SOCIAL DIAGNOSIS 2013

THE OBJECTIVE AND SUBJECTIVE QUALITY

OF LIFE IN POLAND

REPORT

Edited by

Janusz Czapiński

Tomasz Panek

Warsaw: The Council for Social Monitoring

Warsaw, 2014

The opinions and conclusions contained herein represent the authors' personal views and do not necessarily reflect the official position of the Ministry of Labour and Social Policy.

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Contents

1. Introduction

Janusz Czapiński

1.1. Aims and general project assumptions

Our project is a comprehensive attempt at complementing diagnosis based on institutional indicators with comprehensive data on households and the attitudes, state of mind and behaviours of their dwellers; it is a diagnosis of Poles' living conditions and quality of life as they report it themselves. We therefore study households and all their available members aged 16 and above with the aid of two separate questionnaires.

The comprehensive character of the project means that a single study takes into account all the important aspects of life of individual households and their members – both economic (income, material affluence, savings, loans) and non-economic (e.g. education, medical treatment, ways of tackling problems, stress, psychological well-being, lifestyle, pathological behaviour, cultural participation, use of modern communication technologies and many others). In this sense, the project is also multi-disciplinary in nature. This reflects the composition of the *Council for Social Monitoring*, i.e. of the main authors of the report and the team of experts invited by the *Council*. These bodies comprise economists, demographers, psychologists, sociologists, insurance specialist and statisticians.

In line with the original idea, *Social Diagnosis* research takes the form of a panel study – we return to the same households and individuals every few years. The first wave took place in 2000 and the next three years later. The next five readings took place every second year. The study is always conducted in March in order to remove seasonal effects. From 2009 the wave was extended into April due to the marked increase in sample size.

Not only does this report show Polish society as it is today, but it also enables us to track how it has changed over the past thirteen years almost from the very beginning of the process of transition if we take into account earlier studies of the quality of life in Poland (Czapiński, 1998), similarly extended over a longer period of time.

Social Diagnosis focuses on discovering more fundamental facts, behaviours, attitudes and experiences; it is not just an ordinary descriptive opinion poll, it is a scientific project. This is not only because the authors include scientists, university employees and professors. The deciding factor is the professional technique based on the research experience of the members of the *Council for Social Monitoring* and the team of experts, and – above all – the theoretical context of the particular thematic modules. A majority of variables taken into account follow from scientifically grounded knowledge of the phenomena under consideration, rather than from intuition, common observations or sponsors' commission. Apart from describing Polish society, an important goal of the *Diagnosis* is to verify scientific hypotheses. In this report, addressed to the "universal" reader, any theoretical background is of necessity extremely limited. Instead we seek to reveal what Polish society is like 24 years after system change, 13 years after the first study within the project and 9 years after Poland's accession to the European Union.

We hope that the project results will provide useful information to politicians and social and local government workers responsible for preparing, implementing and adjusting the reforms that affect the conditions of citizens' lives. We would also like to provide the public with reliable information about their everyday life and the changes they are subject to, as the notions individuals may have about their situation as compared to the situation of other people generally tend to be based on selective observations, stereotypes or theses broadcast by the media, not infrequently false or exaggerated (e.g. those about the deteriorating mental health of society, about a total paralysis of health care services, about retirees and the elderly in general as the social group most adversely affected by the process of transition in economic terms, to name but a few examples). We all deserve a relatively accurate, comprehensive and objective diagnosis of the main sources of our problems in life, of the sense of mental discomfort, uncertainty of the future or difficulties adapting to new circumstances, as well as a demonstration of the advantages brought about by subsequent system changes, the educational boom and lifestyle changes. Private diagnoses are all too often illusory, defensive, simplified, and generally speaking wrong.

The differences between the present study and the previous concern sample size and thematic scope, reflected in the content of questionnaires (see Annex 1). The sample of households was extended from the original 3005 in 2000 to 12,355 in 2013 (with a resulting increase in the sample of individual

respondents from 6625 to 26,307). Several thematic modules were altered in the questionnaires in subsequent study waves (*cf.* questionnaires at www.diagnoza.com).

1.2. Research issues

The project covers a range of aspects of the situation of households and their individual members. The social factors it considers may be divided into three general categories:

household demographic and social structure,

household living conditions in terms of their material situation, access to health care services, culture and leisure, education and modern communication technologies,

quality of life, lifestyle and citizens' individual characteristics.

Indicators that describe household demographic and social structure are not analysed separately in this report; they are only used for stratifying the groups of households and population to allow comparison of living conditions and quality of life across various social categories like gender, age, education, place of residence, social and professional status, main source of income, marital status, household type (established on the basis of the number of families and biological family type) and other criteria. The analysis and description refer to the living conditions of households and the quality of life of individual citizens in relation to social change that defines the global context and the general principles regulating the functioning of society. One of the major problems and questions that accompany any programme of social change is the distribution of the costs and benefits that arise from their implementation for particular social groups along a varied time horizon. Also, we were interested to see which categories of households and citizens are able to cope with the new circumstances and take advantage of system transformation and which social groups are unable to do so, objectively or subjectively experiencing failure.

Within the project, the division of social indicators into living conditions and the quality of life roughly corresponds to the distinction between the *objective description* of the living circumstances (conditions) and their psychological significance as expressed by the respondent's *subjective assessment* (the quality of life)[1]. This substantial distinction is roughly matched by entity type examined and the method of measurement. The examined entity is the household for living conditions, while for the quality of life, we considered its individual members. Living conditions were measured by direct interview with one best-informed household representative. Quality of life was measured using a self-completion questionnaire to be filled in by the respondent, i.e. by all available members of the examined households aged 16 and above.

The measurement of household living conditions included:

household income and income management,

nutrition,

household material affluence, including modern communication technology equipment (mobile phone, computer, internet access),

housing conditions,

social assistance received by the household,

children's education,

cultural participation and leisure,

use of health care system services,

the household's and its members' labour market situation,

poverty, unemployment, disability and other aspects of social exclusion.

Individual respondents' quality of life and lifestyle indicators included:

general psychological well-being (including the will to live, sense of happiness, satisfaction with life, symptoms of mental depression),

satisfaction with particular areas and aspects of life,

subjective assessment of material standard of living,

[1] This distinction is not entirely sharp or disjunctive. We also used the scales of subjective assessments when describing living conditions, and in the part devoted to the quality of life we asked not just about assessments, but also about behaviours (e.g. smoking, alcohol abuse) and objective events (e.g. arrest, death of a loved one, home renovation).

various types of life stress (including the Kafkaesque administrative stress related to contacts with public administration, health-related stress, parental stress, financial stress, work-related stress, environmental stress, marital stress and random stressful occurrences such as assault, burglary, arrest, loss of money),

somatic symptoms (a measure of distress, treated as a general measure of health condition),

strategies for dealing with stress,

use of the health service,

personal finance (including personal income and trust in financial institutions),

system of values, lifestyle and individual behaviours and habits (including smoking, alcohol abuse, drug use, religious practices),

social attitudes and behaviours, including social capital,

social support,

civil attitudes and behaviour,

use of modern communication technologies – computer, internet, mobile phone,

situation on the labour market and professional career,

unemployment, disability and other aspects of social exclusion,

causes of low birth-rates in Poland,

activity and life-quality of the elderly,

political identification and activity.

2. Main results and conclusions

1. In this year's edition of *Social Diagnosis*, there are still no signs of the economic crisis in many subjective indicators of quality of life. In relation to 2011, the proportion of very happy and quite happy Poles rose by 1 percentage point (p.p.[2]) to 81%, with 79% (the same as two years ago) evaluating their whole past life positively up to now.
2. Even though real household income fell by 5%, and personal income by 1%, the proportion of households declaring stable income allowing satisfaction of basic needs increased from 74 to 76%, as did the level of equipment with various household goods. The amount of in-debt households fell and the number with savings rose.
3. There was however a small drop in satisfaction with the majority of aspects of life.
4. The economic stratification of Polish society was reduced. Income inequalities measured by Gini's coefficient fell in the last four years from 0.301 in March 2009 (0.313 in March 2011) to 0.299 in March 2013.
5. 5.1% of Polish households lived below the level of extreme poverty in February/March 2013, while 44.7% were below the prosperity level. Material depravation affected 19.7% of households in February/March 2013, which is significantly more than the total of monetary poor. In the final assessment, poor households were considered to be in poverty both in monetary and non-monetary terms, and these made up 2.7% of the researched population.
6. Between March 2011 and March 2013, we observed an increase in extreme poverty and hardship (1 percentage points and around 11% percentage points respectively) caused in part by a fall in real equivalent income over the period of study.
7. The financial mobility of Poles is not weakening. In the last four years, over 40% of the households from the $^{1}/_{5}$ poorest advanced to higher-income groups and the same $^{1}/_{5}$ richest retreated to lower-income groups. This means that the structure of Polish society is still very fluid in the economic sense.
8. There were some small signs of the development of civil society. Compared to earlier studies, the percentage of volunteers increased (from 20% in 2011 to 26% in 2013), as did sensitivity to harm to the common good, though still half the questioned citizens were indifferent in this respect. Also, opinions on democracy soured, and indicators of general trust, civil activity, work for the local community and willingness to enter into sharing relations even fell slightly, despite already being consistently low and some of the lowest in Europe, since the transformation.
9. Voivodeships with the highest general quality of life were Małopolskie, Pomorskie and Opolskie, with the lowest -- Świętokrzyskie, Lubuskie and Warmińsko-Mazurskie. The fastest climbers in the last four years were Małopolskie, Podkarpackie and Lubelskie, with the biggest falls in quality of life rankings noted by Dolnośląskie and Warmińsko-Mazurskie. As far as the largest towns were concerned, the residents of Toruń, Warszawa, Poznań and Kraków fared the best, and the worst off were those of Włocławek, Sosnowiec and Wałbrzych.

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10. Average net per capita income in the studied households in February and March 2013 was PLN 1349. Its level in the panel sample households did not change markedly in real terms between March 2009 and March 2013, though it did fall by almost 5% in real terms in the last two years. .
11. According to households' evaluation, the lowest net monthly income allowing monthly break-even amounted to 1489 zł in February/March 2013, rising over 10% between 2009-2013. However, real household minimum income aspirations fell over 2% over this time.
12. Most of the studied households declared that, with their current revenues, they made ends meet with certain difficulty (over 35%), nearly 19% with difficulty, and over 17% with great difficulty. Over the last four years the percentage of households in great trouble in this respect fell markedly (by over 2%).
13. Compared to the year 2000, the percentage of households declaring that, with their current earnings, making ends meet was very difficult fell by almost half from 31% to 17%, and the share of those coping with some ease increased equally radically from 12% to 23%.
14. In February/March 2013, households most often declared that they limit their requirements in situations when they could not meet current needs (almost 89% of households with a lack of income), or accept the help of relatives (almost 41%) or also take loans (almost 30%). Only in not quite 18% of households in this situation do members take on additional work. In the last four years the largest relative increase in households unable to satisfy their needs was in those that accepted aid from the church of social welfare services (by over 3%). At the same time, the fastest shrinking percentage was in the needy households taking loans (by almost 5 p.p.). Previously, in 2011-2013, the fastest growing group unable to make ends meet took on

[2] Percentage point.

new work (over 6 p.p.) or accepted the help of relatives or social welfare services (3 p.p respectively). The percentage of households of which a member took on extra work rose markedly (almost 2 p.p.) and the share borrowing fell by over 2 p.p.

15. Compared to the year 2000, the percentage of households declaring that they could afford the cheapest food, but not clothing, fell by 6 p.p, while the percentage declaring they could afford everything thanks to running a tight budget increased by 1 p.p, as did those who could purchase everything they needed and generate savings by 8 p.p.

16. The percentage of households receiving external aid in any form was 11%, so nearly the same as two years ago (10.9%). In relation to 2000, the share of households accepting external aid fell by 3 p.p, and the share of households receiving all there forms of aid did not rise since the turn of the century: financial aid from 9.1% to 8.7%, in kind from 6.5% to 5.6% and in the form of services from 3.6% to 3.1%.

17. In February/March 2013, almost 33% of households reported that their income situation had worsened compared to two years ago, and almost 56% that it had not changed. So, the share of pessimistic evaluations of change was around 8 p.p higher than in 2011.

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18. In March 2013, as far as the satisfaction of nutritional needs in the last year was concerned, households reported that most often they could not afford, for financial reasons, fish and fish products (over 19% of households), next confectionaries and stimulants (over 15% and nearly 15% respectively), followed by meats, poultry and meat products (12.5 and 11.5% of households). Over the last four years, there was an improvement in the level of household needs satisfaction in all groups of foodstuffs with the exception of sugar. In 2011-2013, we observed a fall in financial problems in satisfying needs for all food products with the exception of stimulants, fish and fish preserves and meats (this rise was however less than 1 percentage point, so within the margin of error). However, there was a marked improvement in the case of confectionaries fruit and vegetables and fruit and vegetable products (the fall in households unable to satisfy their needs in this respect was over 2 p.p).

19. Compared to the turn of the century, the greatest fall in share of households unable to afford enough food products concerned stimulants (from 54% to 15%) and fish and fish products (from 37% to 19%), while there were larger or smaller falls in need fulfilment for all other food categories.

20. Around 63% of households in 2013 reported that their state of food need satisfaction had not changed compared to two years ago, around 31% noted a worsening and 6% an improvement. Compared to assessments from March 2011, there was a rise in negative ratings with a fall in positive ratings (over 1 p.p.) of these changes at the same time.

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21. Among all the durable goods selected in the study, most widespread in February/March 2013 were washing machines and paid satellite or cable television. Almost 8% did not have a washing machine, and nearly 28% lacked paid satellite or cable television. The least owned durables included motor or sail boats (less than 1%) and electronic book readers (nearly 4%) and holiday homes (almost 5%). From March to March 2009-2013, ownership of household equipment in the majority of durable goods taken into account in the study rose markedly. Also in the last two years there was a marked growth in all categories except landline telephones and desktop computers, which is linked to these categories being replaced by mobile telephones and portable computers. This included the DVD. The greatest increases over this period were in ownership of LCD or plasma TVs and portable computers (14 and over 9 p.p. respectively).

22. Compared to the turn of the century, the largest increases were noted by access to the internet, microwave ovens, computers, washing machines, modern TV sets, satellite or cable television and dishwashers.

23. In February/March 2013, almost 60% did not have savings, while of those that did declare savings, those with amounts equal to between one month and three months' earnings dominated (over 31% of households with savings). Between March 2009 and March 2013 there was a marked rise in households with savings (almost 8 p.p.), as has also been observed in the last two years (by over 3 p.p.). Almost 67% of households kept their savings in the form of złoty bank savings accounts and almost 45% in cash at home. In 2009-2013 there was only a marked rise in the share of households with savings in cash (by almost 8 p.p.). In the last two years the percentage of households with savings also increased significantly only among those with savings in cash (by 5 p.p.), while there was a marked fall with banked savings (over 3 p.p.) and investment funds (nearly 3 p.p.).

24. Since the year 2000, the share of households with savings has increased by over 50% though the scale of savings in relation to income has not changed much.

25. Since the year 2000, the share of households saving in cash increased (from 31% 45%) and that of bank savings decreased (from 78% to 66%)

26. Households with declared savings in February/March 2013 most often saved to have a reserve in case of emergency (almost 67% of

households), security in old age (nearly 35%) and for current consumption needs (nearly 34%). Over the last four years, the share of households with savings „for a rainy day" rose by almost 8 p.p.., for health care (over 2 p.p..), as old-age security and as a reserve for day-to-day consumption (nearly 2 p.p.). Between 2011 and 2013, there was a marked rise in savings above all as a rainy day reserve (nearly 8 p.p.) and for health care (almost 2 p.p.).

27. Since 2000, the share of households with rainy day reserves against misfortune fell from 79% to 67%, though in 2011 it was even less at 60%. There was also a fall in savings as security for old age (from 47% to 35%) household redecorations (from 38% to 26%) and healthcare (from 45% to 27%).

28. In February/March 2013, almost 37% of studied households declared they borrowed. The value of the borrowings most often exceeded that of annual income at over 28% of households. The share of households with loans fell markedly by almost 8 p.p. between March 2009 and March 2013, and in the last two years the percentage with borrowings fell by over 4 p.p. In the last three months, households most frequently spent between 10 and 20% of their monthly income on debt servicing (over 37% of total indebted households), and the next largest group up to 10%. Only 3% spent over 50% of income on debt repayment.

29. The source of external financing for almost 88% of households were the banks and for over 8% agencies loans repayable in installments. Only not quite 6% were in debt to private persons. Between March 2009 and March 2013, the share of households with bank loans fell by almost 3 p.p., while at the same time the share with financing from other institutions rose by the same amount and loans from private persons increased by almost 2 p.p.

30. Compared to the turn of the century, the share of households with loans with bank loans increased from 73% to 92 %, and borrowing with other institutions and private persons fell.

31. Over 35% of studied households took loans to purchase durable goods, 31% for household redecorations, and over 23% to buy a house of flat. Between March 2009 and March 2013, we observed relatively the largest share of households taking loans to service earlier debts, acquire houses or flats (over 2 p.p.). In the last two years, there was a marked rise in borrowing only to buy a house or flat (over 2 p.p.) and pay off earlier health care debts (over 1 p.p.).

32. In the last 13 years, healthcare, fixed costs and purchase of durables were ever less frequently financed by loans, which were increasingly dedicated to purchase of a house or flat.

33. In their assessment of their changing material wealth in February/March 2013, over 53% of households reported that compared to two years previously there had been no changed and over 38% that it had worsened. Compared to reports from March 2011 the percentage of households assessing changes positively fell by nearly 3 p.p., with a rise in the share of households rating these changes negatively by almost 8 p.p.

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34. Almost 4% of studied households did not live independently in February/March 2013. This percentage rose by almost 2.5 p.p. between March 2009 and March 2013, though over the last two years this did not change noticeably. The average per capita living space in February/March 2013 was over 31m^2, and there had been no significant change to the situation in 2009 in this respect.

35. Of all the equipment and installations included in the study, in February/March 2013, the most widespread was running water, which only 2.9% of households were not equipped. At the same time, we have observed a rise in the share of households with the full range of goods taken into account in the study over the last four years. It should also be noted that there has been a rise in the share of households connected to the gas mains, with a corresponding fall in those using gas canisters. In the last two years there was also an insignificant rise in fully equipped households, with a significant increase in those with hot water on tap (over 2 p.p.) and access to the water mains and sewage system (by 1 p.p.).

36. Analysis of housing conditions in whole samples in 2000-2013 and 2000-2013 shows a fall in the percentage of households without running water from 5.5% to 2.9%, flushing lavatory (from 11.2% to 3.9%), bathroom with tub and shower (from 13.8% to 5.3%) and hot running water (from 29.6% to 20.5%).

37. Households most frequently were equipped with central heating, whether common or individual, in February/March 2013 at nearly 45% and around 42%, while around 12% were still heated by wood or coal-fired heaters. However, in the last four years there has been a marked fall (over 1 p.p.) in households using coal or wood-fired heaters in favour of central heating.

38. In February/March 2013, over 7% of households were in rent-arrears and nearly 5% were behind with their gas and electricity bills. The share of households in rent arrears did not fall to a significant extent in 2009-2013, while gas and electricity late-payment went up slightly. 3.5% of households were late with their mortgage payments Most often late mortgage payments occurred in the unearned income (nearly 17%) group and among incomplete family (almost 9%) household groups. In 2009-2013, there was a marked rise in the share of households in arrears with their mortgage payments.

39. The vast majority of studied households (over 81%) in March 2013 believed that their housing conditions had not changed compared to March 2011. Almost 8% claimed they had deteriorated and over 11% said they had improved. Compared to March 2011, the share of households formulating a positive opinion increased by over 1 p.p.

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40. The National Bank of Poland had the highest trust rating of all public and private financial institutions.

41. Second in terms of trust were the commercial banks. The public ZUS (the Social Insurance Institution) was trusted more than privately managed the Open Pension Funds (OFE).

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42. Compared to 2011, 0-6 year-old children's access to institutional care increased in 2013 in all place of residence classes, especially in middle and small towns (from 200,000 to 500,000 and from 100,000 to 200,000, and below 20,000 residents).

43. There is little territorial differentiation in access to education for 7 to 19-year-olds.

44. The general fall in the share of 20 to 24-year-olds who continue in education in the smallest towns of below 20,000 residents and in rural areas, and the rise in educational activity of the residents of middle and large towns of over 100,000 has contributed to an increase in the already significant territorial differences in the demand for educational services, contrary to the changes observed in 2011.

45. In 2013, 20 to 24-year-old women in towns used educational services more often than in 2011, as opposed to those in rural areas, which widened territorial differences in demand for educational services for women. The share of men in towns using school and post-school educational services fell in relation to 2011.

46. The general fall in the share of 25-29 year-olds using educational services stems above all from a worsening of the indicators for towns of over 200,000 residents, while in the other town types a small increase was noted, which is a reverse of the tendency observed in 2011. The territorial differences in this group's educational activity were maintained, especially in relation to the towns versus rural areas, while the mutual relations between towns changed to the disadvantage of the largest.

47. In 2013, 25-29 year-olds of both sexes used educational services less frequently than in the previous three study rounds. The tendency to the disadvantage of men remained, as did the growth of the territorial disproportion among women. The urban/rural disproportion is also large, though smaller than for women and smaller than in previous rounds of study. The largest and smallest towns were worst for men and the middle-sized towns for women.

48. The educational attainmental activity among 30-39-year-olds remains very low despite a slight improvement. There remains a lack of interest in educational services among the over-39s.

49. The process of adults' qualification raising is determined by age, gender, place of residence, educational level and labour-market status.

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50. Human capital in Poland has shown systematic and significant growth. In 2007, its indicator was 41.72, in 2009 43.67, 45.13 in 2011 and 45.68 in 2013.

51. Human capital falls with age - 15-34 year-olds have the largest reserves and the over-45s the smallest. Over the years the distance between those of sedentary age and the 35-44 year group has grown, while the latter have reduced the gap to the rest. Taking gender into consideration shows that in all study rounds from 2007, women, among the 15-34 and 35-44 year-old groups were characterised by higher levels of human capital, while this was the case for men over 45. This is probably the result of women spending more time in formal education and their higher scholastic indicator at university level. The higher level of human capital of men over 45 could be due to both differences in education to the disadvantage of women in that age group, and that they withdraw from the labour market sooner than men, therefore losing contact with innovation as required by the labour market relatively sooner.

52. The correlation pattern of human capital concentration with class of place of residence has been sustained. There is a marked fall the smaller the size of locality. Best equipped with human capital are the residents of the largest towns, while those in rural areas fare the worst, though, relatively speaking, they showed the greatest improvement in human capital level in 2007-2013. There has also been a rising tendency in other residence classes.

53. The professionally active are better equipped with human capital than inactive labour, and those in work have higher levels than the professionally active. The distance between active and inactive labour has increased. Professional activity supports the level of human capital as well as the gaining of new skills. Remaining outside the labour market tends to lead to a gradual decline in skills and expertise and a fall in human capital, which may be an obstacle to getting out of inactive labour status.

54. Women have the higher social capital among the employed and the unemployed, while this is the case for men in the inactive labour category.

55. There are three distinct groups in terms of labour market status and level of human capital ….. Sorting by falling indicator values shows that students have the highest capital level followed by public-sector workers then private entrepreneurs and private-sector workers (capital level in that order), the next group with a much lower capital level were the unemployed as well as other inactive labour, Retirees , those receiving welfare benefits and farmers, who were the least well equipped with human capital. There has been a relative improvement in the unemployed and other inactive labour groups, as well as that of farmers though to a far lesser degree.

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56. The vast majority of households in February/March 2013 wanted their children to complete their education at Master's level at over 70%. However almost 18% of households were satisfied with vocational qualifications and nearly 13% with a vocational bachelor's degree or equivalent.

57. Most often households were forced, in the school year 2012/2013, to forego children's additional lessons and activities at over 15% and 12% respectively. Least often, households changed to cheaper schools (1.4% of households with children of school age). Between 2009 and 2013, we have seen a marked rise dropouts for financial reasons only in terms of additional activities undertaken (of over 1 p.p.). There have been no marked changes in the frequency of dropouts and spending limitations in children's' education.

58. Over 78% of households in February/March 2013 believed that the level at which they satisfied their children's' educational needs had not changed compared to two years' previously, over 16% noted deterioration and more than 5% an improvement. Compared to 2011 household ratings of educational need satisfaction showed no marked change.

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59. 17% of studied households declared in March 2013 that for financial reasons they had to forego, in the last year, a trip to the theatre, opera, operetta, philharmonic or concert, 20% the cinema, and over 17% from going to a museum or exhibition. In 2013 compared to 2007, the scale of households' financial difficulties in participating in the selected forms of cultural activity were markedly reduced, though the share of households not interested in these forms of participation in cultural event (from $^1/_2$ to around 40%) hardly changed at all.

60. Almost 18% of studied households were forced in the last year to give up buying books for financial reasons, and 17% from purchasing the press. Compared to 2007, these are much smaller numbers, though the share not interested in buying books (from 13% to 18%) or the press (from 6.5% to 7.5%) remained at the same level.

61. There is a musical instrument in every sixth household though in over a quarter none of the residents play it.

62. Only 40% of households bought a book other than a textbook or instructions in the last year, whether in paper or electronic form (on average 9).

63. In 2013, over 13% of households declared they have no library. In the last six years there was a rise in such households from 10.1%. Only 5% declared a collection of over 500 books (5.9% in 2007).

64. Most often, households assessed that the level of satisfaction of needs for cultural events did not change in the last two years (almost 78% of households). However, almost 18% of households claimed that their situation had worsened in this respect, and only 5% that it had improved. Compared to March 2011, the share of households negatively assessing changes their cultural event needs satisfaction increased by almost 2 p.p.

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65. The percentage of households forced to abandon their holiday trip plans for financial reasons was at around 38% in the case of group trips for children and almost 47% for adults. However, we have observed a marked improvement in this area since 2009. The fall in abandoned trips of this kind was over 2 p.p. for family holidays and almost 2 p.p. for all other trips. In the last two years, there was however a significant drop in the need to give up a holiday for financial reasons for adults and families (over 2 p.p. and over 1 p.p.).

66. Households did not feel the need to call off adults planned trips (almost 31%) most seldom, and most often the planned trips of children's groups (almost 78%). In the last four years there was a marked rise in the lack of the need to take any of the selected forms of trip - almost 5 p.p. in the case of children's' groups, over 6 p.p. in the case of family trips and by almost 2 p.p. in the case of adult travel. Also, in the last two years, we have also noted a similar falling tendency in interest in holiday trips. This lack of interest in children's group trips increased by almost 3 p.p., adult trips by almost 2 p.p. and family trips by over 2 p.p.

67. Almost 72% of households reported that their need satisfaction for rest and recreation in 2013 did not change compared to two years previously. At the same time almost 26% indicated a worsening of the situation and only not quite 35 in its improvement. In relation to the ratings of change formulated in 2011 younger people are twice as likely to do some kind of sport than the elderly (chart 6.4.5).

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68. According to households' declarations, in February/March 2013 over 92% visited national health service clinics financed by the National

Health Fund (NFZ), while at the same time 51% used other paid clinics and only just over 7% took advantage of a subscription paid for by an employee. Between 2009 and 2013, the share of households using healthcare paid by employers who had bought subscriptions rose slightly, though within the margin of statistical error (nearly 1.1 p.p.).

69. On average the households that noted the most healthcare spending used outpatient services (582 zł), purchased medicine (423 zł), gave "presents" to gain better and faster services (e.g. more doctor's interest in patient's problems, concern for health in general, choice of surgeon or hospital supervisor etc.) cost on average 287 zł. The average payment in public hospitals did not exceed 250 zł, and the amount of a sincere proof of gratitude once treatment was complete was on average 119 zł. Compared to earlier periods real spending only increased on outpatient diagnosis and treatment. Other spending fell in real terms.

70. In the year previous to the study, household had to abandon purchase of medicine or treatment due to a lack of money in the following areas: health spa trip (almost 29%), false teeth (over 24%) and dental care (over 22% of households). In recent years the share of households forced to abandon these kinds of plans did not rise significantly for any healthcare service. There was however a marked fall in abandonments in the case of medicine purchase, trips to health spas and dental prosthetics (over 4%, nearly 4% and over 3 p.p. respectively). Between 2011 and 2013, the share of households forced to abandon plans, for financial reasons, to visit health spas or realize prescriptions and buy medicines fell by 3 and almost 2 p.p. At the same time, there was no rise in share forced to abandon plans in the remaining healthcare services.

71. In the year preceding the survey, households most often abandoned plans, for financial reasons, to buy medicine (17%), dental care (over 16%) and doctor’s services (almost 14% of households). Between 2007 and 2013, the percentage of financially motivated resignations fell significantly in the case of prescription realizations, dental care, dental prosthetics and trips to sanatoria.

72. In February/March 2013, households most often declared that the satisfaction of their healthcare needs did not change compared to 2011 at around 70%. Negative assessments of these changes were at almost 28%, while only just over 2% gave positive ratings. The share of negative changes rose by over 3 p.p. in relation to the negative changes from 2011.

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73. Registered unemployed that also fulfil BAEL criteria continue to make up around 60% of all out of work. The inflow of new „more active” unemployed as a result of the economic slowdown has meant that those not interested in working made up a smaller share of the total registered and a larger share those that were in work despite being registered..

74. If we remove those not actively seeking work from that of the total registered unemployed, as well as those not prepared to take it up and have monthly net income no less than 1200 zł, the level of unemployment falls from 13.9% to 8.6% of those of working age. However, if we include the factually unemployed but unregistered (the so called hidden unemployed) the indicator rises to 10.3%.

75. There is a mutual relationship between job losses on the one hand, and certain individual features on the other (e.g. psychological well-being, social relations, coping strategies and earnings level). Job loss lowers psychological well-being, worsens social relations, weakens the ability to cope with life's problems and, especially, lowers incomes. Also however, more at risk of job loss are those with a lower sense of well-being, more rarely applying task-based coping strategy, those who have worse social relation and the lower earners.

76. The rise in unemployment between 2011 and 2013 was relatively not so painful for households because the share of those worst off, that is those from which the unemployed originated, shrank again and there were no people hitherto working in the rise observed.

77. The continuation of the rise in employed specialists is a result not only of a growing demand for higher qualified labour, but also from an increasing supply of the highly qualified (including the entrance of the relatively well-educated 1980s baby-boom generation). In this context, the worsening of the labour market situation in 2009-2011 caused higher unemployment among those who had hitherto been employed as specialists and managers.

78. Around 44% of job seekers are not unemployed but either in work or only temporarily of inactive labour status. In recent years, the share of employed job seekers increased to 6% of all those in work.

79. Those working on the basis of agreements other than temporary, open-ended full-time and entrepreneurs are marginal, and among the 18-24 year-olds also do not make up the majority.

80. Temporary agreements are most widespread among the under-25s (around 44%), as it the case with 25-35 year-olds. 11% of 25-35 year-olds are self-employed.

81. Analysis of stable employment opportunities of persons working on temporary agreements indicates that their chances of finding more stable work are far better than that of the unemployed or working on civil law contracts. However, due to

the economic slowdown, the probability of finding a stable job decreased in 2011-2013 compared to the previous two years.

82. The rise in 45-59 year-olds' labour force activity unprecedented since 1989 was mainly a result of the reduction of the opportunities to leave the labour market... People who had already received pensions or welfare benefits rarely returned to work. The relatively limited effect of the unemployment rate in 2011 on the prospects of finding work is at least partially responsible for the increase in activity of the pre-retirement group. The increase in unemployment in the year 2013 meant the increasing risk of unemployment for significant percentage of persons in pre-retirement age still in the labour market.

83. In 2013, respondents best rated further institutional changes easing the reconciliation of child-care with professional work including possible flexibility of work time including also the opportunity to work from home, activity improving childcare for the under-7s and higher wages. For the first time a lengthening of paid maternity leave was not included in the list of most preferred solutions, which is probably a result of the introduction of longer maternity and parental leave periods in that year.

84. Between 2011 and 2013, after a fall in the previous study, the influence of economic factors on returns from economic emigration to Western Europe once again started to rise, and the majority were forced in character. There has also been a rise in persons declaring the return temporary – in 2013 it made up 14% of all returning migrants.

85. The years 2005-2007 were key as far as emigration experience gaining was concerned as 10% of 25-34 year-olds declare that was when they gained travel experience abroad. In following years, travel was no longer so popular, though it still continues, especially among 25-44 year-olds with middle or vocational education and from small and middle-sized towns.

86. The situation of returning work migrants is highly determined by gender. Returning persons are usually more active on the labour market than non-migrants, but it is only the men who work more often and set up companies. Among returning women, unemployment is almost double that for all women.

87. Compared to 2011, the share of persons planning to travel abroad in search of work among both the employed and unemployed increased whatever their educational attainment. Among those planning to travel, the most popular destination was Germany.

88. Merely 9.6% of the over-25s took part in any qualification or skills raising activities in 2009-2011, whether professional or any other, which was slightly less than in previous rounds of study. Analysis of the structure of people who declared such activity indicates the high and sustained selectivity of the education process mainly in terms of age, educational attainment and place of residence.

89. Typically, the person engaged in any kind of activity related to raising their level of professional qualification or other skills still has higher education, is still 25-34 years old, lives in a large city and is more likely to be a woman than a man.

90. Between 2011-2013, qualification or skills rising by the over 25s usually took the form of employer funded courses at around 42%. Around 15-16% indicated schools or universities (not including doctorates and other postgraduate studies). Participants paid for their own training (11.1%) somewhat less frequently than in the previous round of study. However, the share of people who took European Social Fund co-financed courses increased (8.4%). The share of respondents indicating other skills raising like learning how to drive did not change at around 7-8%, and merely 4% to part in Labour Fund (Fundusz Pracy) financed courses.

91. Of those not professionally engaged in 2011-2013, that is the unemployed and the inactive, merely around 4.5% indicated a lack of qualifications required by employers, of whom the majority were women (around 54.4%).

92. Among the unemployed due to a lack of required qualifications, a decisive majority had education no higher than basic vocational and resided in rural areas or in small or middle-sized towns. Most were younger than 30, and most had not acted to reduce their human capital deficit and raise their professional skills in any way at all.

93. Among the basic causes of remaining out of work, the most significant were linked to age at 20% of answers and retirement among the most elderly (41%). Also health was as usual often indicated (13%), as were difficulties locating sources of work (17.6%). The remaining causes were only indicated by a few respondents, with the rank of the various reasons varying with gender and age group.

94. Respondents out of professional work were additionally asked about the conditions that would persuade them to take up work in Poland. Over half who were out of work throughout 2011-2013 did not want to work, a result somewhat lower than in for 2007-2011. Around 19% indicated reasons other than those in the questionnaire. Among the remaining conditions for taking up work, the possibility of part-time and flexible time employment were relatively often mentioned (11-13%), less frequently indicated was the chance to work from home.

95. Results of job-market dynamics analysis, assessed on the basis of flows between defined job market

states for 2011-2013 indicated that qualification raising is important for the activation of the inactive labour. However, participation in qualification raising did not increase the chances of the unemployed finding work in 2011-2013. The chances of remaining in employment remained very high and relatively similar for both compared groups – the educationally active and those who did not make the effort to raise their qualifications. Labour market dynamics are determined by gender.

96. Between 2011 and 2013, the incomes of the employed educationally active and inactive remain clearly different to the advantage of the active despite the negative trend for the personal earnings of the educationally active. The gap between the average incomes of the active and inactive on the labour market narrowed compared to the previous period of study. There are differences in the distribution and dynamics of incomes for both groups among men and women. The effect of education on the improvement of income is smaller for working women than it is for men.

97. The results of educational process model analysis confirm its high selectivity for the over-25s. Young, well-educated, high-earning, professionally active people resident in large urban agglomerations are also the educationally active.

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98. The continued growth in rating of life up to now was confirmed. Currently this is higher than at any time in the whole study period, and over twice that of the worst in this respect year 1993. It is also worth emphasising that since 1994, the rise in assessment has been unusually steady.

99. Also two indicators of will to live (lack of suicidal tendencies and desire for life), the most important aspect of psychological well-being, are at the highest levels in the whole period since 1991.

100. The frequency of depression symptoms remained at the level of 2011 and is the lowest for the whole analysed period.

101. The sense of happiness has also risen in relation to earlier years to 80.3% of respondents, and is the best result since the beginning of measurement. Since 2003, the share of unhappy persons fell almost threefold from 4.5% to 1.6%.

102. Despite the sustained high level and even rise of certain indicators of general well-being, there are visible signs of crisis in terms of satisfaction criteria. There was a fall noted in 12 of the 16 criteria compared to 2011, while there was growth in none. Satisfaction with future prospects fell most, as did with the country's condition, sex life and work. Also satisfaction with place of residence fell. Like two years ago, most satisfied with their place of residence were Gdynia (38%), and least Częstochowa (3%), Kielce (4.5%)and Bydgoszcz (4.6%).

103. Age was most important factor explaining general psychological wellbeing of the Poles was, as in the previous study, age. The older a person, the worse the psychological condition, especially as far as symptoms of maladjustment (depression) are concerned. Second in terms of importance for general psychological well-being is marriage, which together with number of friends (fifth), can be treated as a single indicator of social support. In third place, also similar to two years ago, was alcohol abuse, and fourth was income.

104. Like two years ago eudaemonists, or the seekers of sense in life, were clearly more numerous (41.2%) than hedonists (21.3%), who are geared to the maximisation of pleasure. The hedonistic approach to gaining happiness does not favour its attainment. The better path is the orientation to realise aims and lead a meaningful life as eudaemonists have, in many respects, a more successful time of it than hedonists.

105. This year's study once again confirms the accuracy of the main hypothesis resulting from the onion theory of happiness. Positive changes in psychological well-being are decided almost exclusively by an internal adaptive mechanism (the "happiness attractor"), which acts most effectively at the deepest level, which is the will to live. A fall in well-being, especially at the most superficial level of satisfaction criteria, is on the other hand the result of negative life changes.

106. The happier fare better in life as it is more the case that happiness brings money more than money happiness. The happy have a greater chance of finding a steady partner and starting a family.

107. Levels of psychological well-being determine the chances of divorce in future years.

108. Psychological wellbeing increases as the date of a wedding approaches, then drops fast to the level of the period many years before the wedding. In other words there is an almost perfect asymmetry of well-being change before and after a getting married. Therefore, even though the married are happier than those living alone, it is not getting married that makes them happy in the long run. Naturally happy people simply have better chances of finding a partner.

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109. Average declared personal monthly net income was 1880 zł in the last quarter of 2013, and was somewhat smaller in the panel sample at 1181 zł. In relation to data from 2011, it rose nominally by 4.4 p.p. in the whole sample while falling by 1 per cent in real terms, and in the panel sample it rose nominally by 4.9% though fell by 0.5 %.

110. Households expected their incomes would rise by on average 43% over the next two years, with expectations at 48% two years ago.

111. In 2011-2013, personal incomes were over $^1/_3$ lower than households expected in 2011, and this difference was greater than before to a marked degree even though optimism of expectation was already weaker than in 2009. School and university students, the youngest, the unemployed, entrepreneurs and other inactive labour most exaggerated with their optimism at 168%, 86%, 164%, 67% and 94% respectively. The greatest realists turned out to be the elderly and pensioners (error no more than 10%), and generally these were the groups that had already completed their professional career.

112. A Bachelor's degree yields five times less on education investment than a Master's, and a PhD increases that rate of return by a further 80%. In the last two years, the rate of return has increased to a marked extent only for Doctor's studies. A Bachelor's degree has become twice as unattractive in financial terms, as clearly the Polish industrial/mining industry is no longer capable of absorbing graduates with Bachelor's degrees in accordance with their competences, some of whom have to accept simpler, less well-paid jobs with lower earnings than middle school graduates.

113. Public-sector workers gain less from their higher education degrees than those in the private sector. There is an especially large discrepancy here for Master's degrees, as there is in the case of men with Doctorates. Only women with Doctorates are appreciated more by the public sector than the private.

114. Different disciplines offer differing yields on investment. In recent years there have been marked changes in this area, with currently the best performers being the law and medicine with agricultural studies the weakest.

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115. The Poles are enjoying ever better health. The incidence of physical symptoms fell to their lowest ever levels (since 1996). The share of respondents reporting specific symptoms for at least two weeks fell in the last two years across the whole scale with the exception of very rare cases of tremors/trembling.

116. One health risk factor is excessive weight measured by BMI, and in the context of other selected countries, Poland does not come out all that badly in this respect. USA and Germany have the most overweight people and Switzerland and Rumania have the least. Compared to Poland, there are more overweight people in the Czech Republic and fewer Spain. The BMI effect is most strongly associated with circulatory conditions (sudden peaks in blood-pressure) as might be expected.

117. Another risk factor is smoking, which is also associated with many health issues though to a lesser extent than excessive weight.

118. Alcohol abuse is a risk factor in terms of all 17 state of health gauges. It affects subjective assessments of one's own health, and also worsens objective indicators like the incidence of health issues and the likelihood of serious illness.

119. Six out of ten Poles do no form of physical exercise. Most popular is cycling at 20.9%, while for men in second place is football or other team sports (12.2%), while women prefer aerobics.

120. Physical activity has a weaker effect on health than risk factors (excessive weight, smoking and alcohol abuse), however, it definitely does improve health. It is most strongly associated with the subjective indicator satisfaction with one's own health in the case of both men and women who do some kind of sport.

121. The general level of life-stress in 2013 was somewhat higher than two years previously but lower than in earlier studies from 2000.

122. High-incidence of life stress is associated with, firstly, children to support, work, age and entrepreneurship. The factors alleviating life-stress are higher income, good housing conditions, living in rural areas and retirement.

123. Since the mid-90s, the use of task-based strategy to cope with life-stress has been growing more frequent, and in the latest study the use of emotional strategy has fallen compared to previous years.

124. Coping strategies determine psychological well-being level independently of the level of life-stress. Users of task-oriented strategy achieve better well-being indicators compared to those who apply emotional approaches or who give up in the face of trouble, also whatever the level of life-stress. The advantage of task-based strategy, however, grows with the level of life-stress in the case of a majority of well-being indicators.

125. The task-oriented strategy of coping is a buffer mitigating the psychological effects of life-stress; the higher the concentration of stress, the higher the difference in suicidal tendencies between people who apply task-based strategy and those who prefer the emotional strategy.

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126. Since the Transformation, the 90% (!) level of declared feeling of social support (*I feel loved and trusted*) has not changed. Only 20% of respondents feel lonely against their will.

127. For the first time since 2005, the average number of friends fell from 7 to 6. The number of friends is the 5th indicator of psychological well-being after age, marriage, alcohol abuse and income. Friends have an equally large influence on mitigating the effects of psychological life-stress as task-based coping strategy.

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128. The Poles value system is highly stable. However, it is worth noting a marked rise in the importance of work and fall in that of children and a successful marriage in recent years.

129. As Poles quickly become more wealthy, so the frequency of indications of money as one of the three cardinal values falls (by $^1/_4$ compared to the year 2000), though in the last two years, no doubt because of the fall in real incomes, money has advanced somewhat in the hierarchy of values. The position of God (provenance), with a corresponding fall in the frequency of religious practice, is systematically receding in the value system.

130. Health, like in all previous years, is most often indicated as a cardinal value by 65% of respondents, followed by a successful marriage (a slight fall), children (also a fall) and work. Freedom and liberty, a strong character education, kindness and peer respect were indicated the least frequently.

131. It is possible to predict certain life events that depend on individuals' decisions by value system. These include: getting married, divorce and childbirth. Important life events also cause changes in value systems, e.g. weddings increase the significance of a successful marriage, while divorces reduce it. The birth of a child raises the position of children and loss of money reduces its value system ranking.

132. Materialistically minded people tend to assess their whole life up to now in more negative terms, are less happy and have suicidal tendencies more often. However, shopaholics has the opposite effect and acts positively on all well-being indicator readings.

133. Television is the main medium connecting Poles to the rest of the world. In the last 17 years viewing has increased significantly to one third of adults who spend 3 hours or more per day watching television. People out of work (retirees and welfare benefit receivers, the unemployed and housewives) devote much more viewing time than those in employment. The more elderly spend more time watching than the younger, and the higher the educational attainment, the less time is spent watching television.

134. The relation between psychological and physical well-being and television watching time with control for age and gender is not linear, as among both non-watchers and those watching many hours a day there is a higher percentage of unhappy people who are dissatisfied with life, are unhappy with their health and suffer from chronic physical illness or depression than in the group of "moderate" viewers. However, the relation between time spent watching television and BMI indicator score is linear with the overweight declaring the longest watching time.

135. The more time spent watching television, the less trust there is in other people and the lower the level of social capital.

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136. 80% of Poles (1 p.p. less than in 2011) rate the past year a success.

137. Poles perceive an ever-weaker relation between their prosperity (whether the past year was a success) and the activity of the authorities, largely ascribing it to themselves if the past year was rated as successful. The share of respondents who blamed the authorities for an unsuccessful year rose slightly in the last two years.

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138. In 2013, 41.4% of adults declared systematic participation in church services and other religious ceremonies. This is over 1 p.p. fewer than in 2011, is the lowest result since 1992 and over 9 p.p. less than in 2000.

139. Up to 2005, the fall in participation in church services was combined in a rise in the share of those who resorted to prayer in difficult life situations. In other words, Poles attended church less but prayed more, suggesting a deinstitutionalisation (privatisation) of faith, fitting in with the process of religious behaviour individualisation observed in the West and a fall in the position of institutionalised religious forms in the relation between human beings and God. However, since 2007, this falling trend in institutionalised religious behaviour has also been accompanied by a fall in the frequency of prayer in difficult life situations, and this trend has deepened in successive studies. This may mean that the process of faith-privatisation has been succeeded by the beginning of secularisation.

140. The most religious groups in terms of institutional practice were women, the elderly over 60, residents of rural areas (especially farmers), receivers of welfare benefits and people with a basic education. Those with lowest behavioural indicators of religiousness were men, the age-group up to 44, residents of the largest towns, the best educated and most wealthy, the unemployed, private-sector workers and entrepreneurs.

141. In terms of region, most religious Voivodeships were Podkarpackie, Małopolskie, Opolskie and Lubelskie, where with the exception of Opolskie the majority has been strongly settled for generations, while the least religious are Zachodniopomorskie, Łódzkie Świętokrzyskie and Warmińsko-Mazurskie. Podkarpackie stands out most from the country average, where only 13% declare not going to church and almost 70% takes part in church ceremonies at least 4 times a month. Zachodniopomorskie is at the other end of the scale, with a mere 27% monthly church attendance (there is more than double average attendance difference between these two

Voivodeships). The largest towns are the least religious, as 50% do not attend church compared to 20% in rural areas.

142. Compared to 2009, the largest rise in the percentage of non-participation in religious services took place among the 35-44 age group, dwellers of middle-sized towns and private sector workers, and in terms of region in Warmińsko-Mazurskie, Wielkopolskie and Lubelskie. There were falls in participation among private entrepreneurs and school and university students and residents of Podlaskie and Łódzkie.

143. Institutionalised religious practice is linked to higher levels of psychological well-being whatever the gender or age, mitigating also the effects of life-stress on psychological wellbeing. Furthermore, prayer has a positive influence on well-being as a means of coping with stress, though only among women. Similarly, the choice of God as a cardinal value does not have a positive effect on well-being independent of gender or age. In the case of women, this choice is associated with a lower feeling of happiness and evaluation of one's life up to now while this is the opposite for men. However, in terms of depression, prayer and God as a cardinal value have a very strong negative effect indeed independent of gender and age, the most strongly determining factors of depression symptoms.

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144. Every fourth Pole smokes cigarettes, on average 15 a day. Compared to 1995, the share of smokers has fallen by as much as 12 p.p., and compared to the beginning of the 90s by around 17 p.p.

145. The vast majority of smokers are men, with the middle-aged, the poor, the unemployed private-sector employees and those with basic education making up the numbers. The elderly boast the lowest percentage at 13% of over-65s, pensioners (16%) school and university students (10%), persons with higher education (16%) and women (19%). There was a fall in the percentage of smokers in a clear majority of socio-demographic groups between the year 2000 and 2013, with the most spectacular drops among school and university students (by 43%), entrepreneurs (by 37%), followed by the youngest, public-sector workers, the more highly educated, the 35-44 age-group and in Opolskie and Małopolskie Voivodeships.

146. The share of persons who react to problems by drinking is smaller (3.9% in this study and 3.4% two years ago) than that of those who admit they abuse alcohol (6.7% and 6.8% in the previous study). The percentage of alcohol abusers is the highest since the study began (1991).

147. Men reported that in the previous year they had drunk too much 4 times more than women (six years ago it was nearly six times more often). Residents of larger towns definitely abuse alcohol more often than those of small towns and rural areas, and the middle-aged more often than the elderly and the young, the rich and the poor currently more than the middle income drinker, the private entrepreneur somewhat more than their employees (earlier this difference was much greater), the unemployed more than the public-sector workers while school and university students drink more only in relation to pensioners and retirees.

148. In terms of professional group, construction workers are the most affected by alcohol problems at 17%, miners, salespersons, food-processing workers, other labourers and operators of other equipment and machinery, all of which are typically male professions. The smallest percentage is reported among nurses and other health service specialists (with the exception of doctors, who far more often than the average admit to overusing alcohol at 11%).

149. The share of reported narcotics use increased until 2005, and in this study remained at the level of 2011, and is much higher than at the beginning of the study period (an increase over three times that of levels in 1992). Currently, most at-risk are men, school and university students (generally all younger people), large-city dwellers, private-sector workers, the well-off and those living in Pomorskie and Zachodniopomorskie Voivodeships.

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150. Between 1993 and 2003, the number of victims of theft and burglary increased, but that of mugging and violence did not change. Also in the same period, the share of persons accused in criminal cases increased, as did that of civil lawsuits. After 2003, there was a marked fall in the share of theft, mugging and violence victims (by a half) and home or car breaking and entry (over double between 2003 and 2011). This explains the large rise in sense of security over this period as the share of reported satisfaction with security in the olace of residence increased from the year 2000 by 50%, which is comparable to the fall in theft, mugging and violence victims.

151. Alcohol abusers are four times more likely to be the perpetuators of aggression, and almost twice as likely to be its victims.

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152. The share of those causing traffic incidents is directly proportional to the level of motorisation in particular groups and highest among the under 34 age-group, large-city dwellers, persons with higher education, the relatively well-off and in employment (with the exception of farmers), and is especially high among private entrepreneurs.

153. Respondents who abuse alcohol more often cause collisions or traffic incidents in the sample of

driving licence holders though only among young rivers up to 34 and the elderly over 60. Gender also has some significance, as women are 30% safer in terms of causing collisions and traffic incidents.

154. Both the percentage of victims, and the perpetuators of criminal acts, is significantly higher among men than among women, is much greater in the younger age-groups than in that of the elderly. In large urban areas, the frequency of experience associated with criminal activity is twice as great as in rural areas.

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155. In 2013, both a general and unambiguous assessment of the post-1989 Polish reforms remains a difficult issue for the studied as 45% could not form a definite opinion on the matter (49% in 2011 and 60% in 1997). Among those prepared to offer a conclusive answer, the view that the reforms were a failure dominates at 54% over the opposite opinion (12%). The same is reported in all social categories: age-groups, broad education level groups, income levels, professions, across all residential class, though is not always equally great. Positive assessments of the reforms are reported more often in large urban areas, among those with higher levels of education and those with higher incomes. However, as we move down the social ladder, the share of undecided or negative opinion on the reforms clearly increases. Only in the elite group of Doctorates do positive assessments 37% slightly exceed the negative at 35%.

156. Assessment of the Reform as successful is accompanied by a subjective perception of improvement in life-situation since 1989. In 2011 (not asked in 2013), respondents who claimed they currently live better than before 1989, yet who also more often rate the Reforms as a failure (30-31%), were in sharp distinction to those who claimed life was better before 1989. The latter hardly ever believed the Reforms were a success at 7%, and were usually of the opposite opinion (60%). Ratings of the Reforms in 2013 were also positively linked to acceptance of democracy as the best form of government, as respondents who rated democracy two and a half times more often than the total reported the Reforms were a success at 28% (the total was 12%).

157. Over the years between 1997 and 2013, there is no tendency allowing the prediction of assessments. However, whether it be a steady improvement or a worsening, negative ratings always occurred a few times more often than the positive. The sustained statistical dominance of the negative assessment of the Reforms over such a long period of has a tendency to gain social dominance and self-perpetuation. A social climate is developing in which a negative opinion of the reforms is taking on the form of political correctness.

158. In 2013, members of organisations, associations, parties, committees, councils, religious groups, unions and circles amounted to 14% of the total studied (15% in 2011). 10% of society takes active part in organizations, with clearly the largest group (24%) active in religious groups. In the last two years, 15% reported activity on behalf of their own social environment as the slow, but systematic, rise in involvement in social initiatives came to a halt. Every sixth respondent (17% compared to 23% in 2011) had attended some kind of public meeting other than for work-purposes. These are basic indicators revealing the low level of development of Polish civil society, and the low level of civil experience and competences. Civil experiences have a tendency to cumulate as members of organisations and socially active participants in public meetings tend to be the same individuals.

159. Civil experience and skills associated with social position were measured by educational level. The higher the education, the more people set up organisations and join existing structures where they perform voluntary functions and the more willing they are to become actively involved in social initiatives. The educated are better organised and express their interests more effectively. They are better able to take advantage of the opportunities created by democracy at the local level.

160. Acceptance of democracy as a political principle does not have significance for participation in civil society at the local level. Civil activity clearly raises trust in other people, but only once the level of middle education is gained. Other factors linked to education have a much greater influence. These may be a greater interest in political matters, a more developed network of social contacts, a lifestyle with more room for activities beyond that of making money, and also organisational skills associated with the knowledge of procedures and the law. The strength of these factors cannot be all that great, as indicators of participation in civil society in Poland are low, so revealed differentiation is not great.

161. In 2013, over 40% of respondents declared that harm to the common good is either of no interest to them at all or is largely of no interest. Poles least care about fare dodgers on public transport and tax evasion. However, indifference to these forms of infringement of the public interest has fallen compared to 2007 and 2009. In the remaining categories we also note a rise in sensitivity to the public good. On the other hand, after twenty years of democracy building, nearly half of the respondents are indifferent to six forms of public good violation.

162. Poland fails to meet a single criterion of civil society. In terms of general trust, it occupies one of the last places among the countries covered in the *European Social Survey* (ESS) 2010. In 2003 and 2005 only 10.5% of Poles agreed with the opinion

that "most people are trustworthy". In 2007 this was 11.5%, in 2007 and 13.4% in 2009 and 2011 and 12% in 2013. The ESS 2010 reported positive trust levels at 22%, though this was still three times as little as in Denmark, Norway and Finland.

163. According to EES 2010, only 14% of Poles believe the people close to them have good intentions, which is also far more rarely than the representatives of other nations. This figure was 16% in to *Social Diagnosis* 2013.

164. An example of the Poles' low-tolerance levels with respect to minorities is their attitude to homosexuality. Only 11% in EES 2010 and 9% in *Social Diagnosis* 2013 definitively agree with the opinion that homosexuals ought to be able to arrange their lives in accordance with their own convictions.

165. *Social Diagnosis* data confirms the relation between social capital as defined according to the indicators we have accepted, and other quality of life parameters.

166. Just like on the international scale, we note a significant relation between social capital, the prosperity of sub regions and larger towns. The average social capital level in 66 sub regions explains 35% of GNP differences. In terms of 43 larger towns, social capital explains 33% of residents' wealth differentiation.

167. Almost $^{2}/_{3}$ of Poles of 16 and over either cannot find (49%), or has trouble finding (14.4%) a political representative for their own views or interests. Three out of five Poles therefore has no defined political identity. Of those who did find a representative in March-April 2013, 36.6% identified with the right-wing Law and Justice party (Prawo i Sprawiedliwość), 34.8% with the broadly central Civic Platform (Platforma Obywatelska), 9.9% with the left-wing Democratic Left Alliance (Sojusz Lewicy Demokratycznej), 7.7% with the largely agrarian Polish Peasants Party (Polskie Stronnictwo Ludowe), 7.3% with Ruch Palikota (a liberal initiative of a single politician by the name of Janusz Palikot), 2.4% for the right-wing splinter Solidarna Polska and 1.3% for Polska jest Najważniejsza, another right-wing splinter.

168. Respondents with a declared political identity form two large groups made up of a range of individual features, one belonging to Civic Platform and the Democratic Left Alliance, the other to Law and Justice and Peasants Party voters.

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169. The activity of respondents over the age of 60 and above is determined by their life situation and level of physical ability. This falls with age, but there is an observable significant statistical relation between various forms of activity (familial, physical and social) and educational attainment. Older people in religious and social organizations, hobby clubs, residents' committees and universities for the elderly show the highest organizational activity. However, passive pastimes, above all watching television, prevail. The elderly spend on average 60% more time watching TV than younger people. Almost one third of the elderly is satisfied with its family relations, which does not mean that these contacts are limited only to the family. Only 7.3% of the elderly fail to stay in touch with friends and acquaintances.

170. One in four of the elderly is taken care of by domestic co-residents, and also every fourth acts as a carer for another elderly co-resident (usually spouse), and half (mainly those living alone – 86% among them) neither act as a carer, nor are cared for. This does not mean that the elderly living alone do not require care as 30% are registered as disabled (as much as one third of all disabled), of who one in three have a severe disability.

171. 9.4% of the elderly are active in various organizations, which is very similar to the share of the younger groups (9.6%). The greatest activity of the over-60s is in religious, community and hobby groups, residents' committees and elderly-persons' universities.

172. The elderly are twice as less likely to do any kind of sport. Most popular (especially among men) is cycling, which is even more popular than among younger people that do not avoid physical exercise. Nordic walking, with running and jogging, is just as popular with the elderly as with the younger groups.

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173. Poles most frequently report they do not want to have children because of difficult living conditions and uncertainty of employment and future life, high costs of education, poor living conditions and infertility. The latter affects 21% of women and 18% of men who would like to have either a first child or more children (the so-called procreative reserve).

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174. In the first half of 2013, 70% reported ownership of a computer with 67% of households reporting internet access.

175. The number of computers households are equipped with has also risen to almost 31% reporting ownership of more than one unit, and are now more likely to be laptops than desktops. The number of tablets, which are already to be found in over 9% of households, is also rising quickly.

176. The rise in households with a computer and access to the internet is slowing as we observe gradual market saturation.

177. Over half of households report having fixed-link internet access, with 18% of connected households

using mobile phone services offered by telecommunications operators.

178. Multi-person households more often have computers and internet access, as a result of which 79% of the over-16s have a computer in their own home (a rise of almost 70%) and 76% internet access (5 p.p. fewer two years ago)

179. Not all households with a computer and internet access actually use these technologies. In 2011, this was 14.9% of over-16 year-old non-users with a computer and an internet link, while by 2013 this figure had increased to over 40% not using the internet.

180. A key barrier to the spread of computers and the internet is a lack of motivation as well as the appropriate skills. Financial hurdles are important for about 10% of households, while only 1% declare the lack of technical means to have internet access. So, hard barriers like money and infrastructure are ever less important, while the soft, both in terms of mind and skills, variety are coming increasingly to the fore.

181. Ownership of landline telephones is falling systematically, as only 47% of households reported having one in 2013. Meanwhile, 87% reported ownership of a mobile phone, and over a quarter a smartphone.

182. The presence of computers and internet in the home is to a great extent determined by family type. Couples bringing up children are significantly more likely to have this technology, while it is definitely rarest in single-person households. Wealth also plays a part, as do size of place of residence and region by to a far lesser extent.

183. We continue to observe a narrowing of difference between towns and the countryside in terms of internet access. At the same time however, the internet is used by all household members less frequently in rural areas. Differences in income remain large though an ever-smaller share of households report financial reasons as a cause of a lack of access.

184. The spread of the internet does not completely translate into a fall in interest in television. The share of households equipped with LCD and plasma television sets is increasing faster than that with computers. More households have cable or satellite television than internet access. Though those with internet access spend markedly less time watching television than those who do not, the total time spent watching TV is not changing much, and is even rising among those who do not use the internet.

185. Computers are currently used by nearly 64% of Poles over 16 years of age. This is almost always combined with use of the internet (63%). Mobile phones are used by over 87%. as the increase in users of these technologies has clearly slowed in recent years.

186. An ever-greater percentage of internet users have home access at over 95%.

187. Computer, internet and mobile phone use is unusually strongly determined by different socio-demographic factors, above all age and educational attainment. Most internet users are definitely younger (97% of the 16-24 age-group) and there are very few older people (14% in the 65+ age-group). The net is above all used by those in education (99% of school and university students) and the better educated (91% with a higher education), while only 12% of those with basic education go on-line. Men tend to use these information technologies slightly more often than women, while of great importance is profession and job-market status as the majority of students and those in employment are users while the technologies are least used by pensioners, welfare benefit receivers and farmers. Computer use is also linked to prosperity and size of place of residence. 80% of dwellers in the largest cities and only 53% of the residents of rural areas use these technologies. However, the significance of place of residence is not as great as that of other factors and is falling year to year.

188. The vast majority of children have a home computer. 95% of primary and secondary school students have one, around 90% have internet access and the majority are brought up using technology from an early age. 82% of 7 year-olds and 91% of 8 year-olds use a home computer.

189. The increase in the number of internet users is causing marked changes in the structure of the user population. The average age of users is rising, as in 2003, 40% were in the 16-24 age group, while currently this share is twice as small. Ten years ago 16% of users were at least 45 and now this group amounts to 30%. Also, the share of students has shrunk to 13% from 30% in 2003, as has that of big-city dwellers from 21% to 33% over a 10-year period.

190. Computer and internet skills vary a great deal. Relatively most widespread are the skills associated with internet use, while the situation is much worse as far as more advanced functions are concerned as well as office programme use. As many as 30% of users only use the internet and do not have even the basic skills associated with other uses of computers.

191. The skills level of the average user is lower than in the previous study, which stems from the generally very low competences of new internet users and a lack of new skills acquisition by current users. The competence level very much depends on socio-demographic functions. Users from groups with proportionally greater numbers of users also have higher levels of internet-use skill.

192. The forms and distribution of internet use are similar to previous years. As in the case of skills, also the frequency of use is higher in the groups with a larger proportion of users, so among younger people, students, the better educated and residents of larger towns and cities.

193. Internet users are much more likely to participate actively is the arts and cultural events than those who are not. Also, there is clearly a larger proportion of the socially active more involved in the local community and in organizations and associations.

194. Internet users are not only much more likely to be in employment than those who do not, but also, comparison of the employed shows that users take up better paid work significantly more often, as do they raise their qualifications and skills in order to improve their earnings and so are promoted more often. Internet users also start their own companies much more frequently, and use is linked to much better job-security and chances of finding work in the event of unemployment.

195. The ever more widespread nature of information technology use, the improvement of its effectiveness and ever greater penetration of everyday life at all levels - in education, work and access to information and knowledge means that those who do not use the internet are to an ever greater extent at risk of social exclusion. The scale of cyber-exclusion in Poland is not being reduced.

196. Extreme poverty (in terms of the objective point of view) was not of a permanent nature in the majority of households in the last two rounds of study. Only 2.1% of households found themselves in extreme poverty in both years of study. However, of the 4.1% affected in March 2011, as much as 49% were still in extreme poverty in March 2013. 84% of households in a state of hardship in March 2011 were still there in March 2013, which shows that hardship was permanent in character for most of the affected households in the period of study. Around 5.2% of households moved out of the sphere of extreme poverty between March 2011 and March 2012. So, in the last two years there was a net increase in the number of households in extreme poverty as 3.13% entered and 2.09% exited, with the same pattern noted also for the hardship sphere. Here, as many as nearly 21.5% of households moved out of hardship. The income situation of over 5% improved in March 2013 compared to March 2011 enough for exit from hardship. However, 11% of households fell into hardship as a result of deterioration in their income situation over the same period.

197. The household groups at highest risk of poverty of income are those living on unearned sources of income retirement pension and forms of disability support . The strongest poverty-risk determinant is the household head's educational attainment – the lower the level, the higher the risk. However, when the household head has middle education, the household poverty risk is higher than with a household head of a basic profession education. Households with unemployed members run a markedly higher risk of falling into poverty, as do those with handicapped members, though this effect is relatively smaller than that in the case of the unemployed. The number of household members also significantly acts to raise the risk of poverty, with the exception of 2-member households.

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198. The level of sense of discrimination in Poland is still not high, though compared to the mid-90s, it has risen three-fold. Currently, 1.8% of adult Poles feel discriminated against for whatever reason.

199. A lack of a sense of discrimination does not mean a lack of discrimination per se. For example, women suffer discrimination in terms of income, as their average declared income is 25% lower like in 2009 and 2011. This difference is not a function of differences in profession. With the exception of welfare benefit receivers, the income gap is the same or similar to the total with control for education level and age. Also in terms of specific professional groups of relatively equal competences, duties and job-titles, income differences between women and men remain though fall to 19-20%.

200. However, women do not feel discriminated against more often than men and in 2005 and 2011, the share of men reporting a subjective sense of discrimination was even greater (in the remaining years the differences were not statistically significant. If we consider only the employed and compare men and women with the same career-length and educational attainment, we do not detect a greater sense of discrimination among women.

201. Educational attainment and age affects sense of discrimination by gender. In so far as men feel more discriminated against as middle-school graduates, it is the best and least well-educated women who report most feelings of discrimination.

202. Objective social disability of the disabled has a moderate effect on their feeling of being discriminated against, with of basic importance being the level of disability. In the severe disability group, the indicator of subjective discrimination is almost twice as high as in the group with a light degree of disability.

203. Absolutely most often a sense of discrimination is reported by the victims and perpetuators of criminal acts, alcohol or narcotics abusers and those in psychiatric and psychological therapy (between 2 and 5 times more often than in the population as a whole).

204. An analysis of the potential risk factors of social exclusion (age, disability, loneliness, low

education level, rural residence, drug or alcohol dependency, conflict with the law, sense of discrimination, poverty and unemployment) reveals four separate categories of exclusion: physical (age and disability related), structural (low cultural capital and rural residence), normative (social issues and pathologies) and material (unemployment and poverty).

205. Since the beginning of study on social exclusion, poverty and unemployment were treated as the main barriers preventing full participation in social life. These groups also received the most attention in the assumption that fighting unemployment and poverty ought to make up the main aim of social reintegration policy. However, the fact is that material exclusion is one of four separate exclusion types in Poland today implies the necessity of differentiating integration policy to cover these other forms of exclusion whatever the labour-market situation and material living conditions, requiring separate instruments addressed to the less-well educated, rural residents, alcohol and narcotics abusers and those in conflict with the law.

206. The largest share of Poles aged 16 or more at risk of exclusion are in the structural and physical categories at nearly 23% and 10.5% respectively, though of those who are actually excluded, the majority are in the material group (7.4% compared to 5% physical, 1.3% structural and 4.6% normative.

3. The research method

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3.1. Research structure, procedure and progress

The *Social Diagnosis* research project is a joint academic undertaking by the members of the *Council for Social Monitoring*. The concept and logistics of the project were developed by the Council. Data are analysed and reports are prepared by Council members in cooperation with a group of experts.

The project is a panel study. Each subsequent wave involves all available households from the previous wave and households from a new representative sample. So far, seven waves have been conducted in 2000, 2003, 2005, 2007, 2009, 2011 and in 2013.

Two questionnaires have been used in the study (Annex 1). The first is a source of information about household composition and living conditions completed by the interviewer during a meeting with the household representative who knows the most about household situation and its members. The questionnaire provides data about household structure and living conditions, and about the demographic and social features of its individual members. The other questionnaire is completed by all available members of a given household aged 16 or more and contributes information about individual persons' quality of life.

In each wave field research is conducted in March or in March and April by professional interviewers of the Central Statistical Office. Supervision over the organisation of the questionnaire survey is provided by the Office for Statistical Analyses and Research of the Polish Statistical Association.

3.2. Sampling design and weighting method

The first wave of the study, conducted in March 2000, involved 3005[3] households with 10002 members. From among them, all 6614 available persons aged 16 and above participated in the individual survey.

The second wave of study, carried out in March 2003, included 3961 households (2396 from the first wave at 79.7%) with a total of 13,693 members and 9587 persons aged 16 and above who filled in the self-completion questionnaire (including 8180 – 81.8% and 4719 – 71.3% from the first wave of the study respectively, and 458 and 202 new individuals in households interviewed in 2000 respectively).

The assumption of the third wave of the study, conducted in March 2005, was to examine all households which had participated in the second panel wave along with all those in which members from the initial panel sample had transferred; i.e. households established as a result of the division of the initial panel sample of households.[4] It was also decided that the self-completion questionnaire would include all household members born no later than March 1990. As a result, 3113 households that had participated in the second wave were entered in the database (78.6% of second wave households). The database was expanded with information about 9939 members of households examined in 2003 (72.6% of individuals from the second wave), 537 new members of those households, 6388 individual respondents who had completed the questionnaire in 2003 (66.6% of all individual respondents from the second wave) and 231 new individual respondents from households examined in 2003 (mainly individuals who turned 16 between the second and third wave). In addition, 900 new households and their members were included in the study. In order to obtain the assumed number of 900 new households for the third panel wave, a 900-element basic sample and a reserve sample of the same structure and size were drawn. 738 new households with 2351 members and 1572 individual respondents were entered in the database. The third wave database included a total of 3851 households with 12,872 members and 8820 individual respondents.

[3] All information about sample size pertains to cases entered in the database rather than all cases examined. Some of the latter were not entered in the database or were removed from it due to incorrectly completed questionnaires or problems with identifying households and individual respondents. Figures concerning the number of households and their members from previous waves differ slightly from those included in the Social Diagnosis reports of 2000, 2003, 2005, 2007 and 2009 since after they had been published the databases were once again verified in terms of the identifiability of cases and the logical coherence of data and approx. 2.5 % of examined entities (households and persons) were either removed or restored.

[4] The panel sample of households is defined in section 3.2.

In 2007, the study covered 5532 households with 18,067 members and 12,645 individual members of those households aged 16 and above. Interviewers managed to reach 2760 households (71.7%) from the 2005 sample, with 8,406 of the same members (65.3%) and 5,593 of the same individual respondents (63.4%) as well as 109 households established by members of households examined in 2005 with 294 members and 207 individual respondents. The panel sample of 2005 was extended by 883 members and 452 individual respondents. From the new set of 3000 households sampled in 2007, the study was carried out in 2,663 with 8,822 members and 6,844 individual respondents aged 16 and above.

In 2009, the study covered 12381 households with 36778 members and 26,243 individual members of those households aged 16 and above. Researchers managed to revisit 3686 households from the 2007 sample (66.6 %) with 11,126 of the same members (61.6 %) and 7638 of the same individual respondents (60.4 %).

In 2011, 12,386 households with 36,753 members were examined as well as 26,453 individual members of those households aged 16 and above. Researchers returned to 8504 households from the 2,009 sample (68.7 %) with 24,074 of the same members (65.5 %) and 16,440 of the same individual respondents (62.6 %).

In 2013, we studied 12,355 households with 36293 members and individually 26,307 household members over 16 years of age. Of the 2011 sample, we were once again able to reach 9,137 households (73.77%) with 24,980 of the same members (67.97%) and 18,102 of the same individual respondents (68.4%).

Out of the initial sample of the first wave, after fourteen years the survey was conducted in 2013 in 642 households (21.4 %) with 1592 of the same members (15.9 %) and 1041 of the same individual respondents (15,7%).

A total of 23,804 households with 75003 members and 56,038 respondents were examined in the seven waves of the study.

Households were selected using the two-stage stratified sampling method. Prior to sampling, they were stratified by Voivodeship and then within Voivodeships by the class of the place of residence into large towns (with more than 100,000 inhabitants), small towns (with fewer than 100,000 inhabitants) and rural areas. For urban strata, statistical regions (covering at least 250 dwellings) were the primary sampling units (PSUs) in particular Voivodeships, while statistical districts were the PSUs for rural strata. At the second stage, two dwellings from the randomly generated list of dwellings were drawn systematically in separation for each of the strata established at the first stage.

In the first wave of the study (2000), the same number of households was sampled for each Voivodeship with a view to obtaining a relatively high number of households also in Voivodeships where the number of households was relatively low. The assumption was that estimates of parameters for Poland in general would be obtained as weighted averages of Voivodeship data. In the subsequent six waves of the study (2003, 2005, 2007, 2009, 2011 and 2013), the number of new households sampled for particular Voivodeships was directly proportional to the share of the number of households in a given Voivodeship in the total number of households in the country; i.e. in the general population. In case of non-response, households were replaced by those from reserve samples that belonged to the same statistical region.

From 2009 due to the significantly greater size of the new household sample, both the number of strata and the number of dwellings sampled from each particular stratum at the second stage were increased. Census areas were the primary sampling units, sampled with probabilities proportional to the number of dwellings they covered. Urban strata were divided into large towns with more than 100,000 residents, medium-sized towns of 20,000-100,000 and small towns with fewer than 20,000. Furthermore, in five largest cities the strata covered individual districts. At the second stage, three dwellings were sampled per census area in large towns, four per area in medium-sized ones and five per area in the smallest towns. Six dwellings were sampled for rural areas.

3.2.1. Principles of defining the panel sample

In the study's panel approach, the examined panel sample of households (i.e. households that participated in the second wave of study) represents a specific dynamically changing section of the population of Polish households. Thus, it was assumed that the panel sample of households would not be complemented in subsequent waves when the households from the panel sample died out naturally or refused to participate further in the study. The first of these situations is treated as a natural process

in which part of the population of households die out. In the second case however, so that the decrease in the number of households does not affect the evaluation of the dynamics of the changing phenomena and processes, we apply an appropriate system of weighting to the results. At the same time, the initial panel sample of households was complemented in subsequent waves (starting from wave three) by new households where members of households from the initial panel sample of households had transferred; i.e. those established through the division of the initial panel sample of households.

The dynamic approach to the panel sample requires not only that the panel sample of both households (the so-called panel sample of households) and their members (the so-called panel sample of persons) be defined at the beginning, but also that the principles for treating those research units in the subsequent waves are defined. These definitions are presented in Annex 2 (principles of defining the panel sample).

3.2.2. Sample weighting systems

3.2.2.1. Premises for the use of weights in panel studies

In panel studies based on samples observed over a longer period of time, problems arise as to the representative character of samples and the precision of results not encountered in cross-sectional studies (Kalton and Brick, 1995; Verma, Betti and Ghellini, 2007). Due to the long-term character of the study, the sample loses units due to their refusal to participate in the study (on the part of households and/or their members) in subsequent waves. Households also change their place of residence and contact with them is lost or they disintegrate in the course of the study. At the same time, the sample is complemented by new households established by individuals from the panel sample of persons. Finally, the structure of studied households is subject to change.

All these factors make the sample less representative in the subsequent panel waves and make it impossible to compare the samples and their relevant results between the subsequent panel waves.

If the decreases are not random and their frequency depends on observable investigated entity characteristics, the systematic bias of results may be eliminated by appropriate weighting of raw data from subsequent panel waves. Similarly, households added to the panel sample of households must receive suitable weights in order not to disturb the structure of the sample.

It is necessary to construct a weighting system for each study stage both for cross-sectional and longitudinal analyses. The weights for the first panel wave (the initial sample) are meant to restore, in the process of calculation, the original structure of sample distorted by refusals to participate (refusals on the part of households and their members). Weighting at the first study stage may also adjust the distribution of sample features (both households and persons) on the basis of data available from independent and reliable sources on the distribution of those features in the population. This type of weighting eliminates random errors in the selected sample.

In subsequent panel waves, weighting is meant to adjust sample distortions that arise due to the decrease in the number of entities under investigation (households and persons) caused by refusals and loss of contact by extending the sample to include households newly established by individuals from the panel sample of persons and other changes in the households under investigation. Changes due to the entities dying out should not be adjusted for as this type of decrease is representative for the population.

3.2.2.2. Cross-sectional weights

The results were appropriately weighted in order to preserve their representative character on the national study scale as well as for individual Voivodeships and the particular classes of place of residence,

The initial weight of a household sampled from a given stratum is the inverse of the sampling fraction for the dwelling in that stratum. Initial weights were then adjusted to account for the refusals of some households to participate in the study with the exhaustion of the reserve sample at the same time, or for the fact that some of them did participate (the household questionnaire was completed) but no individual interview was conducted. In order to estimate the household non-response, the sample of households was divided into groups according to the class of the place of residence, with six groups of such classes identified. It was assumed that the probability of household non-response was the same for

each class. In other words, the household non-response ratio identified for a given class constitutes an estimate of the non-response ratio for each household within that class.

The adjusted initial weights for households were calculated for individual locations by dividing their initial weights by the relevant non-response ratios for those locations.

At the next stage, the adjusted initial weights were calibrated against external sources of information in order to enhance the precision of estimation. The method of integrated calibration applied in the study provides estimates of the weights for households and their members simultaneously. The values of variables concerning persons are first aggregated within individual households by calculating the total value of those variables within households (e.g. the number of women/men in a household). Then calibration is conducted at the level of the household, with the use of variables related to households and variables related to persons in the aggregated form. The advantage of this technique is it ensures concordance between the household estimation and that of individual members since all household members (persons) receive the same cross-sectional weights as their households. The following calibration variables were applied in the study:

at the household level: size (4 size categories of 1 to 4 persons were identified), Voivodeship, type of the place of residence (rural and urban area),

at the member level: gender, age group (14 age groups were identified: under 16, 16-19, eleven five-year groups, 75 and above).

Information on calibration variables was taken from the 2012 National Census of Population and Housing and from current demographic estimates.

Running this integrated calibration procedure yielded the calibrated cross-sectional weights for households.

Subsequently, calibrated cross-sectional weights are adjusted to eliminate extreme weights. Excess variation of weights is unfavourable for the results of the estimation as it increases the variance of estimators. For each of the variables, the evaluation of whether a given variable should be deemed as extreme was based on estimating the ratio of the quotient of the calibrated value of that variable and the average value of weights for all variables after calibration to the quotient of its value before calibration and the average of the values of weights of all variables before calibration. If the value of that ratio fell outside the range of [0.3; 3], it was properly adjusted (decreased or increased) in order for the ratio to move closer to the (upper or lower) limit of the acceptable range of variation. The application of the procedure of calculating extreme weights yields the final basic weights (the so-called final weights).

The procedure for calculating basic weights as presented here is applied separately to each new sample included in subsequent panel waves. At the final stage of estimating cross-sectional weights, samples from subsequent years are combined and cross-sectional weights of their households and persons undergo simultaneous integrated calibration. Any extreme weights are then trimmed to yield final cross-sectional weights for a given year (panel wave).

This procedure ensures the assumed sample size and representative character on the national scale and in the identified classification cross-sections.

3.2.2.3. Longitudinal weights

The purpose of longitudinal weights is to preserve the sample's representative character throughout panel duration (Ernst, 1989; Verma, Betti and Ghellini, 2007). The final cross-sectional weights for 2011 served as the starting point for constructing longitudinal weights for 2013.

The guiding principle assumed for the study was to observe the initial panel sample of persons in subsequent panel waves[5]. Cross-sectional weights assigned to those persons were properly adjusted in order to minimize the possible impact of sample attrition on comparison results due to loss of examined persons. Longitudinal weights for persons not belonging to the initial panel sample of persons were estimated on the basis of panel sample longitudinal weights of persons.

3.3. Basic terms and classifications

For the purposes of the study households and their members aged 16 and above were identified as the two basic entity types. The study covered single-person and multi-person households. A single-person household is understood to mean a person who makes a living on their own; i.e. they do not

[5] Cf. section 3.3.

combine their income with anyone else irrespective of whether they live on their own or not. A multi-person household on the other hand, is understood to mean a group of people who live together and make a living together. The following cross-sections of households were adopted in the study for the purposes of classification:

- the socio-economic group, identified on the basis of the main source of income,
- household type, established on the basis of the number of families and the type of the biological family,
- class of the place of residence,
- Voivodeship,
- economic activity.

Seven basic socio-economic groups were identified according to source of household income:

- households where the sole or main (dominant) source of income is from gainful employment in the public or private sector and from performing home-based work or on the basis of agency agreements – *households of employees*,
- households where the sole or main (dominant) source of income is from a farm with agricultural land exceeding 1 ha (including users of plots up to 1 ha of agricultural land and owners of domestic animals but no agricultural land if the livestock is the sole or main source of income) – *households of farmers*,
- households where the sole or main (dominant) source of income is entrepreneurs activity other than agriculture or a liberal profession – *households of the entrepreneurs*,
- households where the sole or main (dominant) source of income is a retirement pension – *households of retirees*,
- households where the sole or main (dominant) source of income is a form of disability welfare support – *households of pensioners*,

households where the sole or main (dominant) source of income are sources other than paid work (except for retirement pension, disability benefit or other type of pension) - *households living on unearned sources of income.*

Household type involves the following categories:

one-family households: married couples with no children, married couples with children (one child, two children, and three or more children),

single-parent families,

multi-family households,

non-family one-person households,

non-family multi-person households.

In another parameter

- single-family households: childless married and unmarried couples, couples with children (one, two, three and more)
- incomplete families
- many-family households
- one-person non-family households
- many-person non-family households

In yet another parameter

- single-family households: childless married and unmarried couples, couples with children (one, two, three and more)
- incomplete families
- many-family households
- many-family households with and without children
- one-person non-family households
- many-person non-family households

Irrespective of economic activity type, the studied households were divided into those without the unemployed and households with the unemployed.

The class of place of residence is divided into urban and rural areas, with urban areas further subdivided by resident size units of 500,000, 200,000-500,000, 100,000-200,000, 20,000-100,000 and

fewer than 20,000. Classification by the class of place of residence and Voivodeship is the same for households and their members.

In addition, the following criteria for the classification of household members were identified:

- gender,
- age,
- educational attainment,
- household income per capita,
- social and professional status,
- disability.

As regards educational attainment, four categories were identified:

- primary and lower,
- basic vocational,
- secondary,
- higher and post-secondary.

As regards household income level, three classes of households were identified: those with income per capita below the first (lower) quartile of income distribution, higher than the first quartile and lower than the third quartile, and higher than the third quartile.

The following categories of social and professional status of household members were identified:

- public sector employees,
- private sector employees,
- private entrepreneurs excluding farmers,
- farmers,
- pensioners,
- retirees,
- the unemployed (registered in labour offices or – in some analyses – identified on the basis of Labour Force Survey criteria),
- school and university students,
- others professionally inactive.

3.4. Features of the sample by main categories

3.4.1. Features of the household sample

The distribution of households according to source of income type is comparable to reported household budgets. Employee households were the most numerous group, followed by retiree households. These two groups account for a total of 79,3 % of the examined household sample.

Two-thirds of households lived in towns, with one-fourth in towns of over 200,000 residents. The share of households from small and the smallest towns with 20,000-100,000 and with fewer than 20,000 was 20.4% and 12.2 % respectively.

Table 3.4.1. Households by socio-economic group and class of the place of residence

Socio-economic group	Place of residence						Total	
	Towns of more than 500k	Towns of 200k-500k	Towns of 100k-200k	Towns of 20k-100k	Towns of fewer than 20k	Rural areas	N	%
Employees	1087	762	563	1241	754	1782	6189	50.6
Farmers	10	3	4	13	22	531	583	4.8
Self-employed	109	72	59	122	90	224	676	5.5
Retirees	453	390	322	837	464	1030	3496	28.6
Pensioners	48	52	64	181	89	288	722	5.9
Living on unearned sources of income	72	61	48	117	67	195	560	4.6
Total N	1779	1340	1060	2511	1486	4050	12226	
Total %	14.6	11.0	8.7	20.5	12.2	33.1		100.0

Single-family households made up 68.4% of the total in 2013. The significant difference between rural and urban areas concerns multi-family households, which are disproportionately numerous in rural areas, and non-family one-person households, which are disproportionately rare in rural areas.

The most numerous are households from the Mazowieckie and Śląskie Voivodeships (14.3% and 12.7% of the total), followed by the Wielkopolskie, Dolnośląskie, Małopolskie, and Łódzkie Voivodeships.

Table 3.4.2. Households by type and class of the place of residence

Household type	Place of residence					
	Towns of more than 500k	Towns of 200k-500k	Towns of 100k-200k	Towns of 20k-100k	Towns of fewer than 20k	Rural areas
Single-family						
Married couples with no children	305	253	202	513	295	570
Married couples with 1 child	305	227	188	416	282	643
Married couples with 2 children	207	171	129	340	211	657
Married couples with 3 or more children	43	37	39	108	104	442
Non-married couples without children	86	40	19	54	7	13
Non-married couples with children	32	18	26	29	19	47
Incomplete families	166	172	143	287	162	483
Multi-family	40	40	46	145	84	545
Non-family						
Single-person	562	364	253	576	305	640
Multi-person	53	42	30	71	34	119

Table 3.4.3. Households by Voivodeship and class of the place of residence

Voivodeship	Place of residence					
	Towns of more than 500k	Towns of 200k-500k	Towns of 100k-200k	Towns of 20k-100k	Towns of fewer than 20k	Rural areas
Dolnośląskie	267	0	102	244	162	257
Kujawsko-pomorskie	0	219	47	86	106	242
Lubelskie	0	155	0	127	75	330
Lubuskie	0	0	97	62	72	107
Łódzkie	318	0	0	212	62	261
Małopolskie	330	1	33	111	98	458
Mazowieckie	712	102	44	265	148	539
Opolskie	0	0	51	73	69	129
Podkarpackie	0	0	51	153	85	313
Podlaskie	0	110	0	85	53	137
Pomorskie	0	258	5	186	89	211
Śląskie	0	310	468	445	99	303
Świętokrzyskie	0	61	10	70	58	203
Warmińsko-mazurskie	0	1	122	97	88	173
Wielkopolskie	202	0	31	259	161	389
Zachodniopomorskie	0	162	35	108	105	167

3.4.2. Features of household members' sample

Women made up 57.7% of the 36,670 household members studied in the weighted sample. Over one-third of women and men (40.2%) lived in rural areas (table 3.4.4). Every fifth woman and every fifth man were in the "immobile" working age (45-59 years) and the share of women and men aged 60 and above amounted to 24% and 17.6 % respectively. The share of children and youth under 24 did not exceed 30% on the national scale.

Educational attainment is a significant feature of household members. Observable changes that occurred over the past four years concern individuals within the lowest and the highest category of

educational level. The share of respondents with at most primary education decreased significantly and the percentage of those with post-secondary and higher increased both among women and among men.

Table 3.4.4. Household population by demographic and social characteristics[6]

Demographic and social characteristics	Women			Men			Total		
	% 2013	% 2011	% 2009	% 2013	% 2011	% 2009	% 2013	% 2011	% 2009
Age									
Under 24	26.0	27.8	29.1	29.1	31.0	32.5	27.5	29.3	30.7
25-34	16.0	15.4	15.3	17.3	17.1	16.6	16.6	16.2	15.9
35-44	13.5	12.5	12.3	14.8	13.8	13.5	14.2	13.1	12.8
45-59	20.6	21.9	22.3	21.2	22.2	22.6	20.9	22.0	22.4
60-64	6.9	6.0	4.9	6.3	5.4	4.4	6.6	5.7	4.7
65 and above	17.1	16.4	16.1	11.3	10.6	10.4	14.3	13.6	13.4
Place of residence									
Towns of more than 500k	12.4	12.1	12.0	11.4	10.8	10.7	11.9	11.5	11.4
Towns of 200k-500k	9.5	9.8	10.4	9.1	9.3	9.8	9.3	9.6	10.1
Towns of 100k-200k	8.2	7.7	7.2	7.6	7.3	6.9	7.9	7.5	7.1
Towns of 20k-100k	19.1	19.3	18.9	18.6	19.0	18.6	18.8	19.1	18.8
Towns of fewer than 20k	11.8	12.6	12.4	12.1	13.0	12.8	11.9	12.8	12.6
Rural areas	39.1	38.5	39.1	41.3	40.6	41.0	40.2	39.5	40.1
Voivodeship									
Dolnośląskie	7.6	7.5	7.6	7.5	7.4	7.4	7.5	7.5	7.5
Kujawsko-pomorskie	5.5	5.4	5.4	5.6	5.3	5.4	5.5	5.4	5.4
Lubelskie	5.5	5.6	5.6	5.5	5.7	5.7	5.5	5.7	5.7
Lubuskie	2.6	2.5	2.6	2.7	2.6	2.6	2.6	2.6	2.6
Łódzkie	6.6	6.7	6.8	6.4	6.5	6.6	6.5	6.6	6.7
Małopolskie	8.8	8.4	8.5	8.7	8.5	8.5	8.7	8.5	8.5
Mazowieckie	13.8	13.5	13.5	13.6	13.4	13.3	13.7	13.5	13.4
Opolskie	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
Podkarpackie	5.5	5.5	5.5	5.6	5.6	5.6	5.5	5.6	5.5
Podlaskie	3.1	3.1	3.2	3.1	3.2	3.2	3.1	3.1	3.2
Pomorskie	6.1	5.9	5.9	6.1	5.9	5.9	6.1	5.9	5.9
Śląskie	12.1	12.4	12.3	11.9	12.3	12.3	12.0	12.4	12.3
Świętokrzyskie	3.3	3.5	3.4	3.3	3.5	3.5	3.3	3.5	3.4
Warmińsko-mazurskie	3.7	3.8	3.7	3.8	3.9	3.8	3.8	3.8	3.8
Wielkopolskie	8.9	9.1	8.9	9.0	9.1	9.0	8.9	9.1	9.0
Zachodniopomorskie	4.4	4.4	4.5	4.5	4.4	4.5	4.4	4.4	4.5
Educational attainment									
Primary and lower education	20.3	22.4	24.2	16.0	17.8	19.7	18.3	20.2	22.0
Basic vocational/lower secondary school	23.3	23.1	24.2	37.8	37.9	38.4	30.2	30.2	31.0
General secondary	30.4	31.0	30.0	28.3	27.3	26.9	29.4	29.2	28.5
Higher and post-secondary	25.9	23.5	21.7	17.9	17.0	15.1	22.1	20.4	18.5
Social and professional status									
Public sector employees	12.4	11.3	12.1	9.1	9.4	9.7	10.8	10.4	10.9
Private sector employees	17.7	15.6	14.5	27.4	25.4	23.8	22.4	20.3	19.0
Private entrepreneurs	2.4	2.1	1.9	5.4	5.4	5.2	3.9	3.7	3.5
Farmers	3.6	2.4	2.4	4.8	3.9	4.4	4.2	3.1	3.4
Pensioners	6.4	6.7	7.3	5.0	5.1	5.7	5.7	5.9	6.6
Retirees	20.1	20.0	20.2	13.8	13.8	13.7	17.1	17.0	17.1
School and university students	16.0	21.2	19.9	16.6	21.9	21.7	16.3	21.5	20.8
Unemployed	6.3	5.8	5.2	6.0	4.9	4.4	6.1	5.4	4.8
Other inactive labour	15.1	15.0	16.3	11.9	10.2	11.4	13.6	12.7	13.9
Total N* 2009	19244			17534			36778		
Total N* 2011	19268			17475			36753		
Total N* 2013	18974			17596			36670		
Total % 2009	51,9			48,2					
Total % 2011	51,9			48,1					
Total % 2013	51,7			48,3					

[6]The table presents weighted values (with the exception of the non-weighted value "Total N" row; the distribution by educational level only concerns persons aged 12 and above. In over a dozen cases, the gender of the household member was not specified.

Table 3.4.5. Households members with driving licences and command of foreign languages in 2011 and in 2013 by demographic and social properties[7] (%)

Demographic and social characteristics	Driving licence		(Active) command of a language							
			English		German		French		Russian	
	2013	2011	2013	2011	2013	2011	2013	2011	2013	2011
Total	49.7	47.0	18.8	18.4	7.2	8.0	6.0	6.5	61.8	59.3
Gender										
Men	62.2	60.1	18.2	18.4	7.1	8.1	5.5	6.2	63.3	60.9
Women	38.0	34.8	19.3	18.3	7.3	7.8	6.5	6.9	60.5	58.9
Age										
Under 24	17.6	17.1	28.4	29.9	10.7	12.7	1.5	1.8	96.5	93.3
25-34	75.7	73.9	39.2	36.5	10.5	11.2	3.7	4.7	88.5	86.3
35-44	75.8	73.0	19.4	14.8	5.7	5.6	7.7	9.0	82.4	76.6
45-59	62.8	60.1	6.6	5.8	4.9	4.4	10.6	11.4	55.0	51.0
60-64	51.1	49.0	2.6	3.2	2.2	2.3	8.9	9.6	35.4	30.2
65 and above	35.6	32.3	2.1	2.1	3.9	4.3	7.4	7.2	14.4	12.2
Place of residence										
Towns of more than 500k	56.1	54.0	33.4	31.5	8.6	8.4	9.5	10.0	79.1	75.6
Towns of 200k-500k	52.3	48.9	24.9	25.1	7.0	8.4	7.8	7.6	72.1	71.1
Towns of 100k-200k	49.2	44.7	24.2	21.2	9.1	8.4	6.7	8.3	69.4	65.2
Towns of 20k-100k	48.5	46.9	18.3	19.2	8.4	9.1	6.2	6.5	64.0	63.3
Towns of fewer than 20k	49.7	46.9	16.0	15.2	7.1	8.0	6.3	6.2	62.2	58.9
Rural areas	47.8	44.9	13.2	13.1	5.9	7.1	4.3	5.1	50.9	47.4
Voivodeship										
Dolnośląskie	49.1	46.8	17.0	17.3	10.0	10.8	4.8	6.8	64.4	61.5
Kujawsko-pomorskie	46.2	42.8	16.7	16.7	5.6	7.9	6.4	6.5	61.4	58.0
Lubelskie	49.7	45.5	17.3	16.3	5.3	6.6	9.1	8.8	57.3	57.9
Lubuskie	46.3	45.4	13.5	11.5	6.9	8.3	5.6	5.8	63.9	70.6
Łódzkie	48.8	46.8	18.0	14.3	7.3	6.3	3.7	3.9	59.5	56.4
Małopolskie	49.2	46.9	19.7	20.8	6.6	8.0	6.1	6.1	63.1	59.9
Mazowieckie	52.1	50.1	22.9	23.1	5.5	6.4	6.9	8.4	64.0	60.0
Opolskie	52.5	45.7	15.3	18.0	15.6	16.3	7.2	7.8	61.1	58.0
Podkarpackie	48.2	47.4	17.0	16.0	5.9	6.6	3.3	4.0	58.9	55.6
Podlaskie	53.2	47.8	22.2	21.2	6.6	7.3	13.7	17.3	60.4	59.0
Pomorskie	47.8	46.5	22.2	22.1	8.9	10.4	6.0	6.9	67.6	63.3
Śląskie	50.1	47.1	19.8	19.5	7.2	7.8	6.0	5.0	63.7	62.9
Świętokrzyskie	48.3	44.8	15.5	15.5	5.3	6.5	3.4	4.5	52.6	50.0
Warmińsko-mazurskie	46.4	43.1	14.3	16.4	5.8	5.3	5.7	5.6	56.6	48.8
Wielkopolskie	54.6	51.4	18.1	16.2	8.9	7.7	5.0	5.2	60.9	59.1
Zachodnio-pomorskie	45.0	41.7	18.8	17.3	7.4	10.1	5.7	6.6	61.7	59.9
Educational attainment										
Primary and lower	17.7	16.9	9.3	10.1	4.7	4.9	1.9	2.2	14.2	15.2
Basic vocational/lower secondary	52.4	50.4	10.7	12.3	6.1	7.7	4.4	4.8	52.0	50.9
Secondary	68.5	66.3	19.2	19.3	8.2	9.1	8.0	8.5	72.5	69.5
Higher and post-secondary	82.0	79.4	45.2	43.3	13.8	14.6	12.9	15.4	90.9	88.7
Income per capita										
Lower quartile	35.2	32.1	11.3	10.5	4.7	5.3	3.9	3.7	46.2	43.2
2nd quartile	44.3	42.0	14.4	15.2	5.4	6.5	4.6	5.7	52.3	50.9
3rd quartile	53.0	50.9	19.2	18.4	7.8	8.6	6.0	6.6	63.9	60.6
Upper quartile	65.5	64.0	30.0	29.9	10.5	11.7	9.8	10.9	82.3	80.3
Social and professional status										
Public sector	76.3	74.3	26.4	23.6	8.7	8.1	11.2	13.0	87.1	83.3
Private sector	76.6	73.4	25.8	20.8	8.3	7.6	6.4	7.0	81.1	75.9
Private entrepreneurs	91.7	91.5	27.3	22.9	11.2	11.2	9.0	10.0	87.8	85.5
Farmers	74.9	76.6	4.6	2.6	2.3	3.3	6.1	7.2	42.1	37.1
Pensioners	33.4	34.1	6.5	2.0	3.6	3.4	6.2	6.2	26.9	26.8
Retirees	41.6	39.8	2.4	2.6	3.6	3.9	8.2	9.0	22.7	20.8
Students	16.7	18.5	37.8	37.8	14.5	15.5	2.1	2.4	98.5	96.8
Unemployed	51.2	49.1	15.7	17.5	5.8	7.6	4.6	5.7	63.8	62.3
Other inactive labour	20.5	25.0	7.7	9.1	2.5	3.7	2.7	3.6	55.2	55.8

Gender determined differences in the structure of educational level still persist. Educational level not higher than basic vocational education is characteristic of 48.5% of studied household members (43.6% of women and 53.8% men while in 2007 53% in total, 48.4% of women and 58.1% men), though

[7]The table presents weighted values.

no more than primary level education was much less commonplace. Individuals with higher and post-secondary education currently constitute 22.1% (25.9% of women and 17.9% men), while in 2007 this was 18.5% in total.

Only 41.3% (37.7% in 2009) of total respondents were employees, private entrepreneurs or farmers. The share of pensioners and retirees amounted to 22.9 % (23.7 % in 2009), two years before the fraction of school and university students is smaller than four (16.3% compared to over 20% in previous years). The share of the unemployed increased back to the level of 6.1% as well as rose to almost that of 2009 (13.6% and 13.9% in 2009).

Apart from formal education, one of the significant factors that have a deciding influence on employability skills described as "civilizational"; e.g. having a driving license, command of foreign languages and computer skills. The 2013 study, similarly to the three previous rounds, included questions about those skills; here we will disregard the issue of computer skills as those are studied separately in analyses of the development of information society.

49.7% of household members have a driving licence (nearly 3p.p. more than two years before), which is nearly two thirds as many men as women (table 3.4.5). The greatest percentage of individuals have an active command of English (18,8%), with German ranking second (7.2%). In third position is Russian spoken by 6%. In comparison with 2011, only command of English has slightly increased while that of other languages has decreased. The numbers of internet users has slightly increased (by 2.5p.p.) on 2011.

The proportion of respondents who have a certain skill, in terms of the demographic and social characteristics under discussion (excluding gender and educational attainment), is the least diversified in the case of driving licences. The command of languages differs significantly in particular groups of respondents. As educational level and income per capita increase, so does the proportion of individuals who speak foreign languages. The percentage of those who speak foreign languages decreases along with the class of the location and is definitely the lowest among the residents of rural areas. Farmers, retirees, pensioners and other professionally inactive individuals differ considerably *in minus* in terms of the command of foreign languages from those who work outside agriculture.

The command of English is over twice as large in the largest cities as it is in rural areas. Mazowieckie, Pomorskie and Podlaskie Voivodeships stand out best in this respect, with Lubuskie and Warmińsko-Mazurskie the worst. Knowledge of German is the most common in Western Voivodeships (with the Opolskie as the leader) and Pomorskie. Russian is the most popular in the Podlaskie Voivodeship.

The share of internet users is most strongly determined by education, age and household affluence. The fastest growing group has been that of 35 to 64-year-old hired workers and farmers.

4. Household living conditions

4.1. Income and income management

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4.1.1. ***Level and variability of household income and income inequalities***

Income is the main measure of the level of household affluence and the key determining factor of the extent of household need satisfaction. The surveyed household groups are almost always made up of different numbers of members and differing demographic compositions, and so have different consumer needs. Therefore, in order for the income (expenditure) of a household to be a correct measure of its ability to satisfy needs comparable with varying consumer needs, the level of such needs should be adjusted. The simplest approach is to assume that all household members have the same needs and so adjust household income by dividing it by the number household members. However, this has two major drawbacks. First of all, the underlying assumption that all members of various ages have the same needs at the same level, and thus the amount of money necessary to satisfy them is also equal is unrealistic. Moreover, this approach ignores the existence of certain savings resulting from living together (such as paying the rent together and using one TV set, washing machine or dishwasher). Hence, an important part of the household's regular expenditure is spread over a more members. Therefore, the income ensuring that the needs are satisfied at the same level does not grow proportionally to the growing number of persons in the household. For instance, ensuring the satisfaction of a four-person household's needs at the same level as a one-person household does not require four times more expenditure (income). The effect of the decrease of household unit costs with the increase in the number of household members is called economy of scale (Szulc, 2007, p. 139).

Thus, rather than adjusting household income by dividing it by the number of members, adjustment with equivalence scales seems more correct. Equivalence scales are parameters with which it is possible to measure the impact of the household size and demographic characteristics on their needs level and thus on the differences in the amount of income (expenditure) necessary to achieve the same level of needs satisfaction. The equivalence scales for a household of a given type indicate how many times its income should be diminished or increased in order to reach the same level of need satisfaction with a standard household being the reference point for comparison, this usually being, with the equivalence scale of 1, a one-person household[8]. The analysis will include both the category of equivalent income and that of income per person.

The average net income of surveyed households in February/March 2013 amounted to PLN 1349 per person (table 4.1.1). In the panel sample from March 2009 to March 2013 it fell in real terms by 1%[9] (table 4.1.1). In last two years, the fall amounted to almost 5%.

In February/March 2013, the highest average net income per person was recorded in the households of entrepreneurs (PLN 1669 per person). Other groups of households with the highest average net income per person include the households of employees and retirees (PLN 1441 and PLN 1375 per person, accordingly). The households living on unearned sources and the households of farmers clearly had the lowest average net income per person (PLN 737 and PLN 879[10] per person, respectively).

The socio-economic groups of households with the highest and the lowest equivalent income (the indicator of their affluence level) are the same as in the case of income per person. The income of household groups with the highest affluence level amounted to PLN 2314, PLN 1917 and PLN 1494 respectively, and PLN 864 for the lowest level of affluence (table 4.1.1). In March 2013, equivalent net

[8]The method of estimating equivalence scales is presented in Annex 4.

[9]This is the percentage difference in the income from two surveys for all households. In the panel sample, also average percentage change in amount of income over the two surveys may be also calculated for specific households. In the latter case the rate of change is considerably higher (37%). This difference results from the "base effect"; in lower income households the growth (or drop) in income by a certain value in the first survey yields a considerably higher percentage rate of change than in the households with a higher starting income. If the majority of changes on this individual level displays a similar tendency and is similar in terms of nominal value, and is in each event not fully proportional to the amount of starting income, then the average change is affected more by changes in those households with lower starting income being greater in percentage terms. When calculating the percentage change in average income in the entire sample, the differences in the starting level of income in specific households are of no significance and changes in the households with a lower starting income have the same weight as the changes in the households with a higher starting income. It is unresolved which of these two approaches to calculating the rate of change provides better information on the dynamics of change in the level of social affluence.

[10] The low income in this socio-economic group of households results partly from its seasonality.

income fell by almost 4% in real terms[11], in comparison to March 2011 (table 4.1.5). The highest average fall was observed in the group of households of retirees (by over 8%) as well as entrepreneurs (by almost 6%).

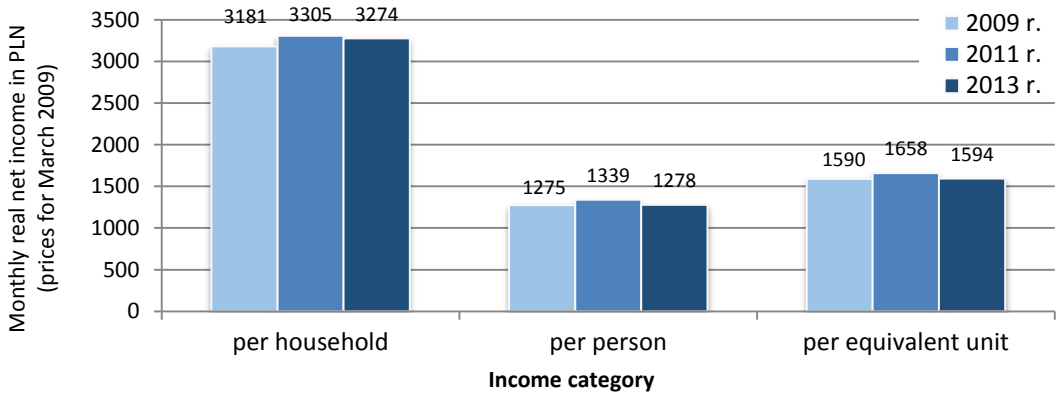

Figure 4.1.1. Real net household income in the 2009-2013 panel sample in the month preceding survey

With net income per equivalent unit being the realistic measure of households' wealth, February/March 2013 recorded visibly the lowest income levels for households of married couples with many children and in single-parent households (on average PLN 1275 and PLN 1350 respectively, table 4.1.2). In last two years, real income per equivalent unit fell most in the households of incomplete families (almost 5%).

In the households with the unemployed, the net income per equivalent unit was on average lower by over PLN 700 than in those without the unemployed (table 4.1.1). Between March 2011 and March 2013, such income fell in real terms in case of the group of households with the unemployed by nearly 5% and in the group of households without the unemployed by over 3% (table 4.5.).

Table 4.1.1. Net household income in February/March 2013 by socio-economic group and type of economic activity

Socio-economic group and type of economic activity	Net income in PLN		
	per household	per person	per equivalent unit
Employees	4118.85	1440.53	1917.14
Farmers	3404.03	879.32	1293.13
Entrepreneurs	5059.95	1669.33	2313.80
Retirees	2473.24	1374.75	1494.39
Pensioners	1856.81	1004.87	1100.34
Living on unearned sources of income	1313.30	737.35	808.12
Without unemployed members	3496.13	1450.37	1787.22
With unemployed members	2750.58	729.18	1063.37
Total	3391.01	1348.67	1685.15

The income per equivalent unit is in February/March 2013 evidently correlated with place of residence class. The average monthly income per equivalent unit is the lower the smaller the place of residence (in February/March 2013, in the biggest towns such income was on average PLN 2402, while in the rural areas – PLN 1341 (table 4.3)). In February/March 2013, evidently the lowest income per equivalent unit was recorded in Lubelskie and Świętokrzyskie Voivodeships (PLN 1387 and PLN 1402 respectively), and the highest in Mazowieckie (PLN 2067 (table 4.1.4)). In last two years, there was a considerable decrease in average real monthly income per equivalent unit for all place of residence classes (table 4.1.7). The greatest fall was observed in the largest city households (more than 6%). In terms of Voivodeship, the greatest fall in this type of income was recorded in the households in the Pomorskie Voivodeship (by around 9%).

[11]This is an index of changes in the average values for the households in the panel sample 2011-2013.

Table 4.1.2. Net household income in February/March 2013 by household type

Household type	Net income in PLN		
	per household	per person	per equivalent unit
Single-family:			
Married couples with no children	3530.46	1669.93	2031.98
Married couples with 1 child	4246.26	1343.28	1908.78
Married couples with 2 children	4554.56	1104.04	1724.62
Married couples with 3+ children	4089.10	744.01	1275.09
Single-parent families	2677.38	1033.71	1349.63
Multi-family	4966.55	912.55	1505.26
Non-family:			
One-person	1761.46	1761.46	1614.44
Multi-person	2752.56	1124.18	1446.46

Table 4.1.3. Net household income in February/March 2013 by place of residence class

Place of residence class	Net income in PLN		
	per household	per person	per equivalent unit
Towns of more than 500k	4309.38	2028.89	2401.65
Towns of 200k-500k	3633.15	1604.03	1948.92
Towns of 100k-200k	3279.73	1386.86	1704.78
Towns of 20k-100k	3200.73	1320.92	1630.96
Towns of fewer than 20k	3301.11	1279.20	1616.25
Rural areas	3094.31	1001.01	1349.11

Table 4.1.4. Net household income in February/March 2013 by Voivodeship

Voivodeship	Net income in PLN		
	per household	per person	per equivalent unit
Dolnośląskie	3272.53	1382.73	1690.76
Kujawsko-pomorskie	3121.12	1240.61	1554.86
Lubelskie	2793.37	1114.34	1386.58
Lubuskie	3270.14	1269.40	1608.47
Łódzkie	3082.15	1246.64	1552.83
Małopolskie	3475.02	1407.88	1742.01
Mazowieckie	4105.30	1664.47	2067.17
Opolskie	3355.70	1206.40	1562.36
Podkarpackie	3133.95	1089.94	1423.98
Podlaskie	3189.96	1221.12	1543.98
Pomorskie	3587.37	1403.19	1762.26
Śląskie	3399.13	1382.43	1713.59
Świętokrzyskie	2875.48	1123.91	1402.03
Warmińsko-mazurskie	3109.18	1209.41	1536.01
Wielkopolskie	3420.31	1303.50	1649.82
Zachodniopomorskie	3465.08	1419.93	1765.28

Table 4.1.5. Changes in real net income in the last month in 2009-2013 by socio-economic group and type of economic activity

Socio-economic group and type of economic activity	Net income in the last month					
	per household		per person		per equivalent unit	
	March 2011-March 2009	March 2013-March 2011	March 2011-March 2009	March 2013-March 2011	March 2011-March 2009	March 2013-March 2011
Employees	103.05	99.28	103.78	95.26	103.33	95.96
Farmers	113.33	100.89	107.36	103.36	109.36	101.38
Self-employed	105.10	99.26	104.93	96.42	104.87	96.93
Retirees	115.30	99.30	112.59	89.31	112.88	91.90
Pensioners	104.81	98.91	102.99	89.24	103.15	94.24
Living on unearned sources of income	108.04	103.35	112.24	98.81	109.10	98.29
Without unemployed members	103.21	99.34	104.86	96.28	103.98	96.79
With unemployed members	109.90	98.98	107.58	94.36	107.98	95.32
Total	103.87	99.09	105.03	95.39	104.29	96.10

Table 4.1.6. Changes in real net income in last month in 2009-2013 by household type

Household type Single-family:	Net income in the last month					
	per household		per person		per equivalent unit	
	March 2011-March 2009	March 2011-March 2009	March 2011-March 2009	March 2011-March 2009	March 2011-March 2009	March 2011-March 2009
Single family						
Married couples with no children	105.57	101.43	103.45	97.19	103.32	97.96
Married couples with 1 child	106.71	102.51	110.18	93.49	108.50	95.79
Married couples with 2 children	106.27	102.56	109.09	96.37	107.74	98.50
Married couples with 3 or more children	99.04	101.79	102.15	95.89	101.39	97.07
Single-parent families	105.89	101.78	102.35	92.88	102.53	95.27
Multi-family	101.08	102.72	100.54	96.28	101.26	96.22
Non-family:						
One-person	103.54	97.78	103.57	98.09	103.84	97.98
Multi-person	100.35	123.45	103.87	92.94	96.99	106.05

Table 4.1.7. Changes in real net income in the last month in 2011-2013 (2011=100) by place of residence class

Place of residence class	Net income in the last month					
	per household		per person		per equivalent unit	
	March 2011-March 2009	March 2013-March 2011	March 2011-March 2009	March 2013-March 2011	March 2011-March 2009	March 2013-March 2011
Towns of more than 500k	105.71	94.91	105.28	93.10	104.75	93.68
Towns of 200k-500k	102.88	101.64	103.04	98.90	103.24	99.03
Towns of 100k-200k	100.36	101.38	104.24	96.73	102.96	97.53
Towns of 20k-100k	102.46	97.32	106.22	92.30	104.27	93.34
Towns of fewer than 20k	99.99	101.49	103.25	98.29	101.64	98.89
Rural areas	106.53	99.92	105.59	96.19	105.78	96.80

Table 4.1.8. Changes in real net income in last month in 2011-2013 (2011=100) by Voivodeship

Voivodeship	Net income in the last month					
	per household		per person		per equivalent unit	
	March 2011-March 2009	March 2013-March 2011	March 2011-March 2009	March 2013-March 2011	March 2011-March 2009	March 2013-March 2011
Dolnośląskie	100.96	95.57	103.45	95.19	102.29	94.82
Kujawsko-pomorskie	105.99	105.69	105.66	106.35	105.35	106.23
Lubelskie	102.02	100.20	107.65	95.68	105.41	96.38
Lubuskie	101.28	102.25	106.45	96.25	104.53	97.32
Łódzkie	103.40	94.71	104.62	91.32	103.83	92.24
Małopolskie	109.34	94.32	108.63	96.14	108.63	94.72
Mazowieckie	100.92	100.42	102.97	95.65	101.83	96.94
Opolskie	99.32	102.44	96.77	93.42	96.27	96.66
Podkarpackie	112.66	99.63	108.05	92.60	109.16	94.92
Podlaskie	116.34	92.27	108.47	96.44	111.17	94.38
Pomorskie	102.56	98.01	104.41	90.00	104.71	91.16
Śląskie	104.48	100.57	106.32	94.21	105.52	95.48
Świętokrzyskie	109.35	99.96	104.48	96.94	106.46	97.39
Warmińsko-mazurskie	104.89	97.57	102.61	95.14	102.28	95.61
Wielkopolskie	103.79	100.57	107.95	95.70	105.78	97.18
Zachodniopomorskie	95.29	104.68	102.34	100.40	99.25	101.11

Households' income inequality was measured with the Gini coefficient and the coefficient of decile variation defined as the relation of the ninth decile to the first decile in the income distribution[12]. The most adequate income category for examining the income inequality in this case is the income per

[12]The Gini coefficient takes into account the households' shares in the total income. Meanwhile the coefficient of decile variation, when assessing the extent of uneven income distribution, takes into account only the income of 10% of lowest income households and 10% highest income, that is, the extreme income groups (cf. Panek, 2011).

equivalent unit, based on which the income of households with varied demographic composition may be compared.

The equivalent income inequality measured with the Gini coefficient kept on falling in the last four years. The value of this coefficient in March 2009 was 0.313, 0.301 in March 2011 and 0.299 in March 2013.

In the last two years, we have also observed a fall in income level inequality for the highest and lowest equivalent earnings groups, that is, the inequalities between the two income groups at opposite extremes narrowed, though by no more than 1%.

Between March 2009 and March 2013, there was a marked flow of households between decile of equivalent net income (table 4.1.9), which indicates changes in relative levels of wealth (compared to all other households) over this period. The percentage of households that in the study period belonged to the same decile group is in the table below. The smallest household flows were in borderline decile groups (1st and 10th), which is above all because the flows here can only be in one direction.

Table 4.1.9. Flows between household equivalent net income decile groups between March 2009 and March 2013.

Decile groups March 2009	Percentage of decile group households in March 2013 in household equivalent net income decile group in March 2013 (%)									
	1	2	3	4	5	6	7	8	9	10
1	44.1	17.8	14.1	6.5	6.7	4.0	1.6	1.6	2.2	1.4
2	22.5	27.4	14.1	10.4	9.7	4.4	5.2	2.9	2.6	0.8
3	11.8	21.0	22.3	14.5	7.6	8.8	6.4	3.2	2.4	2.0
4	7.1	10.0	19.9	23.3	14.5	7.6	7.0	4.9	4.5	1.2
5	5.0	6.9	9.1	16.1	21.2	13.9	12.4	7.2	3.8	3.7
6	4.1	5.4	6.9	10.5	15.9	22.6	14.8	8.2	8.2	4.0
7	2.2	6.2	5.6	7.4	10.6	17.8	18.9	13.3	12.0	6.1
8	1.5	3.8	4.2	5.6	6.1	10.6	17.9	26.5	16.9	7.0
9	1.4	1.2	2.6	4.1	6.3	7.4	11.5	23.7	26.1	15.5
10	0.3	0.3	1.3	1.5	1.5	2.8	4.4	8.5	21.4	58.2

Of the least well-off households in March 2009 (1st decile group), over 445 remained the least well off in March 2013. The greatest flow from this group was into the neighboring decile at almost 18%, and then 14% into the third decile group. Flows from the 1st decile in March 2009 basically decreased together with an increase in the size of the group in March 2013. However, 1.4% and 2.2% of the least well off households in March 2009 entered the most well off groups (9th and 10th decile) in March 2013.

58% of the most well off households in March 2009 (10th decile) remained in this group in 2013. The flows from this group to lower deciles fell together with the fall in the numbers of these groups. Only around 0.6% of the most well off households in March 2009 reported such a drastic fall in levels of prosperity as to find themselves in the groups of the 20% poorest households in March 2013.

In February/March 2013, the lowest monthly minimum net income in PLN, as stated by the surveyed households, was PLN 1489 per equivalent unit. This rose by PLN 134 (figure 4.1.2) in 2009-2013 by over 10%. The aspirations of the households as regards minimum income however fell by over 2% in real terms from March to March 2009 to 2013.

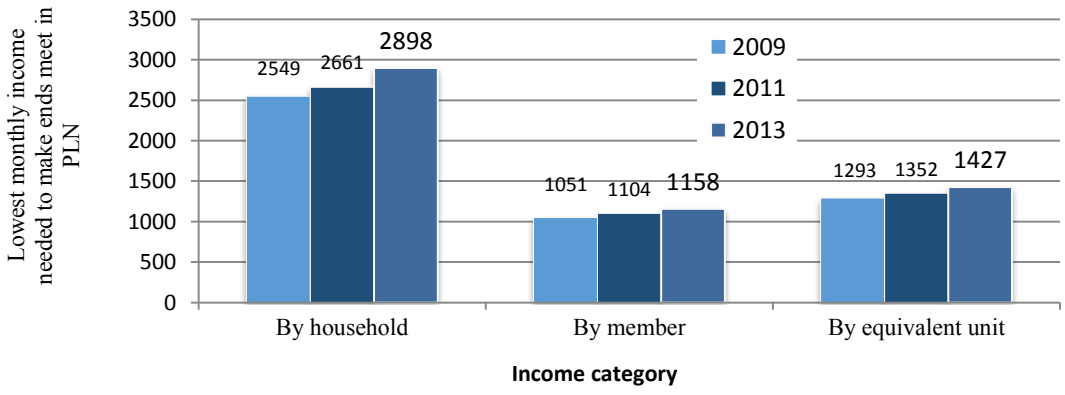

Figure 4.1.2. The lowest monthly minimum net income in PLN in the 2009-2013 panel sample

In the period March 2011 to March 2013, equivalent monthly minimum net income rose minimally by less than 6% (figure 4.1.3).

This however indicates a fall in household real terms aspirations by around 6%.

In February/March 2013, the highest aspirations concerning minimum acceptable equivalent income were noted in the households of entrepreneurs members and the households of employees, as well as in the households of married couples with no children and non-family single-person households (the equivalent minimum income indicated was PLN 1777, PLN 1578, PLN 1688 and PLN 1607 accordingly). In February/March 2013, the lowest income aspirations were declared by the households with the lowest income, that is the households living on unearned sources (PLN 1114 per equivalent unit) and the households of married couples with many children (PLN 1159 per equivalent individual).

The last two years saw a marked growth in income aspirations in nominal terms in all household groups selected by income source and household type. However, at the same time we see a real terms fall in income aspirations in the household groups living on unearned sources, pensioners, incomplete families and couples with one child.

The level of monthly equivalent minimum net income as declared by the households without the unemployed is significantly higher than in the case of the households with the unemployed (PLN 1548 and PLN 1140, accordingly). In March 2013, the level of such income decreased in real terms in the household group with unemployed members (over 2%) in compared to March 2011, while in households without unemployed members there was no noticible change.

The level of aspirations as regards the lowest monthly minimum net income generally fell with the size of place of residence. The lowest level of monthly minimum net income per equivalent unit was declared by rural households (PLN 1226). As regards the regional distribution, the households declaring the lowest income were in the Podkarpackie, Świętokrzyskie and Podlaskie Voivodeships (PLN 1089, PLN 1191 and PLN 1293 per equivalent unit respectively). In the period 2011-2013, we observed a drop in households from large towns of 200-500 thousand residents and middle-sized towns of 100-200 thousand. Meanwhile, in terms of Voivodeship, the largest fall in such aspirations took place in Świętokrzyskie and Śląskie Voivodeships.

4.1.2. Strategies for coping in difficult financial situations

In February/March 2013, the studied households most frequently declared (36% of households) a certain difficulty making ends meet (36% of households), nearly 20% coped with difficulty and over 17% with great difficulty. In the last four years, the percentage of households that make ends meet with great difficulty or with difficulty declined significantly (by almost 2 p.p., figure 4.1.3).

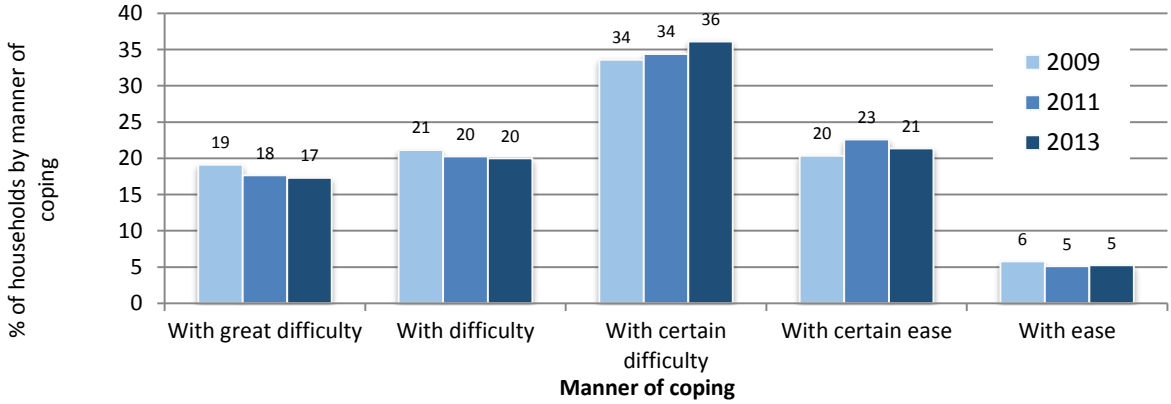

Figure 4.1.3. How households coped on income earned between 2009-2013 in the panel sample

In 2011-2013, the share of households making ends meet with great difficulty fell insignificantly by nearly one percentage point.

The largest share of households making ends meet with great difficulty in 2013 was in those living on unearned income (almost 59%) and pensioners (almost 37%). Among the groups selected by household type, incomplete families were the most numerous in this category of household (almost 29%), as well as one-person non-family households (over 24% of households). The largest share of households making ends meet with great difficulty in 2013 was in the unearned income group (almost

59% of households) and those receiving welfare payments (almost 37%). Among the groups selected by household type, incomplete families were the most numerous in this household category (almost 29%), as well as one-person non-family households (over 24% of households). As much as 36% of households with unemployed members had great difficulty in making ends meet, while those without most often had certain difficulties (over 36% of households in this group). Households in great difficulty given their current income were most often to be found in rural areas (around 20% of rural households) and in the Łódzkie (25% of that Voivodeship).

In the last two years, the share of households making ends meet with great difficulty fell markedly in the groups of households selected by source of income exception of employees and those on welfare payments. However, we observe a marked rise in the share of households making ends meet with great difficulty over this time among those with unemployed members (almost 2 p.p.), in the largest cities (over 2 p.p.) as well as in Kujawsko-Pomorskie (over 3 p.p.), Wielkopolskie and Opolskie (2 p.p. respectively).

When assessing ways of managing money in 2013, households most frequently stated that they had enough money thanks to living frugally (over 37%), and 21% declared they lived very frugally to save up for more important purchases. In the last 4 years, the share of households stating they lived very frugally to save up for more serious purchases rose markedly by 5 p.p. (figure 4.1.4). At the same time, the share of households declaring they had money thanks to frugal living fell as that who admitted they could afford everything without denying themselves yet not saving up (over 2 p.p. and almost 2 p.p respectively).

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In the last two years the shares of households of selected income management type did not change significantly.

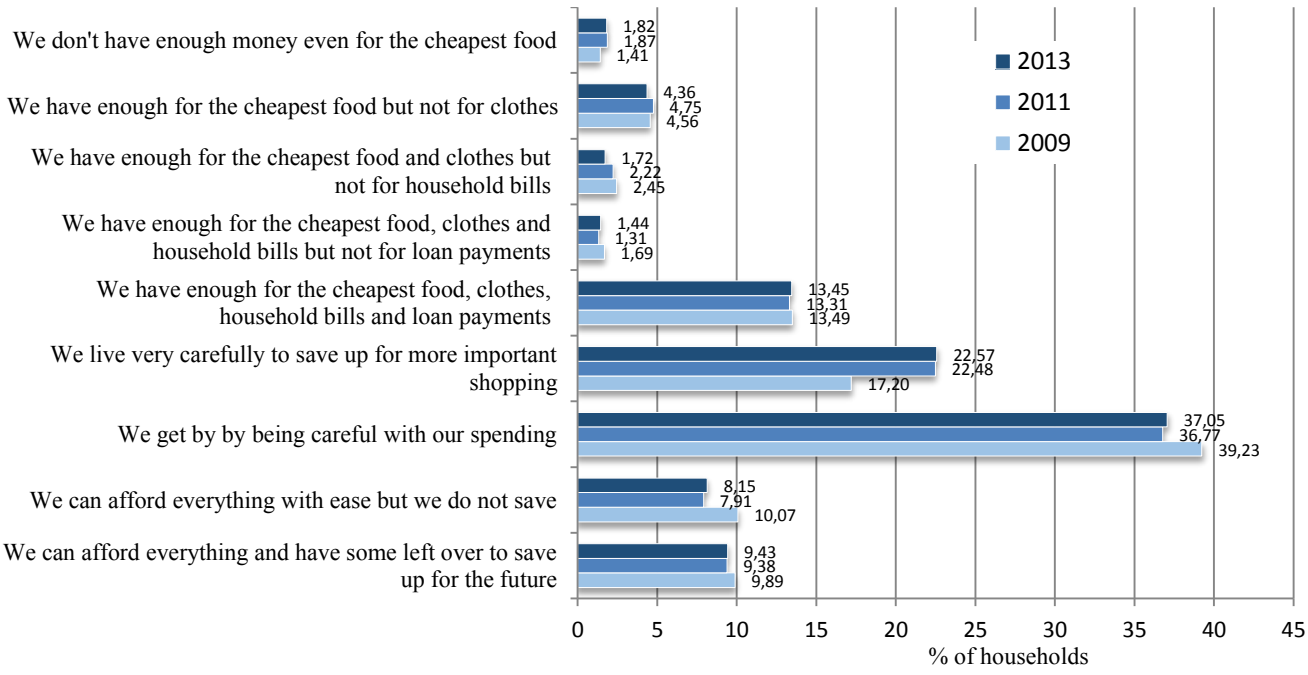


Figure 4.1.4. The manner in which households manage income in the 2009-2013 panel sample

Households declaring that they could not afford even the cheapest food (the worst income situation assessment), of which there were less than 2% in February/March 2013, were significantly most frequent in the unearned income household group at over 18% as well as non-family single-person households and incomplete families at almost 4 and 3% respectively. Both the group of households with unemployed members and in that without unemployed members declared they had money by living

frugally (over 26% and over 39% respectively). However, as much as over 6% of households with unemployed members claimed they could not afford even the cheapest food, and around 10% that they could afford the cheapest food but not clothing. Meanwhile, in the group without unemployed members, this form of money management was indicated by only 1% and over 3% of households respectively.

The shares of households that worst assessed their income situation were not significantly differentiated in terms of place of residence class and Voivodeship. Relatively the largest share of households indicating that they could not afford even the cheapest food was to be found in towns of 100-200 thousand inhabitants and in rural areas at over 2% respectively. The Voivodeships with relatively the largest frequency of households that worst assessed their income situation were Warmińsko-Mazurskie, Świętokrzyskie and Lubuskie, at over 3% in each. The rise in the percentage of households reporting a lack of money for even the cheapest food occurred among those on unearned income over the last 2 years (by almost 5 p.p.). The insignificant rise in the share of households that assessed their way of managing income most pessimistically took place, moreover, in the largest towns groups and in Świętokrzyskie, Łódzkie and Zachodniopomorskie, rising by over 1 p.p.

In February/March 2013, around 25% of households declared their incomes were insufficient to satisfy their daily needs. In the last four years, the share with incomes that did not allow daily needs satisfaction fell by over 3 p.p. (figure 4.1.5), with this figure falling by almost 2 p.p. in the last two years.

Households declaring incomes that did not satisfy daily needs were most frequently in the household groups with unearned incomes (almost 70%), those receiving welfare payments (over 45%), in the group of incomplete households (over 37%) and couples with many children (almost 35%) in February/March 2013. 46% of the unemployed members group reported the same, while in that without unemployed members the figure was just over 21%.

Households with incomes insufficient to satisfy daily needs were most frequent in rural areas at almost 30% and in Warmińsko-Mazurskie and Świętokrzyskie at over 32% and almost 32% respectively.

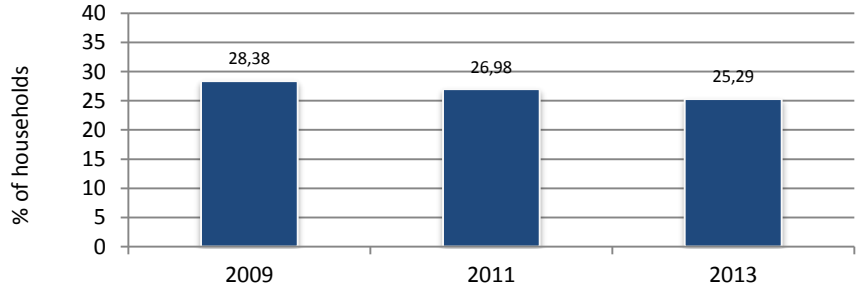


Figure 4.1.5. Percentage of households whose regular income did not cover current needs between in the 2009-2013 panel sample

Between 2011-2013, the proportion of households reporting their stable income was insufficient to satisfy basic needs only rose significantly in the groups with unearned sources of income by over 2 p.p., and those living in Warmińsko-Mazurskie over 2 p.p, Kujawsko-Pomorskie nearly 2 p.p and Mazowieckie over 1 p.p.

In February/March 2013, households most often declared that in situations of income insufficiency they limit their daily needs in almost 89% of cases, while nearly 41% gain the help of relatives or 20% take loans. In only fewer than 18% of households in this situation do members take on additional work. Over the last four years relatively the largest growth in share of households with incomes insufficient to meet daily needs was reported in those receiving church of social welfare support at over 3 p.p. respectively (figure 4.1.6) At the same time, the share of households that took out loans in this situation fell most markedly by almost 5%.

Between 2011-2013, the fastest growing share of households with incomes insufficient to meet daily needs was that which took other action (over 6 p.p.), gained the help of relatives or social care (by almost 3 p.p. for each). The proportion of households in which a member took on extra work also increased markedly by almost 2 p.p. Meanwhile those that took loans fell significantly by 2 p.p.

Household groups selected in terms of all applied study criteria that declared limitation of daily needs in the case of insufficient income did not display much variation. Self-employed and non-family multiperson households most frequently in February/March 2013 limited their needs at 93% and 94% of households respectively. Households taking this course of action were located relatively most

frequently in the smallest towns (over 92% of households) and over 95% in Zachodniopomorskie and Łódzkie.

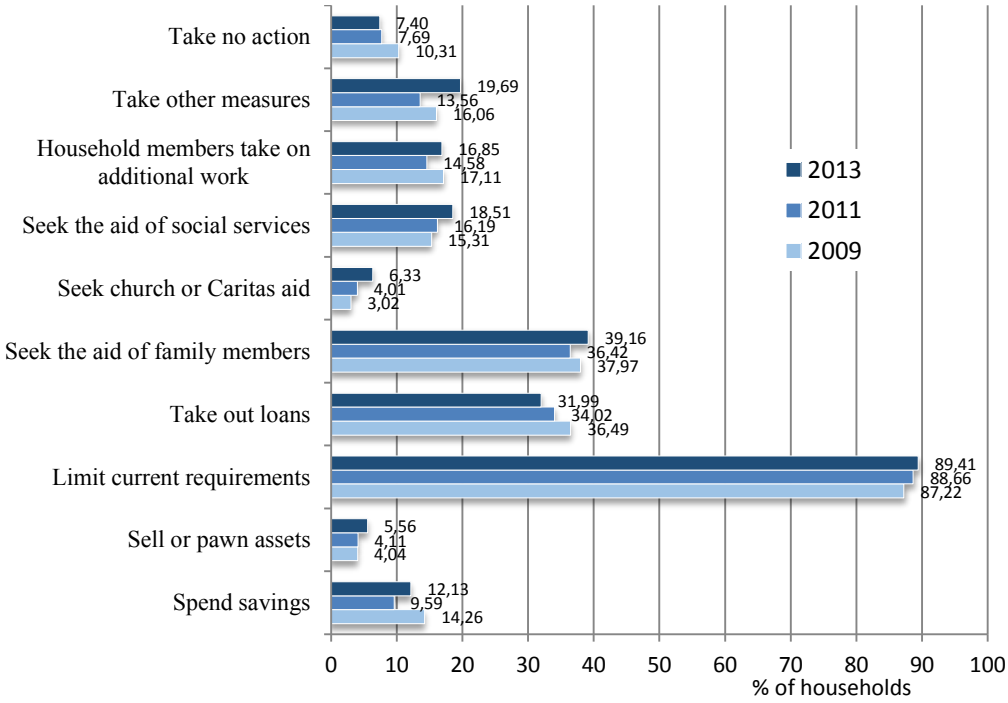


Figure 4.1.6. Measures taken by households when stable income does not meet current needs in the 2009-2013 panel sample

The households that most frequently took loans when their stable income did not meet daily needs were that of physical workers at almost 40% and incomplete family households (over 40%). This occurred most frequently among households residing in middle-sized towns of 100-200 thousand residents (over 40% of households) and in Warmińsko-Mazurskie at over 42%.

In February/March 2013, households that received the aid of relatives when their stable income did not meet daily needs were those subsisting on unearned sources of income and those receiving welfare payments at almost 60% and almost 51% respectively, as well as non-family single-person households (almost 46%). These households most frequently dwelt in middle-sized towns of 100-200 thousand residents (over 53%), Warmińsko-Mazurskie (almost 60%) and Kujawsko-Pomorskie at over 54%.

When stable incomes were insufficient to satisfy daily needs, both households with and without unemployed members most frequently reacted in the same way as groups of households selected by other typological criteria. However, what is noticeable is how much more often households with unemployed members receive welfare payments (almost 38%) than those without (less than 14%) when in a situation of lack of income.

As far as active measures are concerned, such as taking on additional work by a household member in situations when stable income is insufficient to satisfy daily needs, entrepreneur households and farmers were relatively the most frequent at over 31% and almost 30% respectively, as well as couples with many children (almost 34%) while least frequent were households of pensioners at 6%, those receiving welfare payments at almost 11% and non-family households at over 7%. Households that preferred this kind of activity most frequently dwelt in the largest towns of over 500 thousand residents at over 21% as well as Lubelskie and Kujawsko-Pomorskie (almost 26% and over 24%).

In February/March 2013, almost 33% of households assessed their income situation as worse than 2 years ago and almost 56% reported that it had not changed. The percentage of pessimistic assessments of change was therefore around 8 p.p. higher than in 2011. A pessimistic assessment of change was most frequent among households living on unearned sources of income at over 58%, incomplete family households and couples with many children (almost 41% and almost 40% respectively). In the group with unemployed household members, over 56% reported that their income situation had deteriorated, while in that without unemployed members only just over 29% claimed this was the case. Households reporting a worsening in their income situation compared to 2 years ago were most frequently resident

in rural areas (over 36%), while almost 39% were to be found in Łódzkie and over 36% in Mazowieckie and Dolnośląskie.

4.1.3 Change in long-term coping strategies

In the last 13 years the percentage of households that made ends meet with great difficulty and difficulty fell markedly by 14 p.p. and 6 p.p. respectively, and those coping rather well and well rose (11 p.p. and 3 p.p. respectively, figure 4.1.7).

In last 13 years, the greatest increase was observed in the households reporting they live frugally and thus can afford everything (by 10 p.p.). The percentage of households which can afford everything and make savings for the future also increased by 8 p.p., while the percentage of households in the most difficult situation, which have no money for loan repayments, rent or clothes decreased (figure 4.1.8). There was also an increase of the percentage of living very frugally in order to save money for important purchases on the level recorded in 2000.

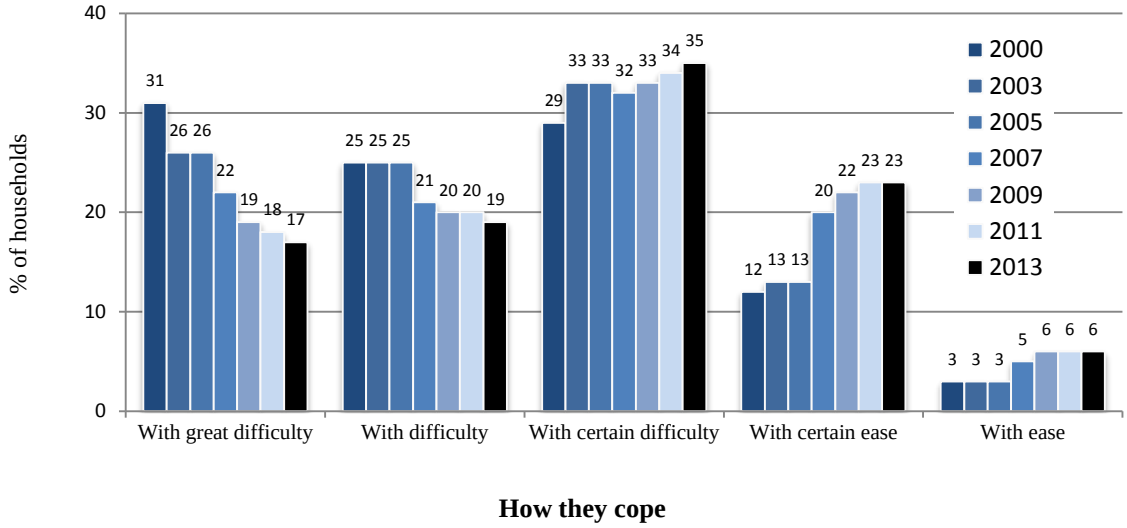


Figure 4.1.7. The degree to which households make ends meet between 2000-2013 in whole samples

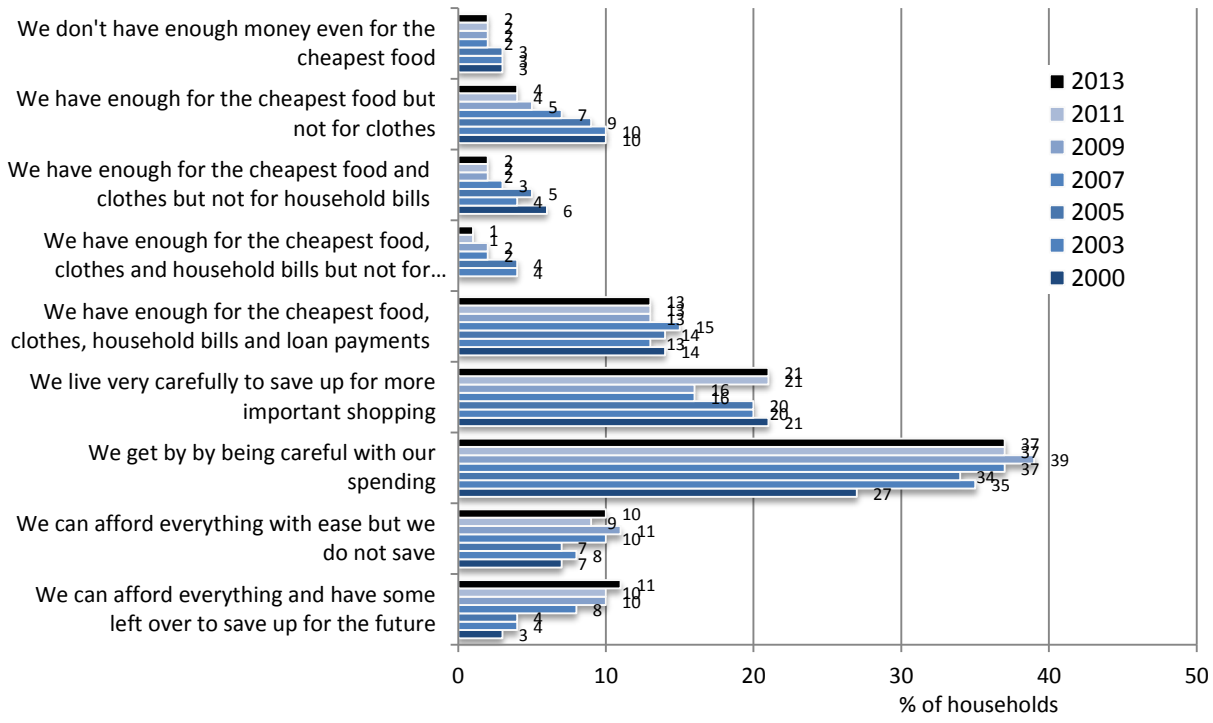
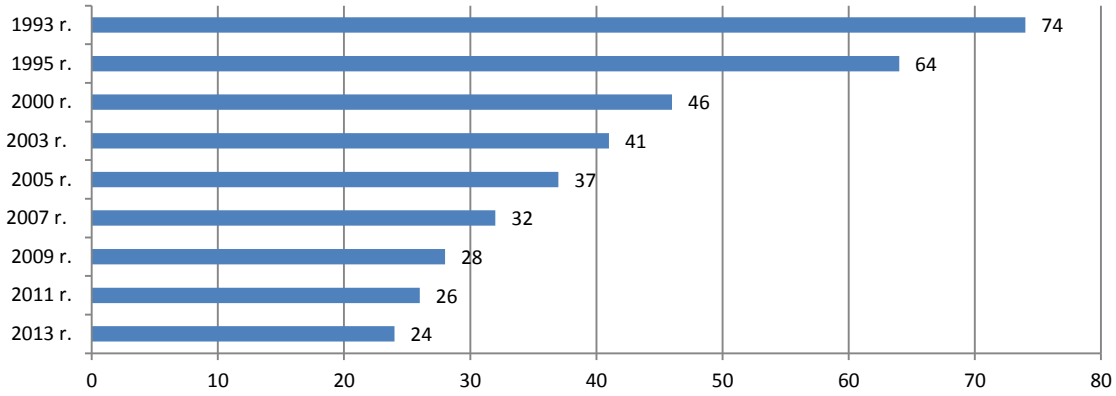


Figure 4.1.8. How households manage income between 2000-2013 in whole samples

24% of households declared that their regular income was not enough to meet their current needs. In last two years, the percentage whose income did not meet current needs dropped by 2 p.p. and in 1993-2011 there was an over threefold drop (figure 4.1.9).



Source of data: 1993-1997 – Czapiński, 1998; 2000-2013 – *Social Diagnosis*

Figure 4.1.9. Percentage of households declaring that regular income did not cover current needs between 1993-2013 in whole samples

Since 1993, the percentage of households which limited their current needs, started additional jobs, used their savings or took out loans when having insufficient income decreased (table 4.1.10). There was also a decline in the percentage of helpless households which did not take any actions in a difficult financial situation, with a simultaneous increase of the households which in such a situation asked for external assistance (mainly social assistance). In relations to the last reading from 2011, the share of households relying on loans to close their budget fell markedly and that of households receiving Church/Caritas aid, social welfare and that taking other forms of action increased.

Table 4.1.10. Percentage of households declaring various measures of coping with financial difficulties and meeting current needs among households with insufficient regular income to cover current needs in whole weighted samples from 1993 to 2013

Coping measures in times of financial difficulty	1993 N=1700	2000 N=1350	2003 N=1579	2005 N=1598	2007 N=1745	2009 N=3433	2011 N=3100	2013 N=3121
Limiting requirements	93.3	88.8	88.7	92.5	89.5	89.2	86.4	88.8
Taking on additional work	29.4	32.9	22.9	22.1	21.5	18.1	16.3	17.5
Spending savings	20.8	15.1	16.6	9.5	8.5	7.6	13.0	12.7
Taking out loans	43.3	44.6	50.7	42.9	42.0	40.9	35.5	29.4
Seeking the aid of family members	44.7	42.9	40.3	35.5	39.1	39.5	38.9	40.7
Seeking the church aid	1.0	0.8	1.3	0.7	1.9**	3.4**	3.3**	6.3
Seeking the aid of social services	7.5	7.1	11.7	13.4	16.2	16.7	15.5	19.9
Sale of assets	ND	ND	5.7	6.9	5.9	4.4	4.5	5.9
Taking other measures	ND	ND	19.0	20.3	23.4	16.6	16.2	19.7
Taking no action	ND	ND	13.1	12.6	11.3	9.8	10.7	7.5

* in relation to the households whose income is insufficient to meet the current needs
** since 2007 "assistance from the Church/Caritas"
Source of data: 1993 – Czapiński, 1998; 2000-2013 – *Social Diagnosis*

4.1.4. Social aid

The share of households receiving external aid in whatever form amounted to 11%, which was almost the same as two years ago (10.9%). There was no rise in households receiving all three forms of aid in relation to the level at the beginning of the century while in relation to 2011, the percentage of households receiving the specified forms of aid fell (figure 4.1.10).

The scope of aid varies strongly according to socio-economic group, household type and Voivodeship.

Couples with and without children, those with three or more children, single and multi-person non-family households and incomplete families received welfare payments significantly more often than the

remaining household groups (figure 4.1.11). Couples without children received aid the most seldom at 4.3% and couples with one child at 5.4%. Aid to couples with three or more children fell to a marked degree, while it increased as regards unmarried couples and incomplete families. Among all types of household, poor households (under 1 income quartile) received external aid significantly more often, though the share of most well-off households receiving was significantly high among unmarried couples, non-family households and couples with three or more children (figure 4.1.12).

Over half the households subsisting on unearned incomes and one in four pensioners received external aid with the smallest share of aid receivers being in the household group of the entrepreneurs at 3%. Almost the same share of physical worker (7.8%), farmer (8.8%) and pensioner (9.8%) households received external aid (figures 4.1.13 and 4.1.14).

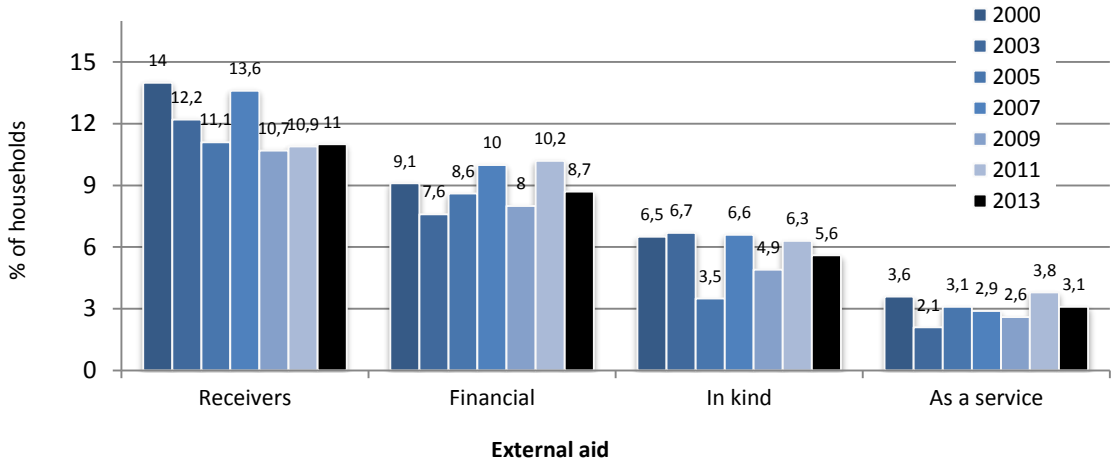
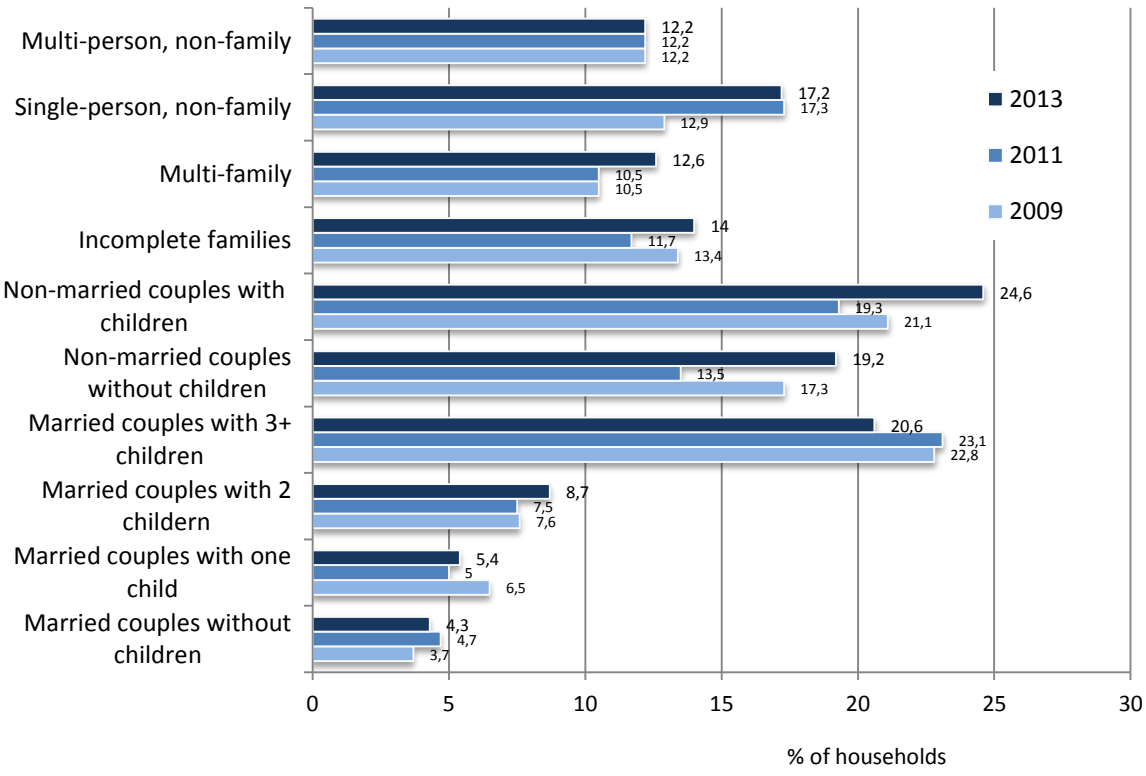
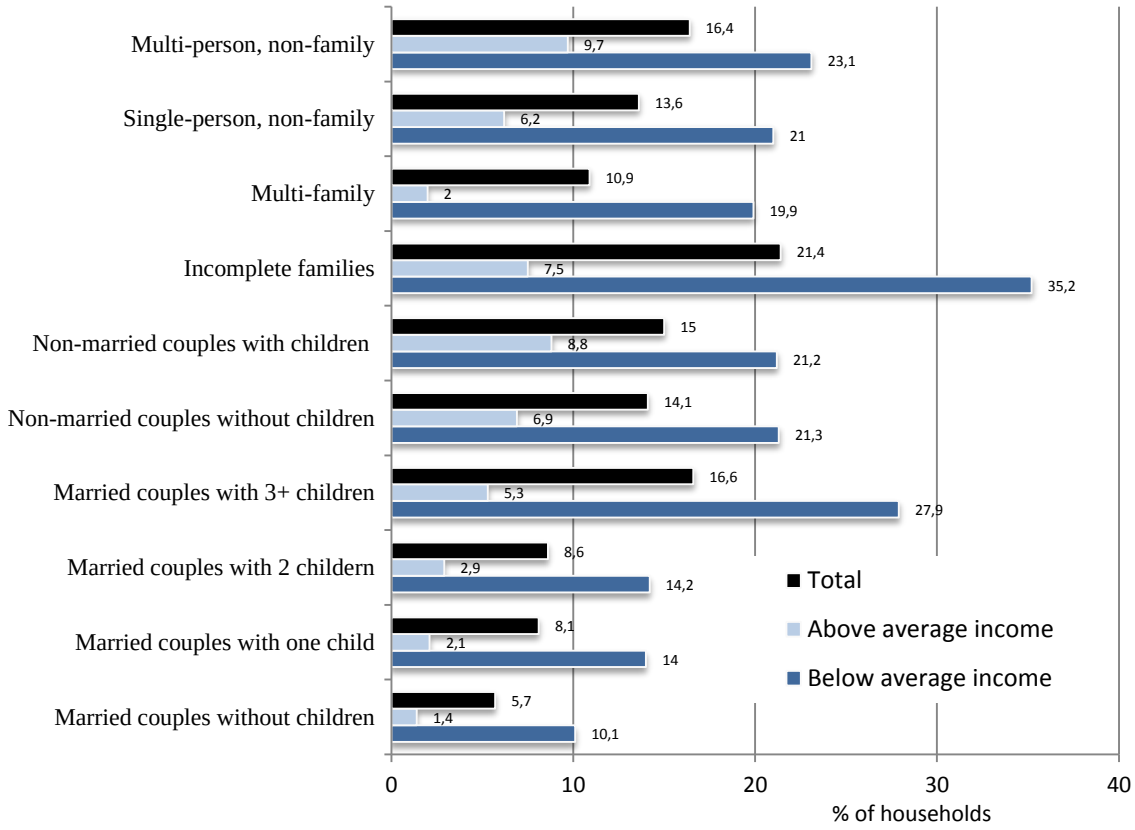


Figure 4.1.10. Percentage of households receiving external aid and households receiving specified aid in 2000-2013 in whole samples.



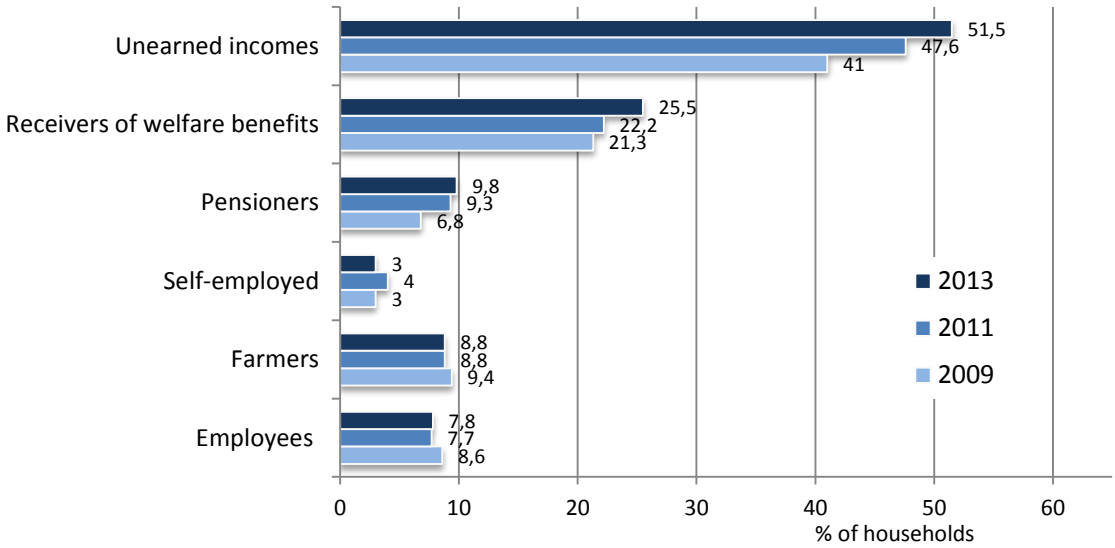
NOTE: household type main effect $F(9, 5968)=35,161$, $p<0.000$, $\eta^2= 0.050$, year of study main effect $F(1,6968) < 2$, ns., $\eta^2=0.000$, effect of household type and study year interaction $F(9, 5968)=2,21$, $p<0.05$, $\eta^2 = 0.003$.

Figure 4.1.11. Percentage of households receiving external aid in 2011 and 2013 in terms of panel sample household type.



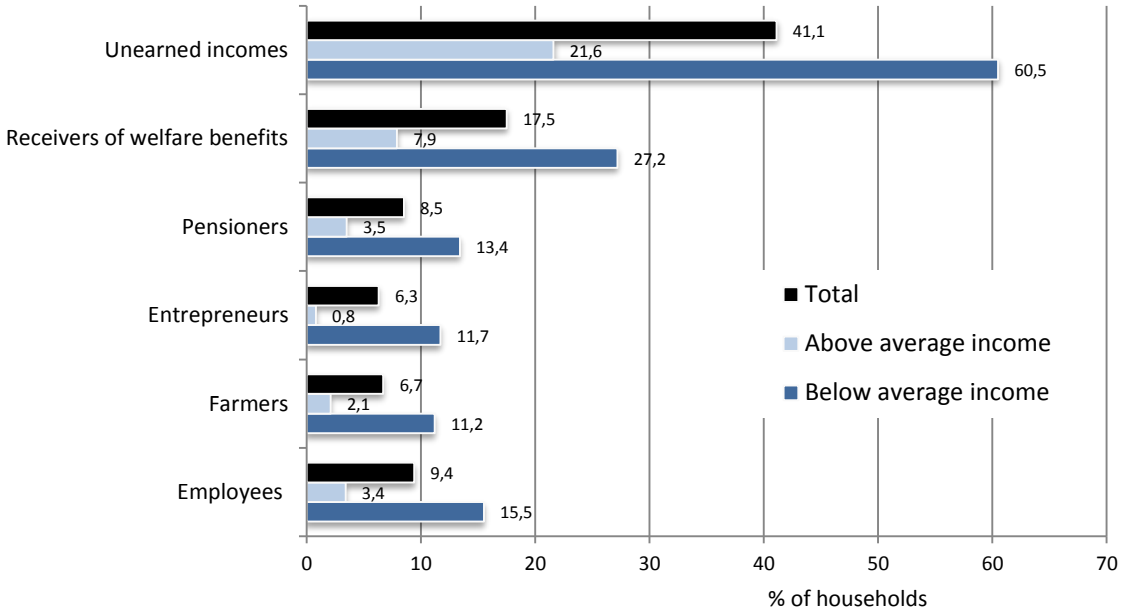
NOTE: household type main effect F(9, 10890)=16,467, p<0.000; η^2= 0.013, main income effect F(1, 10890)=241,173, p<0.000, η^2=0.022, effect of household type and income interaction F(9, 10890)=4, 312, p<0.000, η^2 = 0.004

Figure 4.1.12. Percentage of households receiving external aid in terms of household type and equivalent unit income (below and above average income)



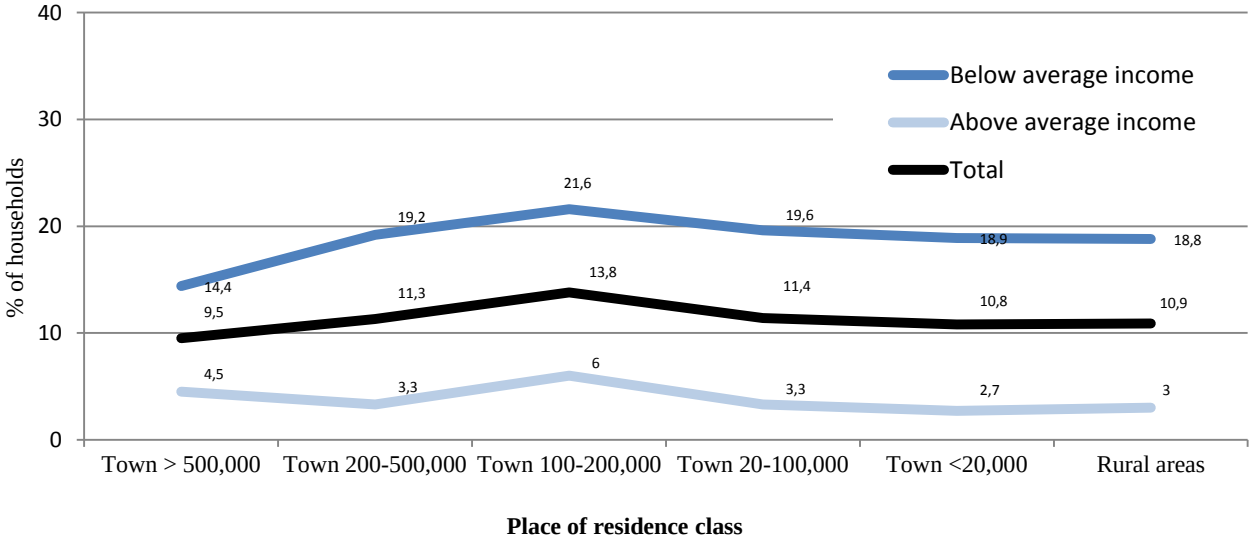
NOTE: main group effect F(5, 6191)=159,476, p<0,000, η^2= 0.114, year of study main effect F(1, 6191)=15,799, , p<0,003, η^2=0,000, effect of group and year of study interaction F(5, 6191)= 7,077, p < 0.000, η^2 = 0.006.

Figure 4.1.13. Percentage of households receiving external aid in 2009, 2011 and 2013 in terms of panel sample socio-economic group



NOTE: main group effect F(5, 11162)=81,321, p<0.000; η^2= 0.035, main income effect F(1, 11162)=286,305, p<0,000, η^2=0,025, effect of group and income interaction F(5, 11162)=15,476, p<0.000, η^2 = 0.007.

Figure 4.1.14. Percentage of households receiving external aid in terms of socio-economic group and equivalent unit income (above and below average income)

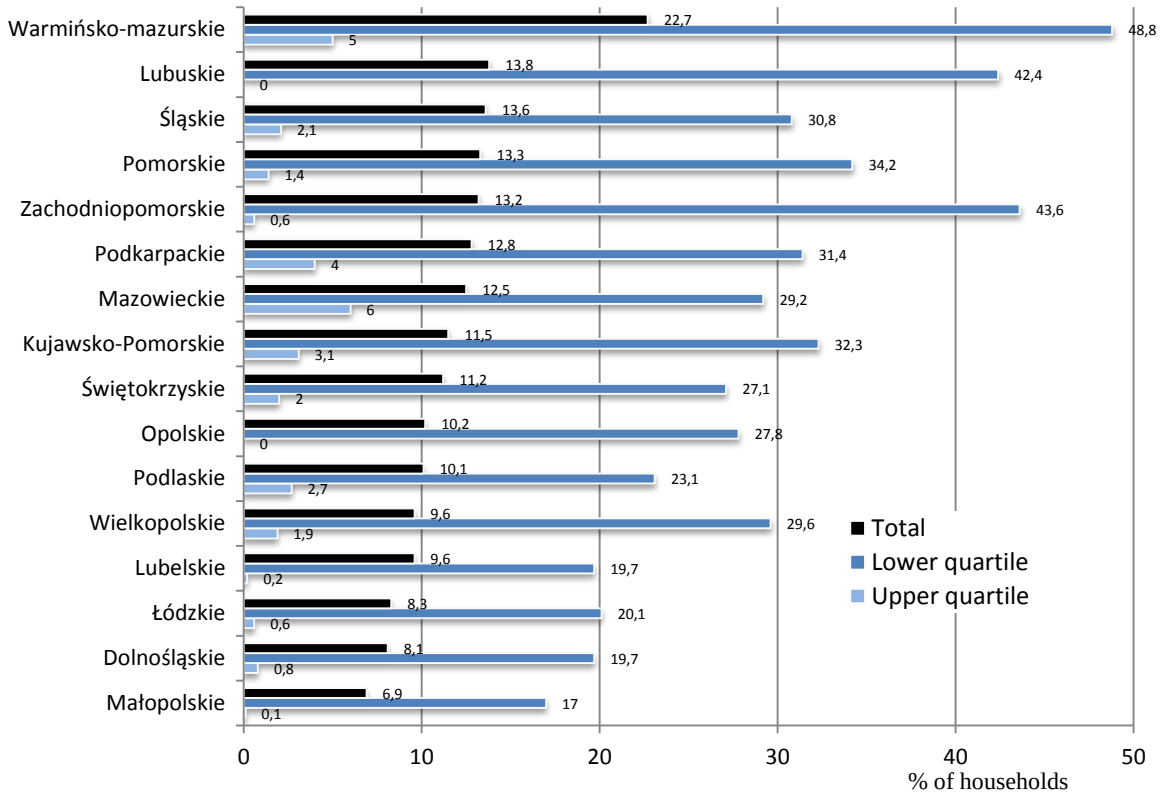


NOTE: main place of residence class effect F(5, 11278)=2,488, p<0.05; η^2= 0.001, main income effect F(1, 11278)=537,327, p<0.000, η^2=0.045, effect of place of residence class and income interaction F(5, 11278)=2,345, p< 0.05, η^2 = 0.001.

Figure 4.1.15. Percentage of households receiving external aid in terms of class of place of residence and equivalent unit income (above and below average income)

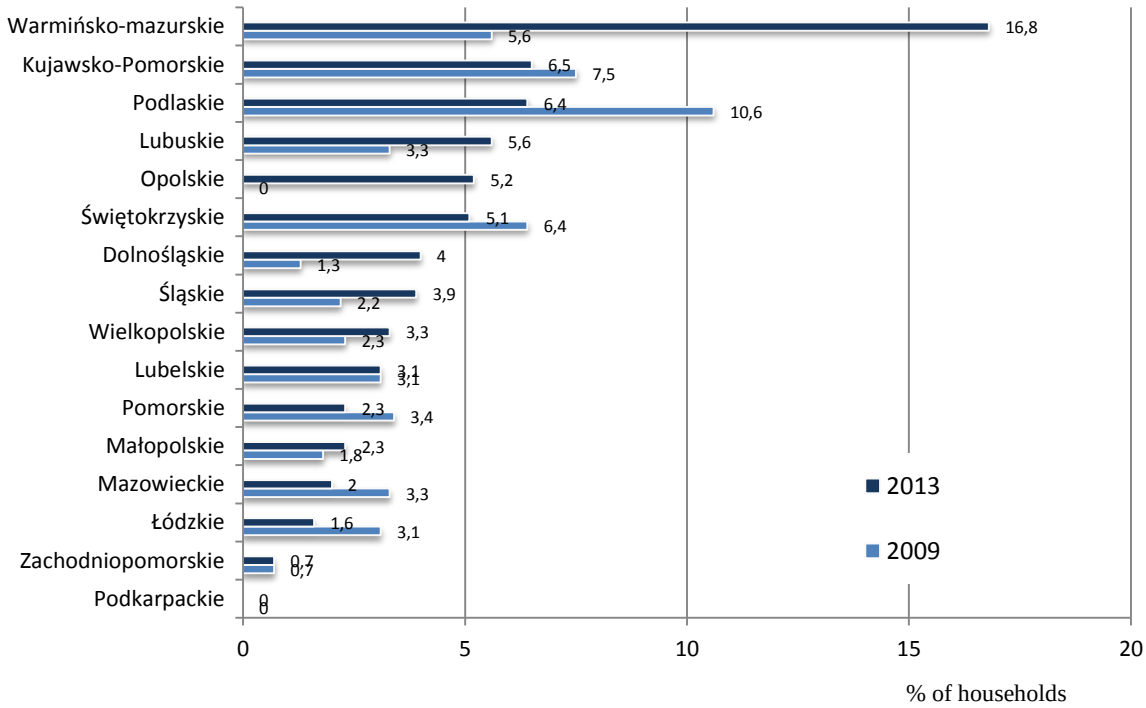
Households in middle-sized towns accepted external aid more often than those of the largest towns and those in rural areas (figure 4.1.15)

The greatest share of households receiving external aid occurred in Warmińsko-Mazurskie (22.7%), and the smallest in Małopolskie, Dolnośląskie, Łódzkie, Lubelskie and Wielkopolskie (less than 10%) (figure 4.1.16). It is clear that the scope of external aid utilization is not the greatest in the poorest Voivodeships (with the exception of Warmińsko-Mazurskie).



NOTE: main effect of Voivodeship F(15, 11228)=8,573, p<0.000; η^2= 0.011, main income effect F(3, 11228)=382,856, p<0.000, η^2=0.093, effect of Voivodeship and income interaction F(45, 11228)=3,662, p<0.000, η^2 = 0.014.

Figure 4.1.16. Percentage of households receiving external aid by Voivodeship in general and by equivalent unit income (upper and lower quartile)



NOTE: main effect of Voivodeship F(15, 5888)=5,391, p<0.000; η^2= 0.014, main income effect F(1, 5888)=391,156, p<0.000, η^2=0.062, effect of Voivodeship and income interaction F(15, 5888)=1,811, p<0.05, η^2 = 0.005, main year of study effect F(1, 5888)=11,107, , p<0.002, η^2=0.002, effect of income and year of study interaction F(1, 5888)= 3,777, p < 0.06, η^2 = 0.001, effect of Voivodeship, income and year of study interaction F(15, 5888)= 2,860, p < 0.000, η^2 = 0.007.

Figure 4.1.17. Percentage of households with above average equivalent unit income receiving external aid by Voivodeship in 2009 and 2013

4.2. Nutrition

Tomasz Panek, Janusz Czapiński

4.2.1. Situation in 2013 and its change in last four years

In March 2013, households stated that they could most often not afford, for financial reasons, to satisfy their nutritional needs for fish or fish products (over 19%), confectionaries and stimulants (over 15% and almost 15%) and meat and poultry and meat and poultry products (around 12.5% and 11.5% of households respectively).

Over the last four years[13] there has been an improvement in the level of household need satisfaction in all grocery item groups with the exception of sugar (figure 4.2.1). Moreover, in 2011-2013 we observed a fall in households' financial difficulty in satisfying nutritional needs with the exception of recreational, fish, fish products and meat[14] (the rise in the share of these households amounted to slightly less than 1 p.p., so within the statistical margin of error). We observed a marked improvement over this time above all in the case of confectionaries, fruit and fruit products as well as vegetables and vegetable products (the fall in the share of households unable, for financial reasons, to satisfy their needs in this respect was over 2 p.p.). There was a marked worsening in the satisfaction of nutritional needs between 2011-2013 with respect to certain items (meat, poultry, confectionaries and fruit products) only in entrepreneur households.

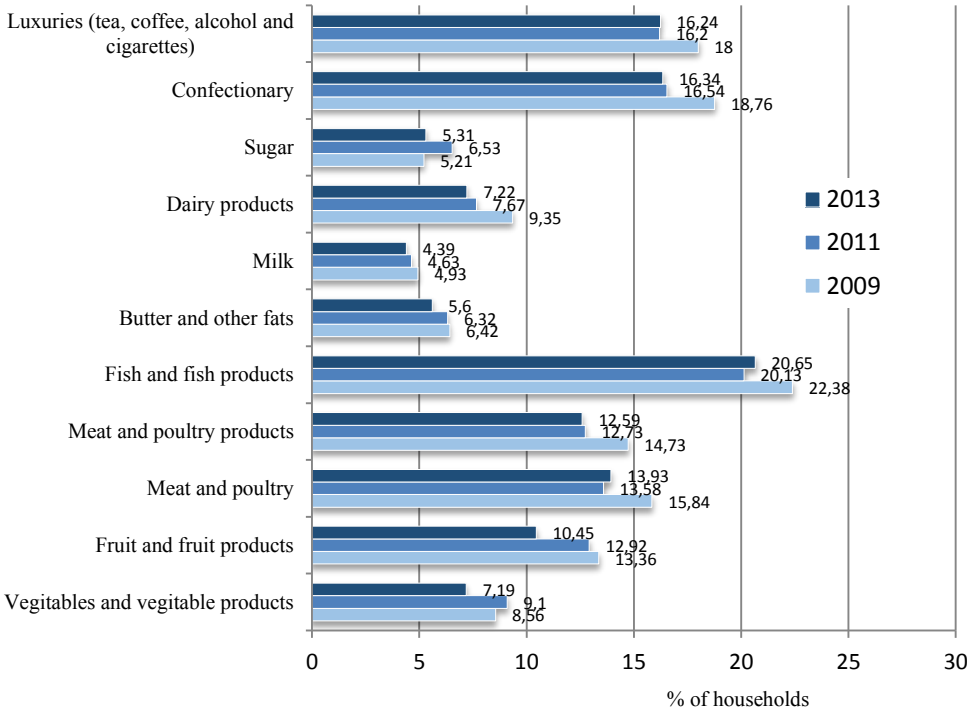


Figure 4.2.1. Scope of unsatisfied household needs for food items for financial reasons in the 2009-2013 panel sample

The household groups that were most frequently unable to afford purchasing food items in February/March 2013 were those living on unearned sources (for the following abovementioned grocery items respectively: around 51%, 45%, 41%, 40% and 35% of these households) and pensioners (around 38%, 30%, 28%, 26% and 25% respectively). Incomplete family households most frequently indicated a lack of financial means to purchase the selected article groups. This group indicated the following items as the ones it had to forgo for financial reasons most often as around 27%, 21%, 21%, 20% and 18% respectively. The next type of household that most often could not afford the indicated grocery items were single-person non-family households with around 26%, 22%, 19%, 17% and 17% of households respectively. The majority of household types generally noted an improvement in financial

[13] All changes in terms of meeting households' nutritional needs in 2009-2013 referred to panel sample from those years.

[14] All changes in terms of meeting households' nutritional needs in 2011-2013 referred to panel sample from those years

capacity to satisfy grocery item needs in the last two years. There was a deterioration in this respect in non-family multi-person households for fish and fish products, butter and edible fats and milk, in multi-family households for meat and poultry products and butter and edible fats and in couples with two children for meat, poultry, fish and fish products.

The percentage of households with unemployed members unable to purchase, for financial reasons, groceries of all analyzed item groups was in February/March 2013 significantly higher than in the group without unemployed members. The household groups below reported the need to forgo purchase most frequently of the respective grocery item groups as follows: nearly 34% and around 17%, nearly 28% and almost 13%, nearly 26% and around 13%, over 24% and nearly 11% and nearly 22% and nearly 10% of households. Over the last two years, the situation has improved markedly in both household groups and at the same time in almost all grocery article groups.

In February/March 2013, households most frequently forced to forgo purchase, for financial reasons, of selected grocery items, resided above all in rural areas (around 25%, 19%, 19%, 15, and 15% of households declared this situation for each of the previously mentioned grocery item groups) and in smaller towns of less than 20 thousand residents (around 18%, 16%, 15%, 12% and 11% of households respectively). The highest percentage of households declaring financial problems in satisfying needs for the selected grocery item groups occurred in the month of study in 2013 in Warmińsko-Mazurskie (around 28%, 22%, 23%, 21% and 20% of households respectively) and Lubelskie (around 26%, 21%, 20%, 23%, 13% and 14% of households respectively). From March 2011 to March 2013, there was a marked rise in households unable, for financial reasons, to satisfy their grocery needs only in the largest towns numbering 500 thousand residents or more, and this was only in certain groups of grocery items (meat and poultry, fish and fish products and confectionaries). Regionally, only in a few Voivodeship and in terms of few grocery item groups was there a marked deterioration of the situation in the study period of over 3 p.p. This concerned above all Dolnośląskie and Łódzkie, where there was a marked rise in households unable to satisfy their needs for meat and poultry.

In 2013, around 63% of households believed that satisfying their grocery needs had not changed in comparison to two years before. Around 31% reported a deterioration and around 6% an improvement. In relation to ratings from 2011, there was a rise in negative ratings of these changes together with a fall in the positive of over 1 p.p

Households that most frequently declared changes for the worse were those living on unearned sources at over 57% of households and households of pensioners (over 44%). Among the households that felt a deterioration in terms of nutrition were above all the non-family multi-person at almost 43%, as well as incomplete and one-person non-family at nearly 38% and nearly 36% respectively.

Negative ratings of change in the satisfaction of nutritional needs were markedly more often formulated in the group of households with unemployed member than in the group without unemployed (almost 47% and over 38% respectively).

The variability of households declaring a deterioration in nutritional need level of satisfaction was insignificant in terms of place of residence class. These households occurred most frequently in small towns of 20 to 100 thousand residents (33% of households). Households in Łódzkie and Kujawsko-Pomorskie most frequently reported a fall in their nutritional need satisfaction level (over 39% and nearly 35% respectively).

4.2.2. The change in nutritional needs satisfaction from 2000 to 2013

Over the last 13 years, the share of households unable to afford, for financial reasons, grocery items regards all groups (figure 4.2.2). The greatest decrease concerns stimulants (3.5 times), confectionary (3 times), fruit and fruit products (3 times), meat and poultry as well as meat and poultry products (2.5 times) and fish and fish products (2 times). These were the same food items households most often could not afford in the last years.

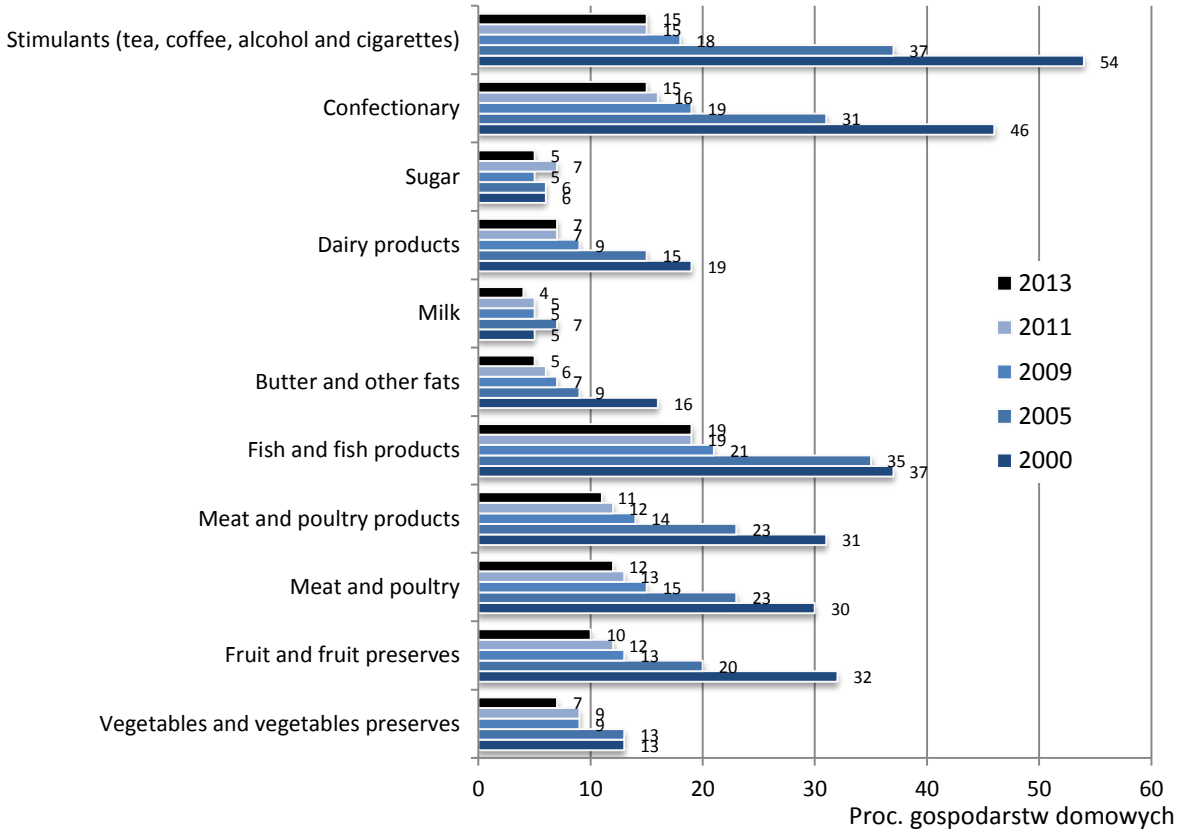


Figure 4.2.2. Percentage of households which could not afford a sufficient amount of various food items in the period 2000-2013 in whole samples

4.3. Material affluence

Tomasz Panek, Piotr Białowolski, Irena E. Kotowska, Janusz Czapiński

4.3.1. Situation in 2013 and change in last four years

4.3.1.1 Durable goods

One of the main elements determining households' affluence is possession of durables. From among the durables indicated in the survey, in February/March 2013 the most common were an automatic washing machine and paid satellite or cable TV. Approximately almost 8% of the surveyed households did not have an automatic washing machine, while nearly 28% did not have paid satellite or cable TV. Among the least common consumer durables were motor/sail boat (nearly 1%), an electronic book reader (nearly 4%) and a summer house (below 5%). Between March 2009 and March 2013, households acquisition of the majority of the durable goods covered in the study increased markedly (figure 4.3.1)[15]. The exceptions were landline telephones due to the ever more general switch to mobile phones and desktop computers in favor of laptops and tablets and DVD players.

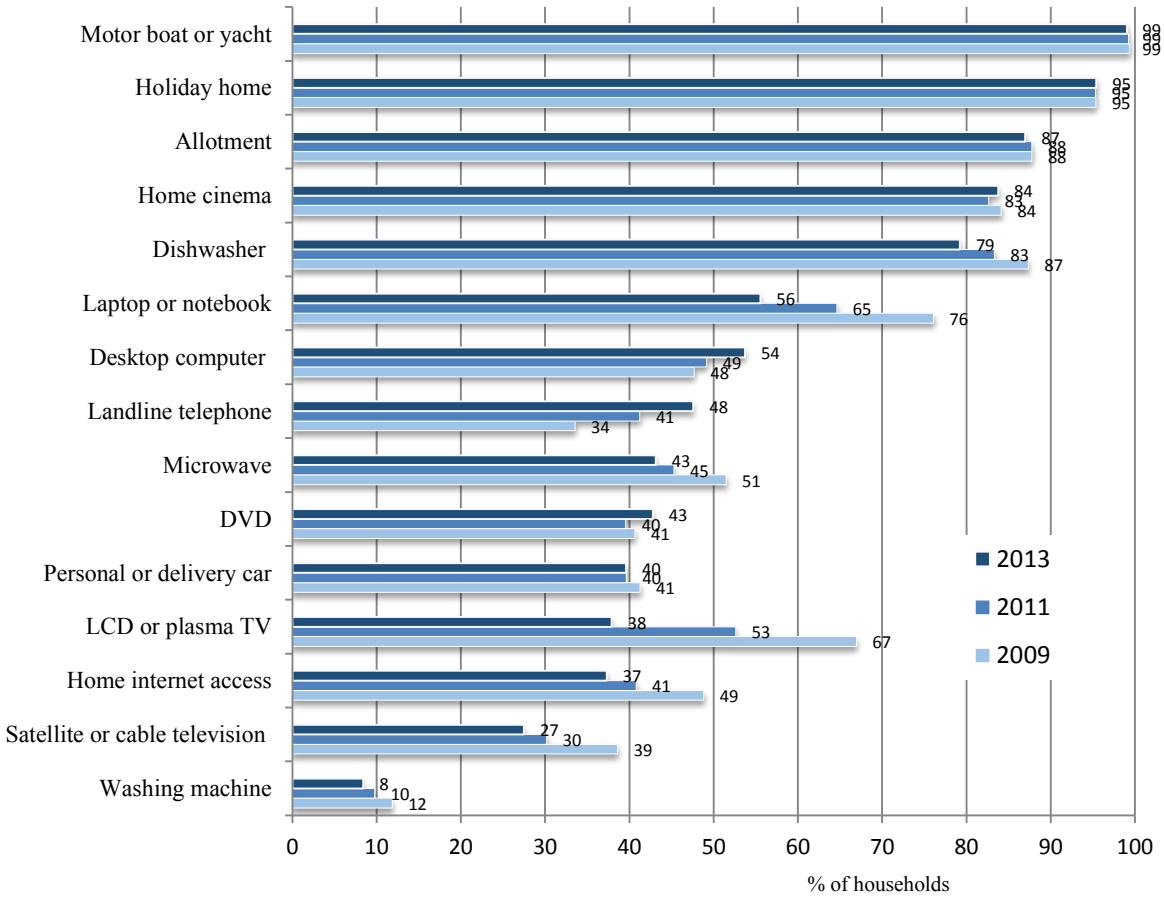


Figure 4.3.1. Percentage of households without durables not owned by the households in the 2009-2013 in panel sample

In the last two years[16] there has been a marked growth in households' durable goods with the exception of the landline telephone and desktop computer, which are being replaced by the mobile phone and the laptop, and the DVD player. The greatest growth in households durable goods was in LCD or plasma televisions at over 14 p.p. and the portable computer (over 9%).

[15] All changes in terms of meeting households' nutritional needs in 2009-2013 referred to panel sample from those years.
[16] All changes in terms of meeting households' nutritional needs in 2011-2013 referred to panel sample from those years.

In February/March 2013, households living on unearned sources and retirees reported the lowest average number of durables. In terms of household type, these were in mainly non-family (both one-person and multi-person ones) and single-parent families. The number of durables in the households without the unemployed is slightly higher for the decisive majority of durables than in the households with the unemployed. However, the number of durables in households broken down by the place of residence class and Voivodeship varies depending on durables indicated in the survey although for the majority, the lowest number was observed in rural households.

The lack of some durables often results not from the lack of funds for their purchase but from the lack of willingness to own. In February/March 2013, the durables which households most often did not have due to the lack of money included mainly an own flat/house, washing machine, LCD or plasma television (at nearly 60%, nearly 59% and almost 59% respectively of households did not have such goods for financial reasons.). In the last four years, we observed a strong drop in the percentage of households that could not afford to buy any of the durables indicated apart from paid satellite or cable television as well as LCD or plasma sets, with a rise by almost 2 p.p. and over 7 p.p. respectively. The largest fall in households unable to purchase goods was observed in the case of access to home internet and a desktop computer at almost 10 p.p. and 12 p.p. respectively (figure 4.3.4). In 2011-2013, there was a significant increase only in the households that could not afford a LCD or plasma TV set (figure 4.3.2). However, this is only an effect of the increase in the percentage of households owning such goods, since the percentage not having such durables for financial reasons in the entire surveyed population (and not only in relation to those households not owning) decreased during the last two years.

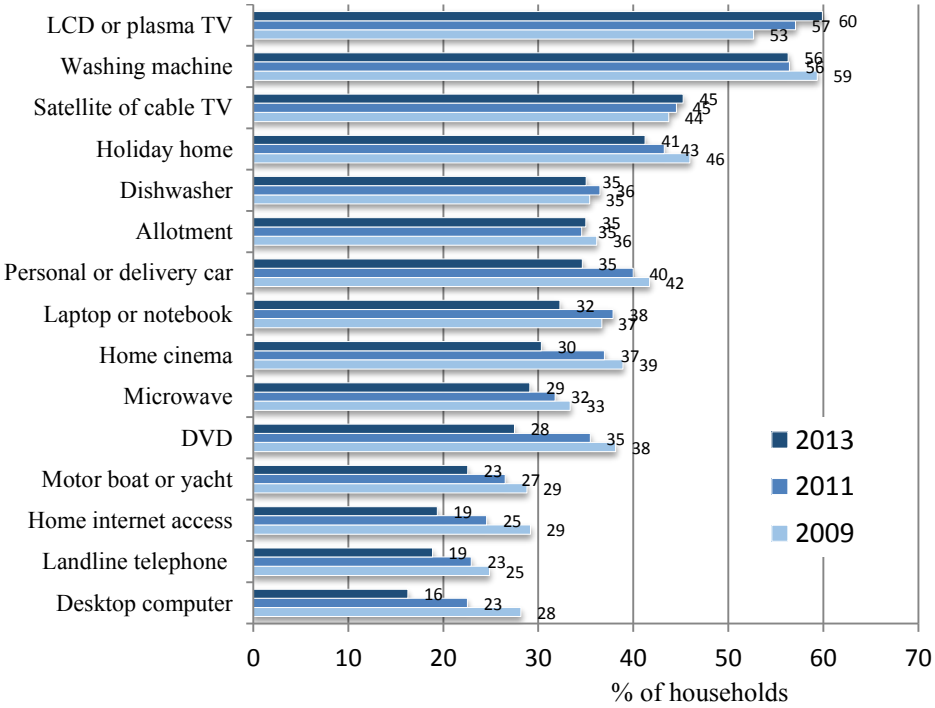


Figure 4.3.2. Percentage of households without durables due to a lack of financial resources in the 2009-2013 panel sample

In February/March 2013, the differences between the groups of households formed with the criteria adopted under the research as regards the lack of certain durables due to financial reasons were multidirectional. The greatest differences here can be observed between the group of households without the unemployed and the group with the unemployed. The percentages of households with the unemployed that could not afford to possess certain durables are considerably higher than in the case without the unemployed, particularly in terms of access to home internet (at over 56% and nearly 17% respectively), a portable computer (nearly 64% and almost 30% respectively) and a washing machine (over 87% and nearly 53% respectively). Moreover, financial difficulties were relatively most often indicated as reasons for not having certain durables by retirees and households living on earned sources, by married couples with many children, single-parent families and non-family households.

4.3.1.2 Savings

In 2013, nearly 60% of households did not have any savings. Among the households declaring they did, there were clearly more with savings at the equivalent of a monthly (over 31% of households) than a 3-month income. Between March 2009 and March 2013, there was a marked rise in the share of households with savings of almost 8 p.p. (figure 4.3.3), and a rise of over 3 p.p. in the last two years.

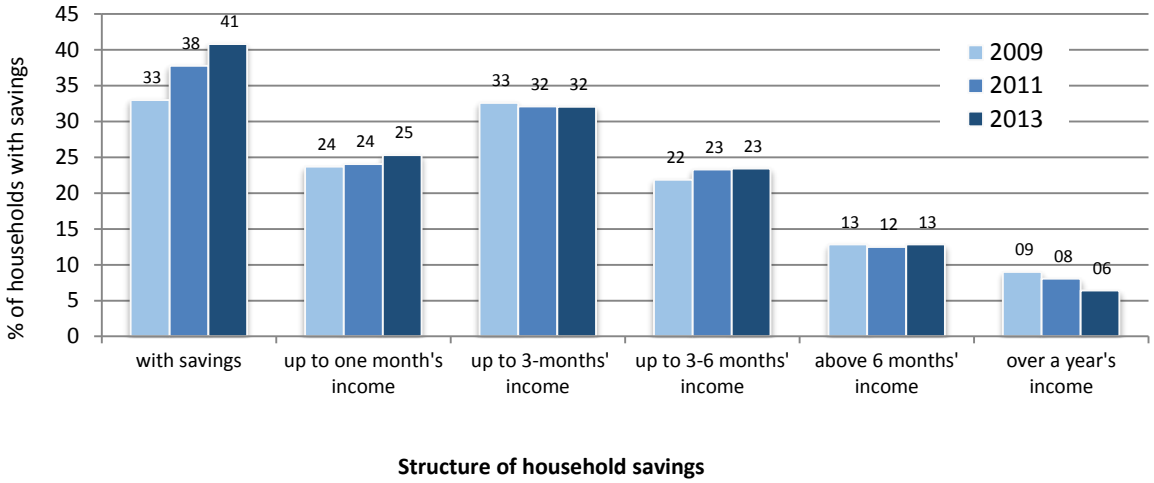


Figure 4.3.3. Percentage of households with savings and scale of savings in the 2009-2013 panel samples

Households living on unearned sources and households of retirees (almost 80% without savings) and pensioners (over 75%) most rarely by far declared any savings. Households that do not have savings are more widespread among incomplete families, married couples with many children (around 71% and nearly 70% in these groups). The percentage with savings with employed members is significantly higher than in the group with unemployed members (76% and 57% respectively). In all socio-economic groups and all household types, there was a significant increase in the amount of savings over the last 2 years, except for households of couples with 2 children where the percentage did not change significantly. We have observed the strongest rise in savings in farmers' households at 6 p.p.

The smaller the place of residence, the higher is the percentage of households without savings. The households declaring no savings mostly lived in rural areas and in the smallest towns (almost 67% and over 63%). Broken down by Voivodeship, the percentage differences between households without any savings are not that high. The Voivodeships where households in most cases do not have savings are Warmińsko-Mazurskie (almost 77%) and Kujawsko-Pomorskie (over 68%). In March 2013, there was an increase, in relation to March 2011, in the percentage with savings in all place of residence classes and Voivodeships, with the greatest rise in small towns at around 8 p.p. and in Zachodnio-Pomorskie and Mazowieckie where the percentage with savings increased by over 9 p.p. and over 7 p.p. respectively.

Almost 67% of households with savings in February/March 2013 had złoty savings accounts, and almost 45% saved in cash. Bank deposits in PLN most often belonged to households of entrepreneurs (nearly 71%), who most frequently saved in cash (over 54%), similarly to the households living on unearned sources (also more than 54%). In terms of the household types, PLN bank deposits were most popular among the married couples with many children (almost 74%). On the other hand, households with many children most often saved in cash (nearly 58%). In both households with and without the unemployed the clearly prevailing forms of saving were bank deposits in PLN (over 68% and more than 63% respectively) and cash (over 44% and in over 52% respectively).

Relatively the highest percentage of households with bank deposit savings in PLN was recorded in the smallest towns at nearly 71%. Cash savings were the preferred form among households in rural areas and in smaller towns (nearly 55% and nearly 46% respectively). Households in Dolnośląskie and Warmińsko-Mazurskie had bank deposits in PLN most often at almost 75% and almost 72% respectively. The Voivodeships with the highest percentages of households with cash savings were Świętokrzyskie (over 63%), Warmińsko-Mazurskie (over 55%) and Lubelskie (over 54%).

In 2009-2013, there was a marked rise of almost 8% in the share of households with savings only in cash (figure 4.3.4). In the last two years, also the share of households with savings rose significantly by 5 p.p. exclusively in the household group with cash savings. However, the share with bank deposit savings in złoty showed a marked fall of over 3 p.p. and almost 3 p.p. for investment funds. The largest relative growth in households with cash savings was observed in recent years among those subsisting on unearned income sources and that of entrepreneurs by almost 14 p.p. and non-family single-persons by over 10 p.p. Also, relatively the highest growth of almost 14 p.p. was reported by households in the largest towns. The share of households with cash savings showed a marked rise also among households both with and without unemployed members (5 p.p. and 3 p.p. respectively).

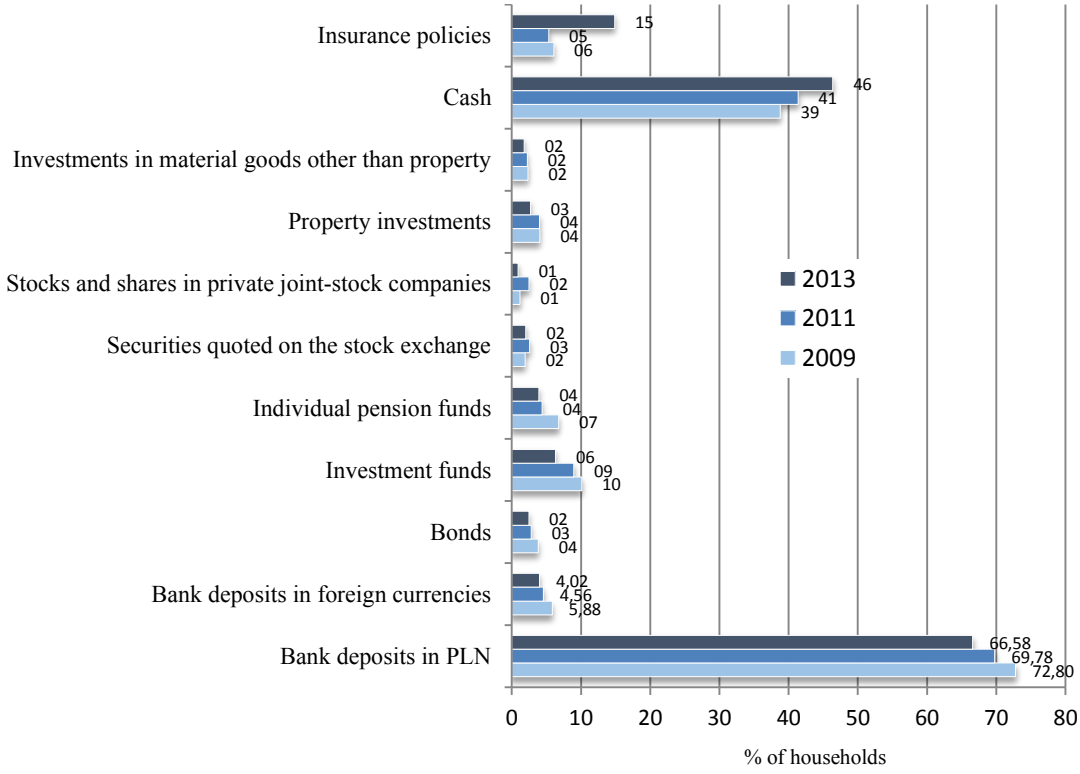


Figure 4.3.4. Forms of household savings in the 2009-2013 panel samples

Households who declared they had savings in February/March 2013, most often treated them as a reserve in case of emergency at 67%, a security for old-age (nearly 35% of) and for daily consumption spending (nearly 34%).

In the last four years, the share of households with savings as a reserve in case of emergency showed a marked rise of almost 8 p.p., healthcare (over 2 p.p.), as a security for old-age and as a reserve for daily consumption spending (nearly 2 p.p., figure 4.3.5). Between 2011-2013, there was a marked rise in savings above all as a reserve in case of emergency and healthcare (over 8% and nearly 5 p.p. respectively.

The savings set aside as a reserve in case of emergency were in February/March 2013 most frequent in the households of retirees (nearly 70% declared this purpose). This purpose of savings was also mostly reported by households of couples without children (by over 69%). Also in the case of the households both with and without the unemployed, savings were mostly a reserve in case of emergency (nearly 64% and almost 64% respectively). However, the group with savings as a reserve in case of emergency was not highly diversified in terms of place of residence class or Voivodeship. This purpose of savings most often occured in large towns with 200,000-500,000 residents (over 75%) and in the Podlaskie and Zachodniopomorskie Voivodeships (nearly 77% and over 73% respectively).

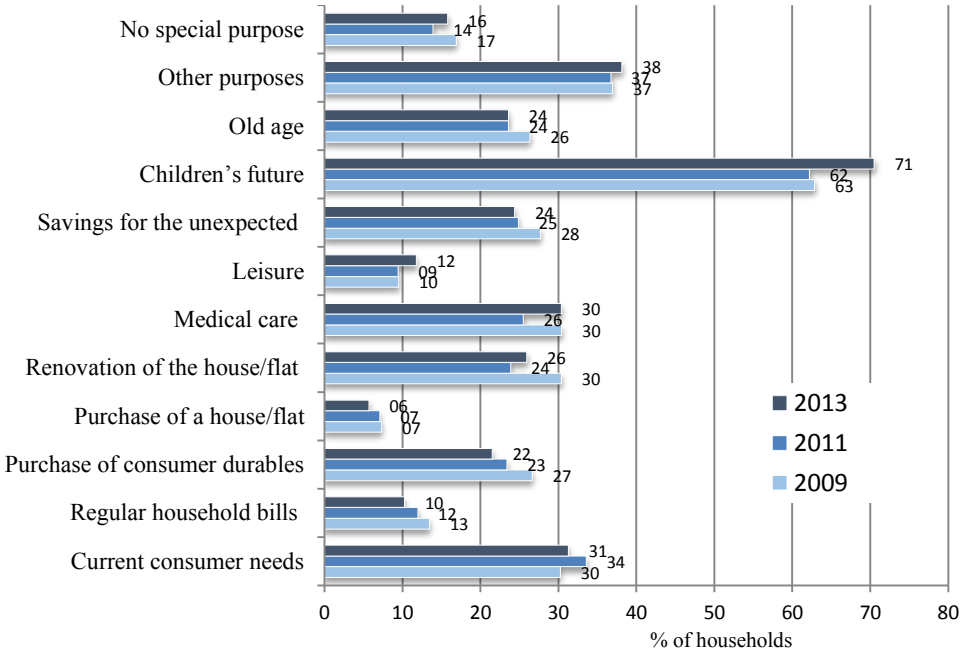


Figure 4.3.5. Purposes of household savings in the 2009-2013 panel samples

In the last two years, the strongest growth in the share of households with a reserve for a rainy day took place in that of farmers and employees at almost 12 p.p. and 10 p.p. respectively), non-family single-person (over 10 p.p.), households residing in middle-sized towns of 100-200 thousand residents (nearly 19%) and in Podkarpackie (over 21 p.p.). At the same time, there was a marked fall in the share of households with this saving aim in households subsisting on unearned income sources (over 14 p.p.), residing in the smallest towns (nearly 2 p.p.) and in Wielkopolskie and Lubuskie (over 8 and 4 p.p. respectively).

The security for old age was in February/March 2013 relatively most frequently indicated as the purpose of savings among the households of retirees and entrepreneurs (in the case of 49% and over 36% of households, accordingly), households of couples without children (in nearly 43% of households), the households living in the towns with more than 500,000 inhabitants (around 40% of households) and in the Zachodniopomorskie and Mazowieckie Voivodeships (nearly 46% and 44% respectively).

In the last two years, the strongest growth in the share of households with a reserve in case of emergency took place in that of farmers and employees at almost 12 p.p. and 10 p.p. respectively, non-family single-person (over 10 p.p.), households in middle-sized towns of 100-200 thousand residents (nearly 19%) and in Podkarpackie (over 21 p.p.). At the same time, there was a marked fall in the share of this saving aim in households subsisting on unearned income sources (over 14 p.p.), in the smallest towns (nearly 2 p.p.) and in Wielkopolskie and Lubuskie (over 8 and 4 p.p. respectively).

Security in old age was in February/March 2013 relatively most frequently indicated as the purpose of savings among the households of retirees and entrepreneurs (49% and over 36% respectively), households of couples without children (nearly 43%), the households in the towns of more than 500,000 residents (around 40%) and in Zachodniopomorskie and Mazowieckie (nearly 46% and 44%).

In the last two years, the share of households with savings as a security for old-age fell most among that of the entrepreneurs (over 6 p.p.), non-family multi-person, couples with 1 child and multi-child families (by over 3 p.p. and almost 3 p.p. respectively), those in small cities of 20-100 thousand inhabitants (by over 7 p.p.) and in Opolskie (over 12 p.p.). At the same time, the most significant rise took place among those subsisting on unearned income sources, physical workers and farmers (over 2 p.p.), non-family multi and single-person (over 6 p.p. and almost 3 p.p.), in middle-sized towns of 100-200 residents (over 10 p.p.) and in Zachodnio-Pomorskie (nearly 15 p.p.).

In terms of socio-economic group, in February/March 2013 savings for the current consumer needs were most frequent among households living on unearned sources and that of farmers (over 62% and nearly 50% respectively). As for household type, this purpose was most often reported by households of married couples with many children (nearly 44%). Savings set aside as a reserve for the current consumer needs were most frequent in rural areas (over 36%), in Zachodniopomorskie (over 47%) and

Podkarpackie Voivodeships (around 42%). Also in the households with unemployed members, this purpose of saving was rather widespread (around 45%).

The largest relative growth in savings treated as a reserve for daily consumption spending was observed over the past two years among farmers' households (by over 6 p.p.), in the largest towns (by nearly 4 p.p.) and in Lubelskie (over 4 p.p.). Over the same period, the strongest relative fall in savings of this kind took place among pensioners (nearly 6 p.p.), incomplete families (nearly 14%), in large and middle-sized towns (by nearly 6 p.p.) and in Opolskie (nearly 22 p.p.).

4.3.1.3 Debt

Nearly 37% of the surveyed households in February/March 2013 declared they had loans to repay. Household debt most often exceeded equivalent annual income as reported by over 28% of households in debt. The share taking loans fell markedly from March 2009 to March 2013 by almost 8 p.p. (figure 4.3.6), which in the last two years fell by over 4 p.p.

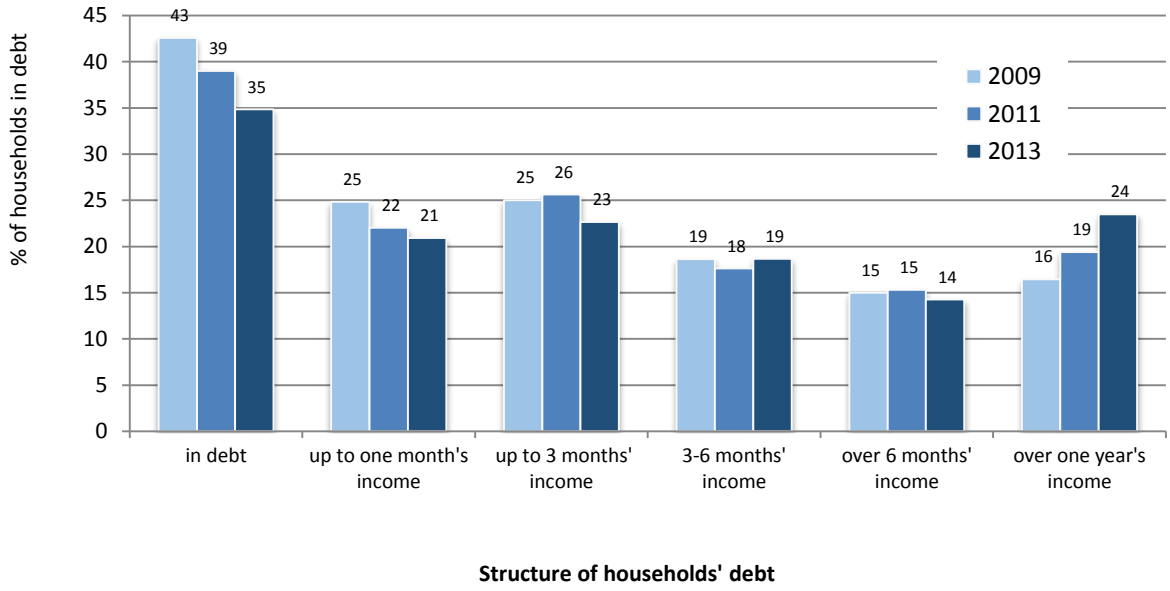


Figure 4.3.6. Structure of household debt in the 2009-2013 panel sample

In February/March 2013, the group of households in debt included mainly that of entrepreneurs and employees (nearly 48% and around 45% respectively). In terms of the household type, the highest percentage of the households in debt was reported in that of married couples with 2 children and couples with many children (over 49% and nearly 47% respectively). Frequency of debt was higher among the households with unemployed members than in those without (over 39% and over 36% respectively). Debt levels increased only in the group of entrepreneurs (by over 2 p.p.) in the last two years.

The distribution of household debt in terms of place of residence class and Voivodeship is relatively only slightly diversified. The highest percentage of households in debt occurred in the largest cities and in towns of 100,000-200,000 residents (nearly 42%), while the lowest incidence was reported in rural areas (over 36%). The highest percentage was recorded in the Pomorskie and Dolnośląskie Voivodeships (nearly 45% and almost 44% respectively) and the lowest in Świętokrzyskie (nearly 26%).

Households most frequently devoted between 10% and 20% of their monthly income to debt repayment in the last three months (over 3%), followed by up to 10% of their monthly income. Only just over 3% used over 50% of their monthly income in this way, with these highest burdens most apparent among households living on unearned sources of income (almost 10%), among couples with many children, incomplete families and non-family single-person (over 4%) households, in large cities (over 5%) and Zachodnio-Pomorskie (nearly 11%).

The source of external financing for nearly 88% of households with loans were banks and agencies offering installment loans (8%). Only not quite 6% were in debt to private persons. Between March 2009 and March 2013, the share of households taking bank loans fell by nearly 3 p.p. with a growth in loans from other institutions (nearly 3 p.p.) and private persons (nearly 2 p.p., figure 4.3.7). In the last

two years, the percentage taking loans with other institutions showed a marked rise of almost 3 p.p., and relatively the strongest rise was reported among households subsisting on unearned sources of income and the entrepreneurs (nearly 26 p.p. and 22 p.p. respectively), among the unemployed (over 4 p.p.), non-family multiperson and single-person households (over 27 p.p. and 11 p.p. respectively), in the smallest towns (nearly 6 p.p.) and in Warmińsko-Mazurskie and Wielkopolskie (nearly 11 p.p. and over 10 p.p. respectively).

among the unemployed (over 4 p.p.), non-family multiperson and single-person (over 27 and 11 p.p. respectively), residing in the smallest towns (nearly 6 p.p.) and in Warmińsko-Mazurskie and Wielkopolskie (nearly 11 and over 10 p.p. respectively).

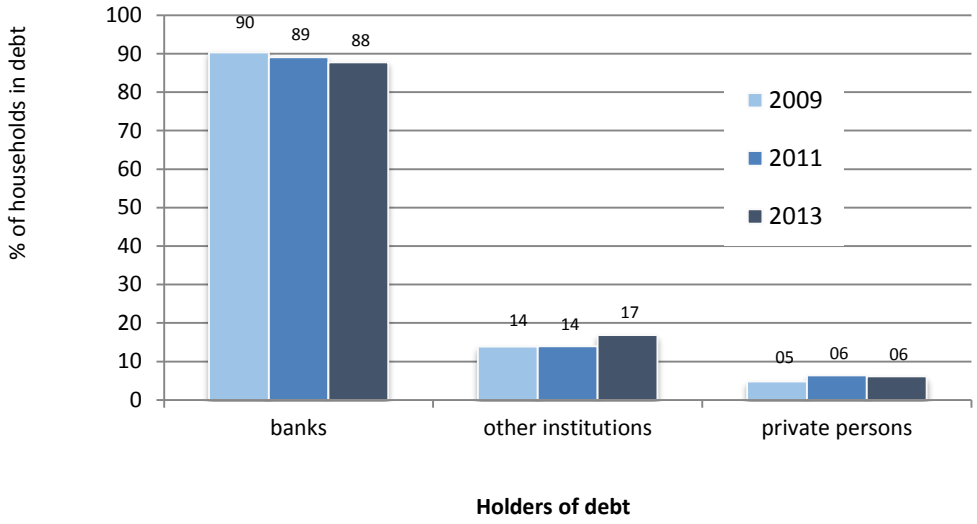


Figure 4.3.7. Holders of households' debt in the 2009-2013 panel sample

In February/March 2013, farmers' households and those of the self-employed most frequently took loans (98% and over 94% respectively). Pensioners' households and those living on unearned sources of income were the main clients of agencies offering installment loans at over 12% and nearly 12% respectively, while multi-person households borrowed from private persons at almost 23%.

Households with and without unemployed members do not differ significantly in terms of external financing with the exception of borrowing from private persons (over 12% and 4% took loans of this kind).

Bank loans were relatively the most common sources of debt in the largest towns (nearly 93%) and in the Podkarpackie and Podlaskie Voivodeships (over 92% respectively).

Installment loans offered by credit agencies were taken mainly in rural areas (nearly 10%) and in Warmińsko-Mazurskie (over 17%) Meanwhile, households in small towns of 200,000-500,000 residents (nearly 7%) and in the Warmińsko-Mazurskie (nearly 15%) took out loans with private persons relatively more often.

Households most frequently borrowed in złoty at nearly 93% and 8% in Swiss francs, which was most widespread among entrepreneurs and employees (12% and over 11% respectively).

We surveyed households in order to identify the purposes of taking out loans collected. In February/March 2013, nearly 35% used loans for financing the purchase of durables, almost 31% to renovate their apartment or house and over 23% to purchase a house or apartment. Between March 2009 and March 2013, we observed relatively the greatest rise in the share of households borrowing to pay off earlier debts and to purchase houses or flats (by over 2 p.p., figure 4.3.8).

In the last two years, there has been a marked rise in the share of houses taking loans only to buy a house or flat (by 3 p.p.), as well as to pay off earlier debts and for healthcare (by over 1 p.p.).

In February/March 2013, loans for the purchase of durables were taken mainly by households of employees (nearly 35% of the households). The groups that relatively most often used their loans for home renovation included households of employees and retirees (almost 33% and nearly 30% respectively). The purchase of a house or an apartment was the main purpose mainly among entrepreneurs (nearly 34%).

In terms of household type, loans financing the purchase of durables were taken mainly by multi-family households and childless couples (nearly 38% and 37% respectively). For multi-family households, borrowings were also an important source of financing home renovation (in nearly 42%). Meanwhile, the purchase of a house or an apartment was mainly financed with loans in households of married couples with one two children (more than 31%).

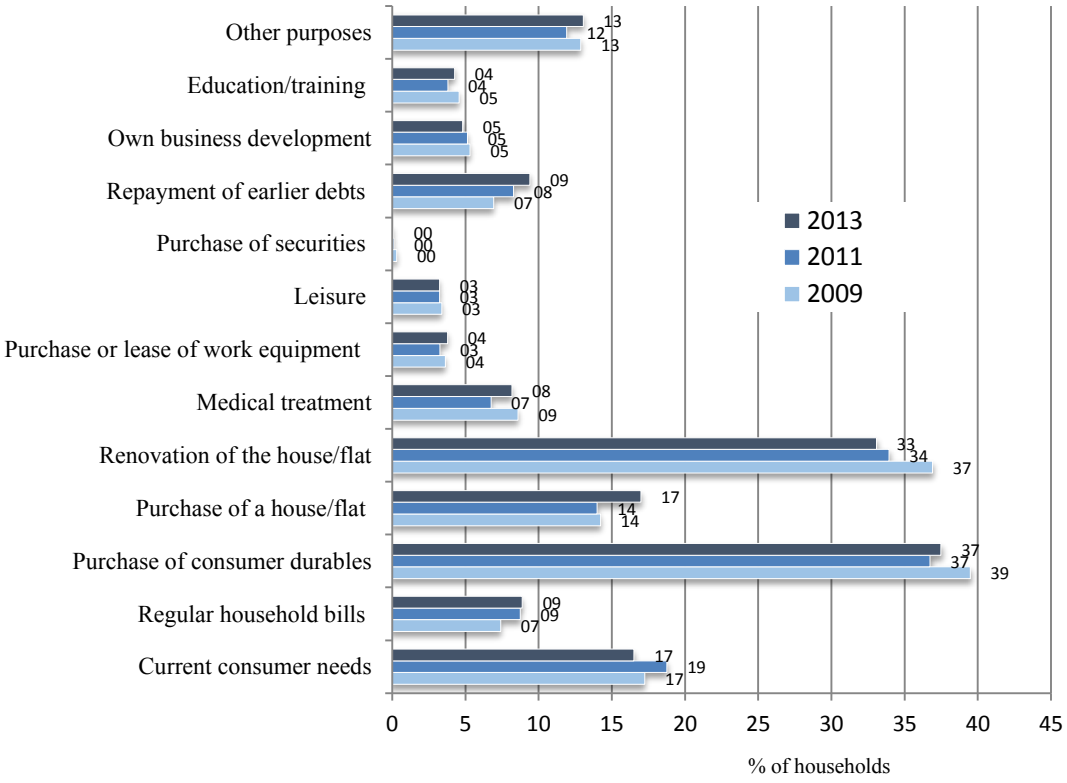


Figure 4.3.8. Purposes of the loans and credit taken out by households in the 2009-2013 panel sample

As far as households without unemployed members are concerned, loans were used mainly for the purchase of durables, home renovation and house or an apartment purchase (nearly 35%, nearly 31% and more than 25% respectively), as was the case for other household categories. The purchase of durables was also the most frequent purpose of loans in households with unemployed members (over 33%). In this group, the next most frequent purposes of loans were home renovation and current consumer needs (nearly 30% and over 28% respectively).

The purchase of durables was most frequently financed with loans by households in middle-sized towns of 100,000-200,000 residents (over 43%) and in Świętokrzyskie (almost 45%). Credit for the purpose of home renovation were mostly taken by the households in the smallest towns and rural areas (nearly 39% and nearly 32% respectively) and in Podkarpackie and Świętokrzyskie (over 42% and nearly 40% respectively). Purchase of a house or an apartment was the purpose of borrowing mainly in larger towns of over 500,000 residents (almost 39%) and in the Mazowieckie (nearly 34%).

When assessing the changes in material affluence as of February/March 2013 in comparison to the situation two years before, over 53% of households declared that their material situation had not changed and nearly 38% stated that it had worsened. In relation to the assessments from March 2011, there was a considerable drop in the percentage of households assessing the changes positively by nearly 3 p.p., with a rise in the share of households rating the change negatively by nearly 8 p.p. Negative assessments of these changes were formulated mostly by households living on unearned sources and retirees (over 62% and nearly 49% respectively) as well as households of single-parent families (over 45%). As regards the households assessing these changes negatively, this group includes visibly more households with unemployed members than without (over 57% and over 34% respectively). Households reporting their material situation had worsened were mainly from largest towns of over 500,000 residents (over 40%), Łódzkie (nearly 46%) and Mazowieckie (over 42%).

4.3.2. Changes in household durables 2000-2013

4.3.2.1 Durable goods

With the exception of the landline telephone, the spread of which was arrested in 2003 and has been falling ever faster to the level of 47% of households, there has a growth in all other durable goods in the households (figure 4.3.9), with the largest in modern communications technology.

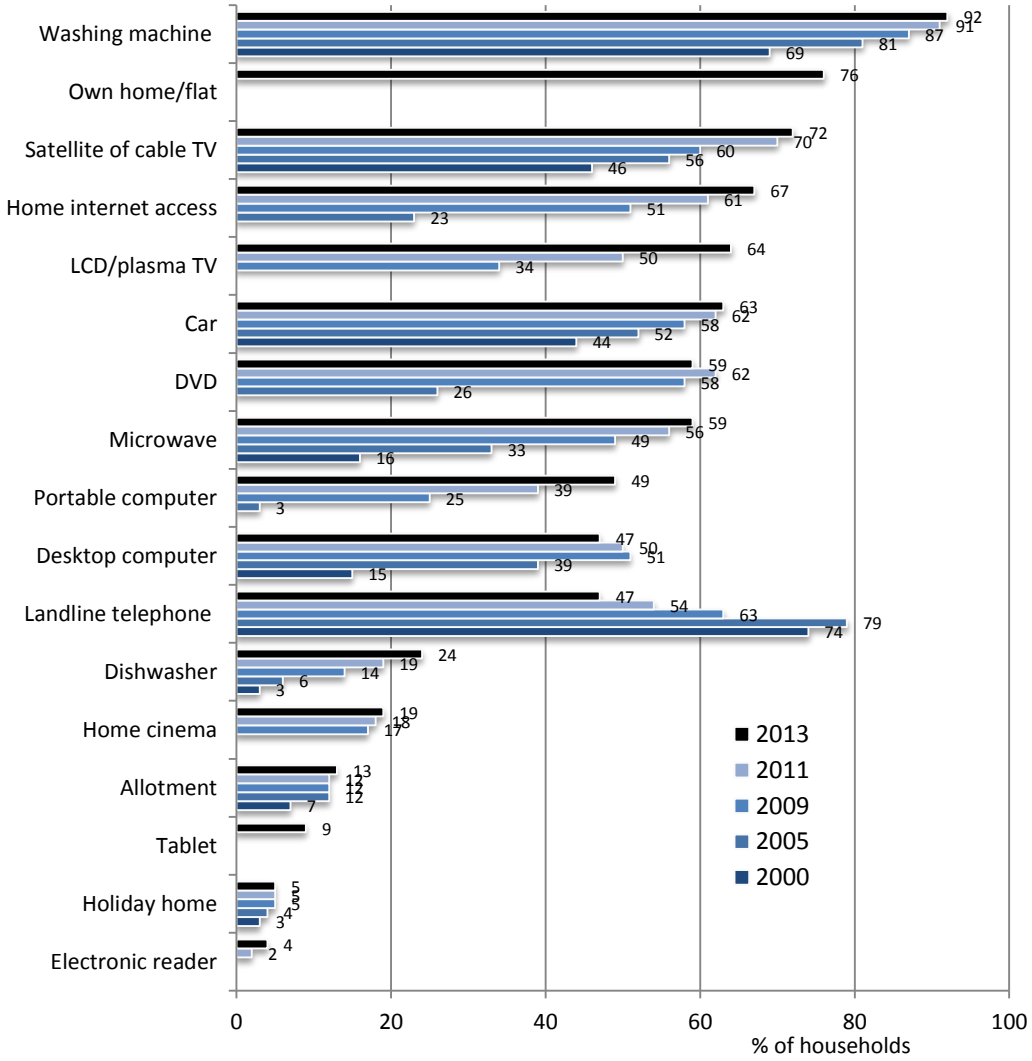


Figure 4.3.9. Percentage of households equipped with selected durable goods between 2000-2013

Currently, 67% of households have access to the internet, which is 3 times that of 2005, while those with a computer (whether desktop or portable) increased fivefold in 2013 on 2000. Also, modern household kitchen equipment is rising rapidly: the microwave 4 times since 2000, dishwasher 7 times and washing machine by 23 p.p to 92% of households. Currently, $^2/_3$ of households have a modern television set, and 72% (a rise of 26 p.p.) receive cable or satellite television, $^2/_3$ have a car (over 40% more than in 2000) and in comparison to 2007, the share with more than one vehicle rose from 11.3% to 23% and a portable computer from 6.9% to 21.3%.

The share of durable goods that households do not have for financial reasons is falling (figure 4.3.10), and today it is a lack of need rather than a lack of money that increasingly often determines whether a house does not have a specific durable. This refers in particular the landline telephone (being replaced by the mobile), the desktop computer, car and microwave.

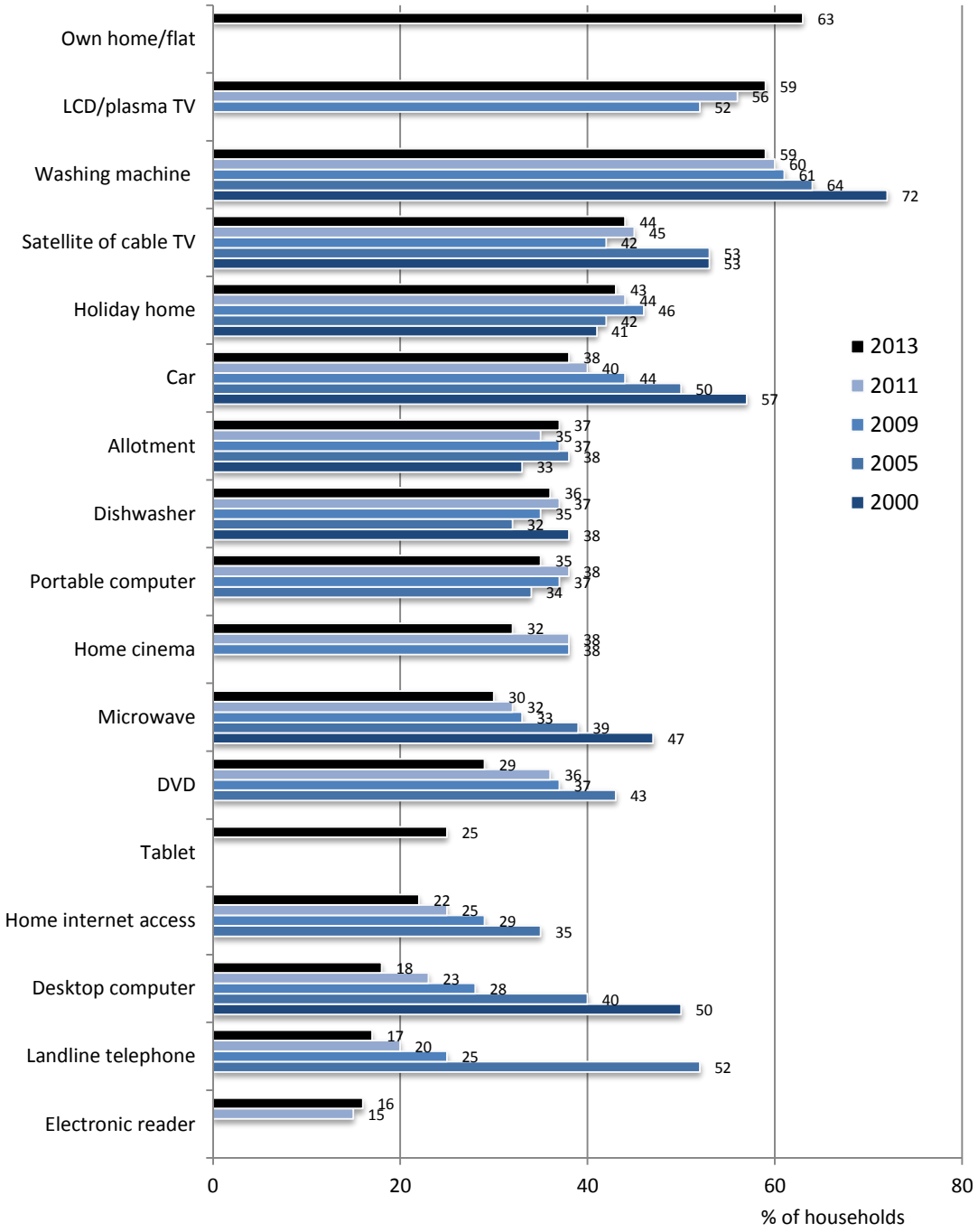


Figure 4.3.10. Percent of households lacking in selected durables due to insufficient purchasing power between 2000-2013

4.3.2.2 Savings

The share of households with some form of savings has risen by almost $^2/_3$ since 2000 to 40% (figure 4.3.11). The size of savings has hardly changed in structure since 2000, with that equivalent to three-months' salary continuing to dominate. The share of households with savings equal to more than a year's income remained at the low level of 7%, which means less than 3% of the whole population.

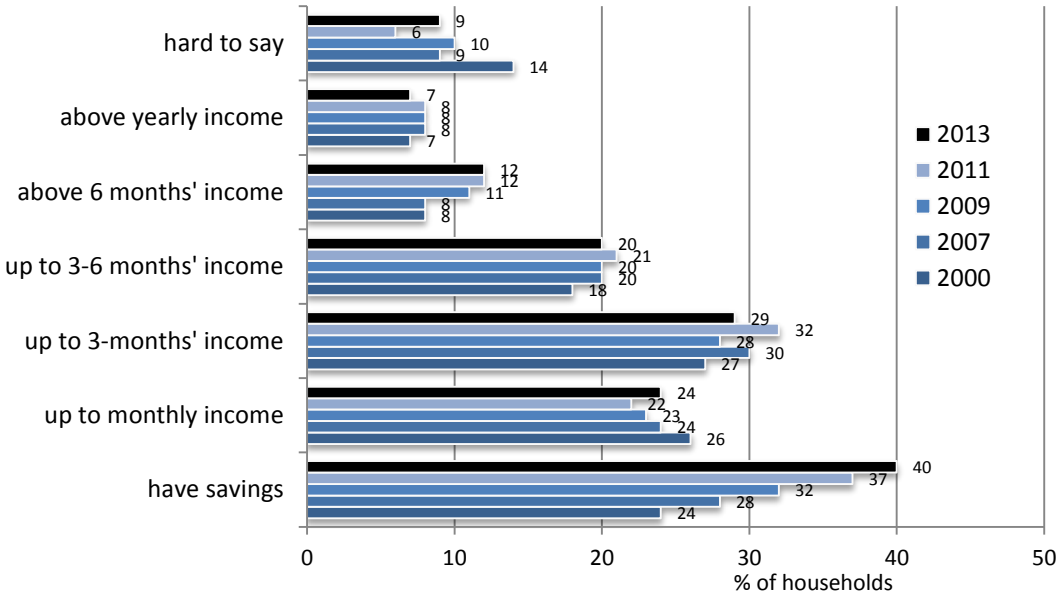


Figure 4.3.11 Percentage of households with various levels of savings between 2000-2013

The forms of saving have not changed to any great extent (figure 4.3.12). It is worth noting however that, in comparison with the years before the world financial crisis of 2005 to 2007, the share of deposits with investment funds, shares, property and in Individual Pension Accounts fell and cash savings rose to the highest level since the study began.

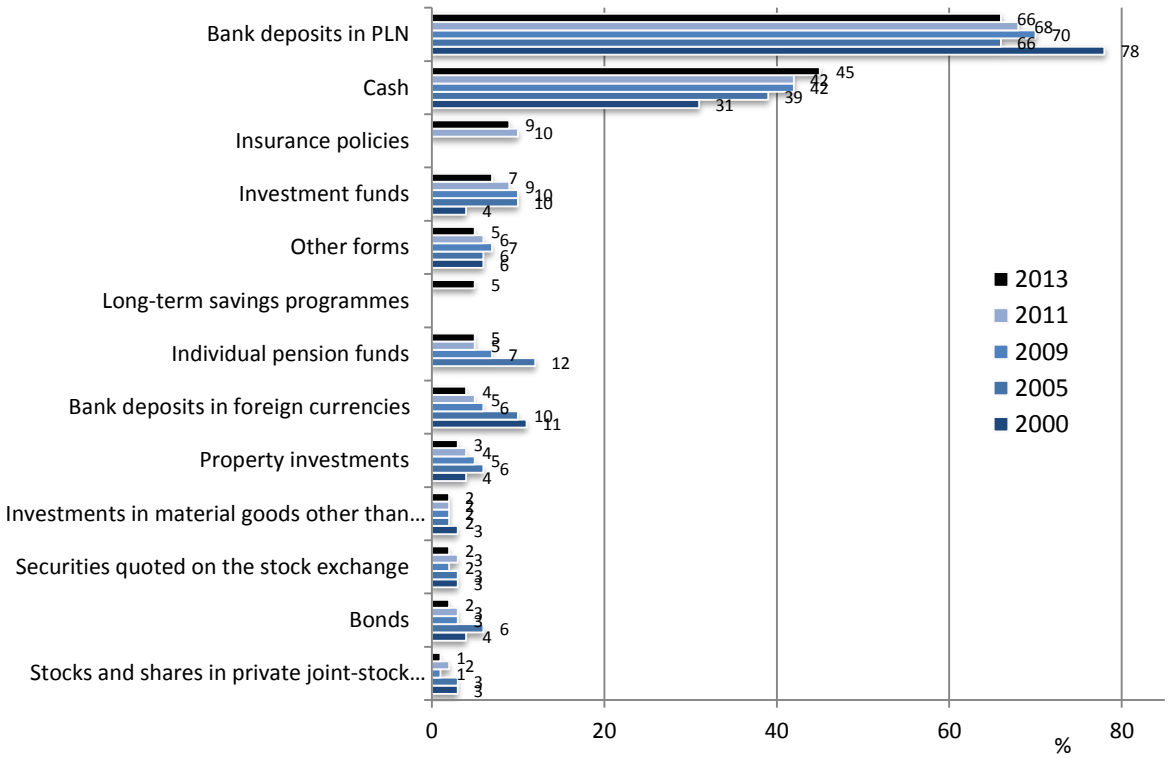


Figure 4.3.12. Forms of households' savings between 2000-2013

As far as the purpose of saving is concerned, the share of households saving to buy durable goods and purchase a house or flat fell in comparison to 2009-2011, and the share of those saving up for daily consumption spending and as an emergency reserve increased (figure 4.3.13).

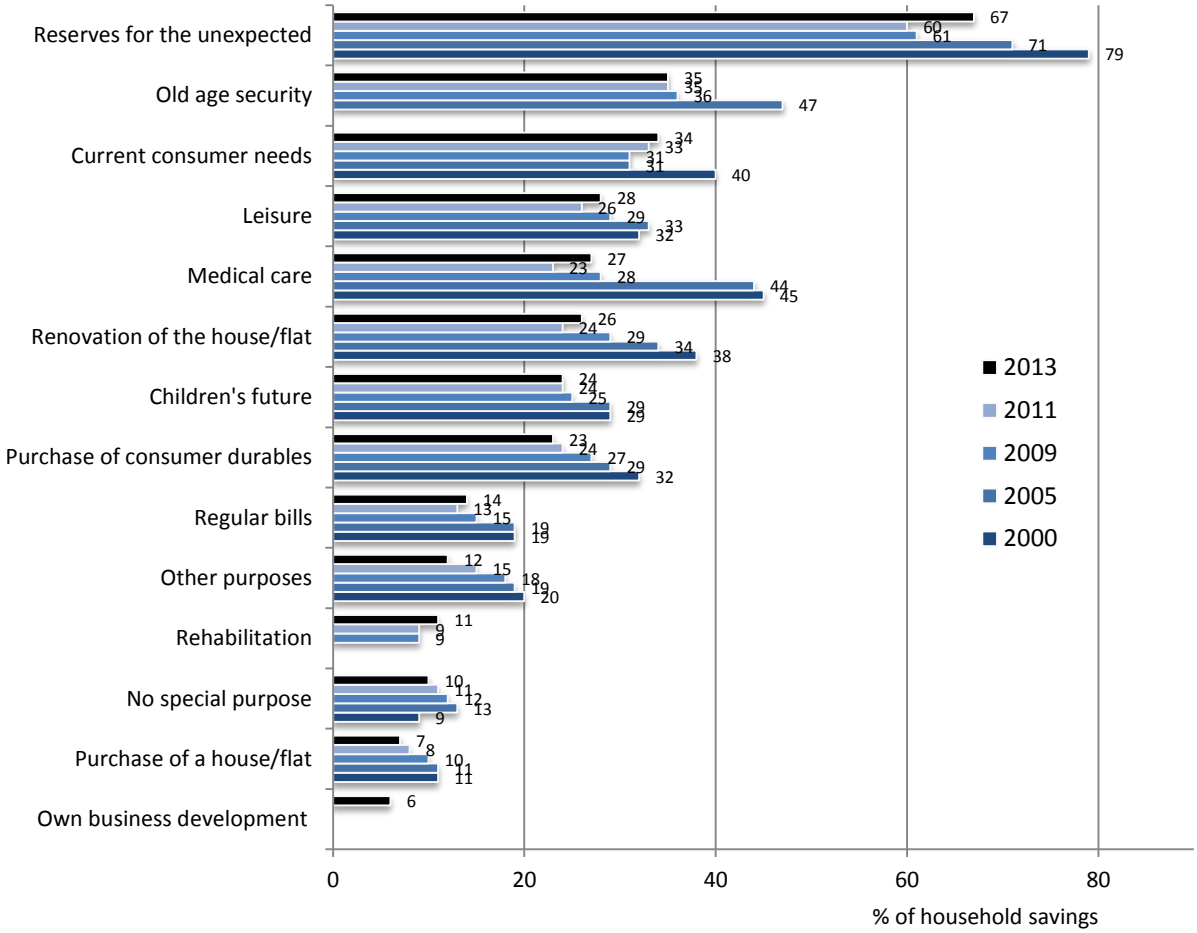


Figure 4.3.13. Purposes of household savings between 2000-2013

The number of indebted households fell slightly from 42% to 37% in the last four years, while there was a marked fall in the share of households in debt to the equivalent of three months income, with a large rise by 10 p.p. of households in debt to that of more than a years salary (figure 4.3.14).

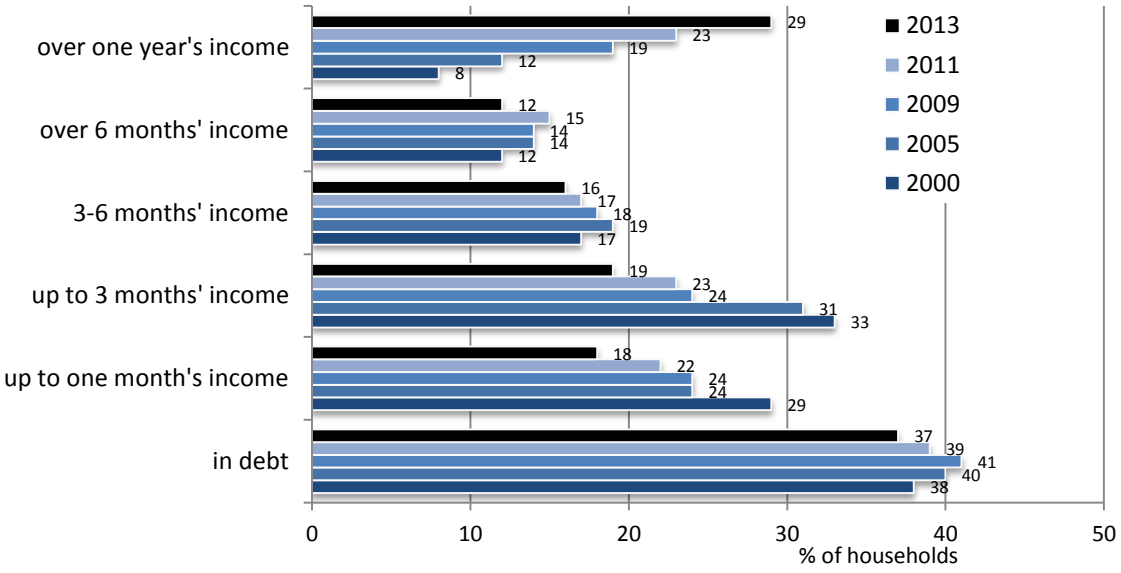
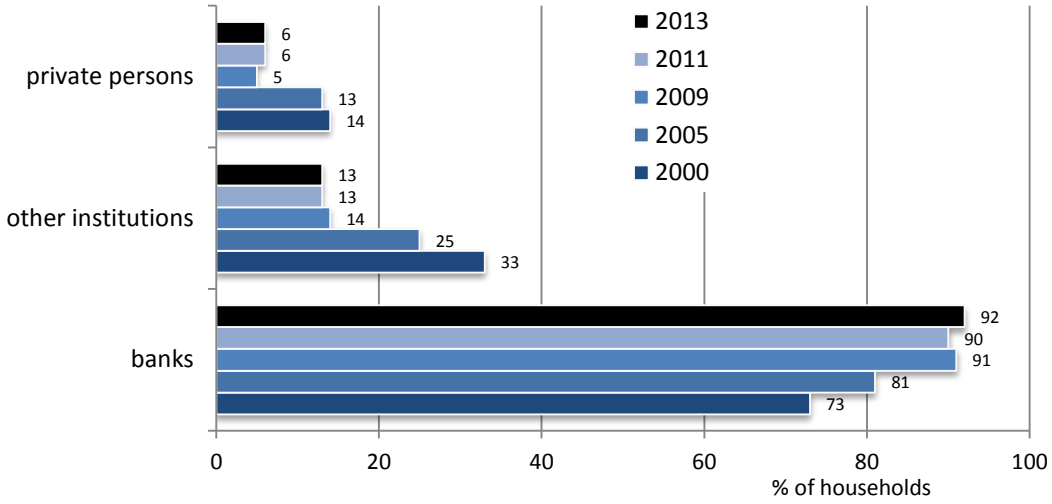


Figure 4.3.14. Percentage of households with various levels of debt between 2000-2013

4.3.2.3. Debt

The level of household debt to banks has been rising significantly and systematically since the beginning of the century from 73% in 2000 to 91% in 2013 at the expense of debt to other financial institutions (figure 4.3.15).



NOTE: in 2013 SKOK was included in the bank category.

Figure 4.3.15. Holders of households' debt between 2000-2013

Loans are increasingly less used to buy durable goods and fund home redecoration, healthcare and cover fixed costs (e.g. accomodation), and more often for house or flat purchase (4.3.16). In combination with the change in the degree of debt, this represents a fall in consumer loans.

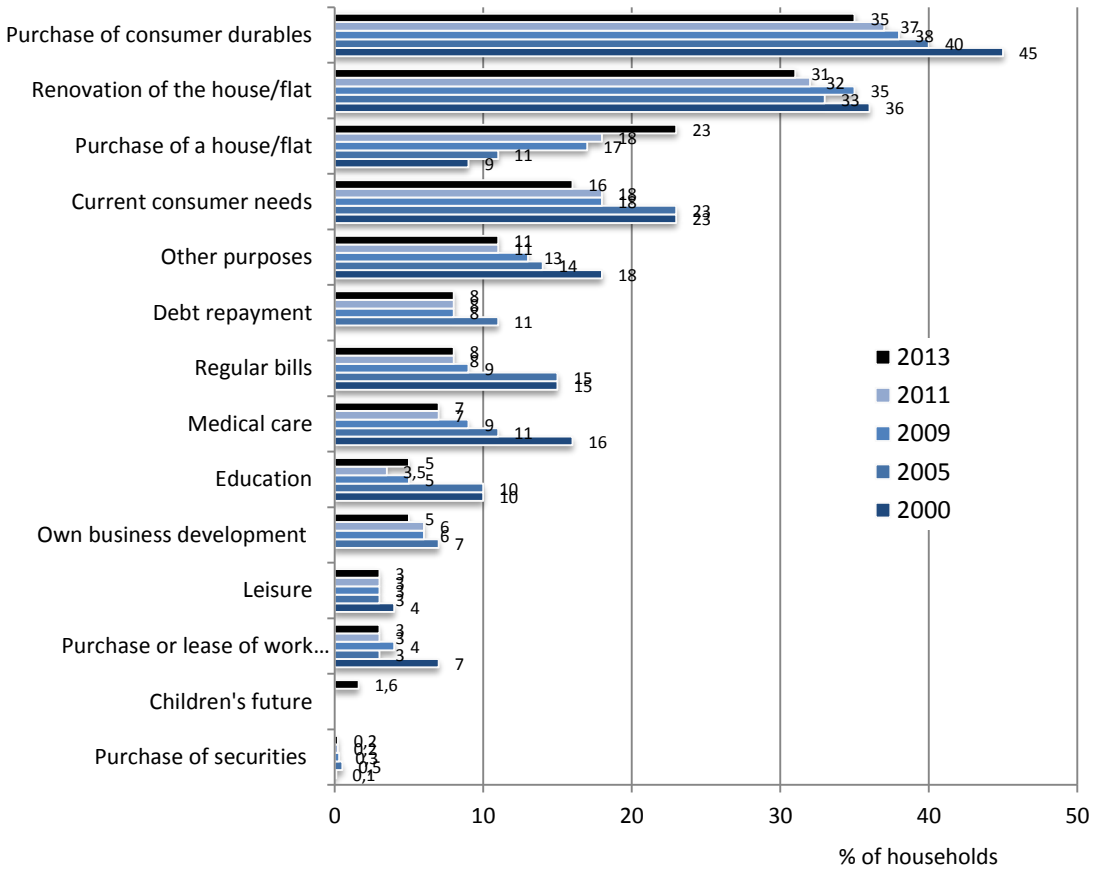


Figure 4.3.16. Purposes of household' borrowing between 2000-2013

4.3.2. Household' activity on the financial market

The analyses presented in the previous points clearly depict the tendencies in behaviour of households present on the financial market. The share of households declaring savings rose and at the same time there was a fall in that of households in debt. National Bank of Poland data indicates that an increase in the share of households with savings translates directly to an absolute increase in the size of savings. However, there is also a visible increase in household debt in the form of bank loans, which is mostly associated with a rise in mortgages, while loans for consumption purposes have remained stagnant since 2011. This observation encourages us to consider the factors influencing the accumulation of savings, and also those determining acquisition and possession of loans. Therefore, an analysis of the influence of factors associated with life cycle, income and job market status has been conducted for the third time (previously in 2009 and 2011). This enables us to determine which factors are crucial for acquiring savings and which ones are important determinants of loan possession. Subsequently, we conduct a comparison between the results of 2011 and 2013 waves.

The Social Diagnosis surveys the form, objectives and the total size of household savings. Therefore, we can provide an estimate of the structure of the forms and aims of Polish households' savings. As far as an analysis of saving forms might be conducted on the bases of financial sector data, analysis of saving aims is only possible with household level data. However, with household level data, it is also possible to analyze borrowing profiles in terms of source and aim. Additionally, the current edition of Social Diagnosis includes an additional set of questions about the size of debt repayments, allowing us to analyse the structure of total debt repayments in terms of the institutions providing household finance and also the structure of repayments by different household purposes.

4.3.3.1. Factors affecting possession of savings and debts

Since the outbreak of the financial crisis, the percentage of households with savings has clearly increased from 28% in 2007 to over 40% in 2013, which considering the stability of this feature (23-24%) in the 2000, 2003 and 2005 waves indicates a considerable change.

Though it is true that the share of households with savings is considerably lower than the one observed in developed countries, the results of the *Social Diagnosis Survey* show systematic increase in the share of households able to generate savings.

Households' saving behaviour depends mostly on factors connected to life factors (the stage of life is determined by the age of the household head), the ability to generate savings (determined mainly by income level) and relative material position of the household in the given period connected to the labour market status of the household head compared to average situation at the given stage of life[17]. These variables have been taken into account in the logistic regression model (e.g. Gruszczyński, 2002) for savings, in which the likelihood of the household having savings is conditioned by its material situation, age of household head and his/her labour market status:

$$P(Y = y_i) = F^{-1}(x^T\beta) = \frac{e^{x^T\beta}}{1+e^{x^T\beta}}$$

where:

Y – is a binary random variable with the following possible values: 1 – the household has savings, 0 – the household has no savings;

F – logistic distribution function;

x – column vector for explanatory variables[18];

β – column vector for parameters.

The models have been estimated separately for the data collected from 2011-2013 waves and represented in table 4.3.1, which includes the results for the two last editions.

[17] If the household head does not work, the relative income is usually lower than at other stages of the life.

[18]Variables: age of the household head and his/her status on the labour market and the level of incomes have been included in the model as categorical variables, which required setting reference categories. In all three cases the groups with the largest representation in 2011 were assumed as categories. In the case of the household head this was the group aged 45-59, in the case of the head's labour market status the category of an employed person and in the case of equivalent income the group of households with incomes between 1500 and 1999 PLN. .

Table 4.3.1. Results of logistic regression model estimation of household savings

Explanatory variables		2011		2013	
		B (standard error)	Odds ratio Exp (β)	β (standard error)	Odds ratio Exp (ß)
Income per consumer unit (PLN)	up to 500	-2.305*** (0.163)	0.100	-2.207*** (0.148)	0.110
	500 – 999	-1.391*** (0.065)	0.249	-1.572*** (0.067)	0.208
	1000–1499	-0.709*** (0.058)	0.492	-0.767*** (0.057)	0.465
	1500–1999	ref.		ref.	
	2000–2999	0.535*** (0.065)	1.708	0.435*** (0.064)	1.546
	3000+	1.191*** (0.091)	3.291	0.986*** (0.095)	2.680
Age of household head	up to 24	0.058 (0.196)	1.060	-0.698***(0.243)	0.498
	25-34	-0.056 (0.075)	0.946	0.115 (0.070)	1.122
	35-44	0.016 (0.067)	1.016	-0.119* (0.063)	0.888
	45-59	ref.		ref.	
	60-64	-0.020 (0.069)	0.981	0.169** (0.082)	1.184
	65 and above	0.199** (0.085)	1.220	0.257*** (0.081)	1.294
Job-market status	Employees	ref.		ref.	
	Unemployed	-0.325* (0.171)	0.723	-0.254 (0.167)	0.776
	Inactive	-0.293*** (0.070)	0.746	-0.293*** (0.073)	0.746
Constant		-0.047 (0.058)	0.954	0.120** (0.054)	1.128
N		11645		11049	
Measure of fit (Cox-Snell R^2)		0.154		0.153	

effects are significant at: *** 0,01, ** 0,05,* 0,1 level

In both of the periods subject to analysis differences in households' incomes influenced the probability of savings possession in a comparable way, although a very slight flattening of income level results may be observed in 2013. This is mostly a consequence of the increased ability of households to save even very low amounts of money in the light of increasing incomes. The probability of having savings still varies significantly across income groups. The odds for savings in the group with incomes ranging from 1000 to 1499 PLN was lower than in the reference group (households with incomes within the range of 1500 – 1999 PLN) [19]. In the group of households with incomes between 2000 and 2999 PLN, the odds of having savings are higher by 54.6% than in the reference group in 2013. In the lowest income household group (up to 500 PLN), the odds ratio with respect to the reference group amounts to merely 0.11, which is very similar to the value obtained for 2011. This implies that the relative chance of savings possession in the lowest income group was about 90% below that of the reference group. In the following group (500 – 999 PLN), the odds for savings possession were around 80% lower than in the reference group, which further declined between 2011 and 2013. A considerable increase in the probability of savings may be observed in households with incomes exceeding 2000 PLN. Nevertheless, the odds ratio of savings possession for households with higher incomes decreased in the past two years. In 2013, among households with largest incomes (3000 PLN and above), the odds for savings possession were 168% higher than in the reference group, which translates into a probability of savings equal to 0.751 (assuming household head employment and age between 45 and 59). In the previous study round, the chances of having savings in this group was over three times higher than that estimated for the reference group.

Job-market status was a significant determinant of having savings in both periods of study. Both households with unemployed heads and those who were inactive labour had significantly lower odds of having savings compared to the working head reference group while the differences to those with unemployed heads were not significant. In 2011 and in 2013, the odds of having savings were smaller by 25% in the household groups with inactive labour heads, as was the case for unemployed heads, though their situation showed a relative improvement compared to 2011. Analysis of the effect of household head age on the odds of having savings indicate that the largest probability is observed among those of 65 years of age or older. In 2011, the odds for having savings in that group was 22% higher than in the 45-49 year-old reference group, and in 2013 this was 29% higher. Also in 2013, for households with heads aged 60-64 the odds of having savings were 18% better than the reference group.

In 2011, the influence of age on the probability of having savings was very similar among all the groups of households with heads aged 25-64. In 2013, the situation changed with a marked fall in the odds of having savings in the youngest household group (head up to 24 years old) and those of heads of

[19] In logistical regression models, variable coefficients inform of the relative chances of success that are defined as the probability of success (here having savings) to that of failure (lack of savings).

35-44 years of age. However, the odds for those of 60 or more increased in the past two years compared to the reference group.

Unlike in the case of changes in the share of households with savings, that of households with a loan has been systematically decreasing. In 2013, this was below 37%, which means a drop on 2011 of around 2 p.p. and 4 p.p. on 2009. A decrease in household borrowing is observed although the Polish credit market, which still remains relatively poorly developed as total household debt was only 33% of GNP, while the EU average is about 60%. So, processes associated with convergence ought to stimulate a rise in the household activity in terms of financial services. It should be underlined that over a prolonged period, there were significant barriers to credit accessibility especially for the poorest households. These limitations were mostly due to the regulatory activity of the Polish Financial Supervisory Authority, with the Recommendation T[20] most responsible for the effect on the Polish financial market. This reduced the supply of small-value consumer loans by banks, which initially caused a fall in the share of households on the credit market. In order to assess which groups of households were most strongly affected by the credit squeeze, we estimated a logistic regression model. In this model, the dependent variable is the possession of liabilities, while the explanatory variables are the same as in the case of the regression model for savings, in which the probability of having liabilities is dependent on income, age of household head and his/her labour market status (table 4.3.2).

Table 4.3.2. Results of logistic regression model estimation of household liabilities

Explanatory variables		2011		2013	
		B (standard error)	Odds ratio Exp (β)	β (standard error)	Odds ratio Exp (ß)
Income per consumer unit (PLN)	up to 500	-0.326*** (0.104)	0.722	-0.633*** (0.111)	0.531
	500 – 999	-0.145** (0.061)	0.865	-0.058 (0.063)	0.944
	1000–1499	0.000 (0.060)	1.000	-0.015 (0.060)	0.985
	1500–1999	ref.		ref.	
	2000–2999	0.042 (0.068)	1.043	-0.023 (0.067)	0.977
	3000+	0.064 (0.084)	1.067	0.429*** (0.088)	1.535
Age of household head	up to 24	-1.077*** (0.221)	0.341	-1.322*** (0.286)	0.267
	25-34	0.422*** (0.068)	1.525	0.394*** (0.067)	1.484
	35-44	0.464*** (0.061)	1.590	0.530*** (0.057)	1.699
	45-59	ref.		ref.	
	60-64	-0.180*** (0.062)	0.835	-0.230*** (0.077)	0.795
	65 and above	-0.891*** (0.080)	0.410	-0.758*** (0.078)	0.469
Job-market status	Employees	ref.		ref.	
	Unemployed	-0.633*** (0.140)	0.531	-0.018 (0.132)	0.982
	Inactive	-0.218*** (0.063)	0.804	-0.170** (0.068)	0.844
Constant		-0,190*** (0,057)	0.827	-0.400*** (0.054)	0.670
N		11507		11046	
Measure of fit (Cox-Snell R^2)		0,076		0.070	

effects are significant at:*** 0,01, ** 0,05,* 0,1 level

In comparison to the savings model, income level seems to have a weaker influence on debt possession. In 2013, the odds of borrowing in households with incomes up to 500 PLN were 47% lower than that of the reference group of 1500-1999 PLN. In groups of households with income in the ranges of 500-999 PLN, 1000-1499 PLN and 2000-2999 PLN, the odds for borrowing were similar to that of the reference group. Only among households with incomes of at least 3000 PLN was there a markedly higher probability of debt.

There was a significant change between 2011 and 2013 in the probability of debt in the highest and lowest earning household groups. It seems that, as a result of the regulations limiting access to financing for the least prosperous households, the probability of debt possession was clearly reduced among lowest income households, but this rose slightly with incomes of 500-999 PLN and very markedly for the highest incomes. In 2011, the odds of households borrowing in the income range of over 3000 PLN were close to those reported for incomes of 1000-1999 PLN. In 2013, the highest earners had 53% higher chances than the reference group of 1500-1999 PLN.

While income variables had the largest influence on the possession of savings, with borrowing age of household head played the crucial role. As expected, compared to the reference group (age of the

[20] Recommendation T was introduced to implement a range of risk-management good practices for banking sector retail credit exposure. It contains a range of regulations on bank credit activity, the most significant of which for households were more stringent creditworthiness criteria. These reduced households' access to credit to a marked degree.

household head 45-59), the younger head households are more active on the credit market than the reference group. The profile of borrowing probability for age is similar for both of the compared periods. In 2013, the odds of borrowing in the groups aged 25-34 and 35-44 were 48% and 70% higher respectively than in the reference group. This was mostly due to high consumer activity typical for the earlier stages of life (purchase of consumer durables, first accommodation etc). After a certain age, the bulk of needs likely to be financed by external sources are satisfied and the propensity to acquire additional debt falls. It should also be remembered that activity of households with heads of over 44 years of age is significantly affected by the fact that they began their professional activity at a time when the market was at a very early stage of development and did not offer financial products suitable to the needs of that group.

The households with the youngest group of heads (up to 24) do not appear to meet financial institutions' creditworthiness criteria. This is borne out by the availability of credit as measured by the odds of borrowing, which were 73% lower than in the reference group. In the case of the households of older persons (household head aged 60 and more), the odds of borrowing with respect to the reference group is 20% lower for the households with heads aged 60-64 years and 53% lower for those with heads aged 65 and more.

Similar to the savings model, employment increases the probability of borrowing as observed both in 2011 and 2013. Nevertheless, in 2013 household head's unemployment status did not significantly affect the probability of borrowing in comparison to those with heads in employment. In 2011 the odds for borrowing for the unemployed and the employed were by 47% lower for households with the same incomes and heads of the same ages. However, in 2013 this difference was merely 2% and was not statistically significant. This may mean that thanks to increased competition among firms offering short-term financing to these households that paid their obligations (notwithstanding the fact of being in steady employment), households with temporary job market problems were able to gain access to credit.

The odds for borrowing in the group of household with heads not active on the labour market did not change significantly compared to 2011, and were 20% lower than the reference group in 2011 and 15% lower in 2013.

4.3. 3.2. Structure of Polish household savings in relation to the form and aims of savings

Part of the *Social Diagnosis* is devoted to monitoring the forms, aims and extent of households' saving activity. The structure of households' saving in terms of form is presented in chart 4.3.20 and point 4.3.2, and in terms of aims in 4.3.21 and point 4.3.2. This data does not however allow for comparison of the structure of savings with respect to forms and also their objectives. Combining information on the three dimensions of saving; i.e. size, form and aim allows the presentation of households' general savings structure in terms of forms and aims[21]. Analysis was conducted on the basis of multinomial logistic regression model estimates. Table 4.3.3 presents savings profile in terms of savings form[22].

The lion's share of Polish households' savings is in the form of PLN savings accounts. Our estimates indicate that around 43% of assets are gathered in this form. In second place there are savings in the form of cash, which account for almost 14% of all savings even though this is the most archaic form of saving. Over 11% are kept in the form of investment funds. Other forms are less popular: 6% of all assets are held on foreign currency accounts, 5% in real estate investment, 4% in shares and a similar figure in insurance policies. The smallest part of household savings are in the form of shares not listed on the stock exchange, which accounts for around 1.3% of total savings. However, it should be born in mind that the household perspective does not include the assets of Open Pension Funds on the stock exchange, as well as other forms of savings in shares involving at least a part of household savings.

The results of savings structure analysis in terms of purpose indicate that households react to signals about the necessity of making provision for security in old age (table 4.3.4).

The lion's share of Polish households' savings (19%) have been accumulated as a security for old age, with a similar percentage (18%) saved as a reserve in case of emergency. The third most popular aim was the purchase of a house or flat, which together account for about 10% of the total savings,

[21] Analysis was only possible for 2013 because of the change in the number of forms and purposes of saving in the cafeteria of questions, as well as also in the sources and purposes of borrowing.

[22] The basis for analysis of savings and borrowings profiles by form and purpose were multinomial logistical regression models. Also the relations of average savings by selected purpose were calculated on the basis of the results of this modeling as was the size of borrowing by source and purpose.

which is actually not such a large share given banking (and other lending institutions') down-payment requirements for property purchase. A significant aim of saving is securing the future of children, which accounts for around 9% of the total.. The smallest share is savings for regular household bills (2%).

Table 4.3.3. Structure of savings in 2013 by form of savings[23]

Form of savings	Estimated share of form of savings
Złoty bank accounts	43.2
Foreign currency accounts	6.0
Bonds	3.9
Investment funds	11.4
Individual Pension Funds / Retirement Insurance	2.1
Stock exchange shares	2.3
Shares in companies not listed on the stock exchange	1.3
Real estate	5.2
Investment in material goods other than real estate	2.4
Cash	13.5
Insurance policies	3.7
Long-term savings plan	2.7
Other forms	2.1

Table 4.3.4. The structure of savings by saving purpose in 2013[24]

Purpose of savings	Estimated percentage of savings with a given purpose
Current consumption reserve (food. clothing etc.)	5
Regular household bills	2.1
Purchase of consumer durables	4.7
Purchase of house/flat. down payment for building association	10.3
Renovation of house/flat	5.8
Healthcare	4.5
Rehabilitation	2.3
Leisure	6.6
Reserve for the unexpected	18
Children's future	9.0
Old-age security	18.9
Own business development	2.8
Other purposes	5.8
No special purpose	4.1

4.3.3.3. The structure of debt and repayments of Polish households by source and aim

As in the case of savings, in *Social Diagnosis Survey* there are also monitored: the value of Polish households' debts and their sources and aims. Also in this case it is possible to combine the information from these three dimensions in order to provide the structure of obligations in terms of their source and aims. Furthermore, in this edition of *Social Diagnosis*, the scope of information gathered from households was extended by information on monthly payment burden. Thus it was possible to link the information on the size of repayments with the source of obligation and also that on repayments burden

[23] The results presented in this table show how Polish households keep their savings and the structure of those savings in terms of form. It should however be noted that a study of this kind is not capable of including the most wealthy households, and this should be taken into consideration in the interpretation of these results. Also it is impossible to take into account that the majority of assets on the Warsaw Stock Exchange are owned by a small group. So the best explanation for these statistics is that they present the forms of Polish household savings not including that of the highest earning group with the largest savings.

[24] See footnote 23.

with the obligation aim. Therefore it was possible to present not only a breakdown of the debt, but also a breakdown of its servicing. These are often very different values, which is mostly affected by different lengths of different obligations – those with shorter maturities usually result in a higher service burden because the payments of principal and interests are higher. However, it should be noted that the weight of the latter factor is often exaggerated, especially for short-term obligations.

In the current edition of the *Social Diagnosis*, the range of source of financing categories was extended. Currently, households can choose from five possibilities: (1) banks, (2) credit unions (SKOK), (3) financial intermediaries offering installment loans, (4) other lending companies, and (5) private individuals. Previously the choice had been confined to banks, other institutions or private individuals. The structure of households' obligations by source is presented in chart 4.3.20, point 4.3.2. However, this does not fully show the differences associated with the very varied size of obligations from different sources. Table 4.3.5 shows the structure of obligation size by source with the structure of servicing presented as well.

Table 4.3.5. The structure of households' obligations and their servicing by source in 2013

Debt holder	Estimated percentage of total debt from a given source	Estimated percentage of total repayment of debt from a given source
Banks	97	89.4
SKOK	0.8	2.9
Credit agencies. shops	0.8	3
Other lending companies (e.g. Provident)	0.7	2.5
Private lenders	0.7	2.2

The banking sector is the provider of 97% of all household borrowing. This is mainly in the form of mortgages, which are traditionally loans of a large value. The remaining 3% is more or less equally divided between the other sources. Around 0.8% is provided by credit unions, with a similar value for installment loan agencies. Lending firms provide more or less the same as households lend each other at 0.7%.

Because bank sector obligations are more often long-term, households devote a proportionally larger part of their income to servicing short-term obligations. Even though bank loans make up 97% of all household debt, the outlays on servicing account for 89% of all monthly repayments. Consequently, 11% of the repaid sums goes on servicing of the remaining debts. This also shows that, to a large extent, media revelations suggesting households' high debt burden from other (non-banking) institutions are incorrect. The results also show that the size of repayments is proportional to share in borrowing if loans from other then bank sources are taken into account. Households dedicate 2.9% and 3% to service obligations to SKOK and installment loan agencies respectively, which have a 0.8% share of total borrowing each. Other lending firms receive 2.5% of the servicing budget and private persons obtain 2.2%.

The structure of households with debts broken down by purpose is presented in point 4.3.2., and the distribution of households with debts broken down by their purpose is presented in figure 4.3.24. In table 4.3.6, as in the case of the source of debt, we present the structure of debts with respect to their purpose[25]. The results also show the share of repayments associated with particular aims in the whole repayment budget.

In 2013 the largest share of household borrowings financed purchase of a house or a flat at 65% of all household obligations. Further aims were significantly less visible in total household debt as nearly 12% was dedicated to the redecoration of houses or purchasing of household durables at 8% of all debts. It is however worth mentioning that these last two borrowing aims were the most common. The following objective of borrowing is to repay previous debts. This purpose was satisfied by one in forty borrowed złoty among all of borrowings. The smallest share with less than 0.5% of total debt obligations was associated with purchase of stocks and for educational purposes.

[25]Average amounts of debt were calculated on the basis of the correspondence of the log-normal distribution with the distribution of expected answers to on the amount of debt in relation to possessed savings.

Table 4.3.6 The structure of household obligations by their aim and servicing in 2013

Aim of borrowing	Estimated percentage of total borrowing to finance a selected purpose	Estimated percentage of total repaid borrowing to finance a selected purpose
Current consumption reserve (food. clothing etc.)	1.9	5.4
Regular household bills	1.5	2.8
Purchase of consumer durables	8.2	18.1
Purchase of house/flat	65.0	32.8
Renovation of house/flat	11.8	20.0
Healthcare	0.6	2.5
Rehabilitation	1.3	1.5
Leisure	0.5	1.1
Reserve for the unexpected	0.0	0.1
Children's future	2.5	4.7
Old-age security	2.5	2.7
Own business development	0.1	0.7
Other purposes	0.3	0.7
No special purpose	0.4	0.8
Other purposes	3.5	6.2

The greatest share of borrowing associated with the purchase of housing is accompanied by the corresponding highest servicing outlays. However, even so, these make up only 33% of all debt repayments. So, as far as house/flat purchase accounts for 2/3 of all household obligations, its servicing amounts to no more than 1/3 of all repayments. It is a consequence of the markedly longer maturity of mortgages. The next position in the servicing budget is that of the two most common borrowing goals: purchase of durables and home redecoration, making up 18 and 20% of all payments respectively. Debt for consumption purposes are rather costly as proven by their 5.4% share in the servicing budget while they only make up 1.9% of the total value of debt obligations. On the basis of the results, it can be concluded that the most expensive form of borrowing is for education and healthcare. Even though child and personal education borrowing only makes up 0.4% of the total value of household debt, its servicing amounts to 1.4% of total monthly repayments. In the case of healthcare borrowing, this relation is 0.6% to 2.5%.

4.3.3.4 Summary

In 2011-2013, there were further changes in households' financial market activity. Above all, for the first time in the history of the study, the share of households declaring possession of savings exceeded that of obligations. This was a consequence of two features. On the one hand, the growing incomes of Polish households translate into the chance of saving much more strongly than the will to borrow. On the other hand, the market for bank financing has been strongly limited in recent years, which has resulted in a fall in the number of households taking loans for consumption purposes. The perspectives for household activity on the financial market in the forthcoming years are to be to a great extent determined by the pace of income growth, but also by bank lending policy. Readiness to take loans will be undoubtly limited by lower number of new households entering the market as the demographic trough of the 1990s enters the market. On the other hand, one can expect a continuation of the increasing role of mortgage borrowing, which should further boost the total value of Polish households borrowing.

The results of the *Social Diagnosis* 2013 also clearly show that households still save mainly in the form of bank saving accounts, and cash savings remain considerable. An important part of household savings is „protective" in nature, as over half are for old age, in case of emergency and childrens' future. The sum of savings for purchase of durable goods, housing or running businesses amounts to less than 20% of the total. The share of savings on healthcare is no more than 7%, as is the case of vacations. It would seem that in subsequent years, the profile of savings should change with demographics. One can expect more savings on investment in health (treatment, rehabilitation and vacations) and old-age security.

As far as borrowings are concerned, our analysis shows the unambiguously dominant position of banks, which own 97% of household debt. Information concerning the unusual burden of servicing obligations to other lending companies has not been confirmed, with this kind of servicing amounting to only 2.5% of payments. Mortgage payments dominate in terms of both purpose and scale of borrowings.

4.4. Housing conditions

Tomasz Panek. Janusz Czapiński

4.4.1 The situation in 2013 and change over the last four years

In February/March 2013, nearly 4% of household members did not live on their own. This share rose between March 2009 and March 2013[26] by nearly 2.5 p.p., though over the last two years it has not changed significantly.

The household members not living on their own were recorded most often in the group of farmers' households and those receiving welfare payments (around 5.5% and around 5% respectively). In 2009-2013, there was a fall in the households with members without their own rooms in all socio-economic groups apart from among that of pensioners.

As regards the breakdown of households by type, multi-family households most often reported members who did not live on their own at nearly 12%. In March 2013 compared to March 2011, there was a marked fall in the frequency of separate rooming in the multifamily group (by nearly 2 p.p.) and a marked rise in that of non-family multiperson by nearly 7 p.p.

In the households without unemployed over 3.8% did not have separate rooming in 2013, while the figure for those with unemployed was over 3.5%. In the last two years, the changes in the share of households without separate rooming among those with and without unemployed members were not significant and less than 1 p.p.

Households without separate rooming were most frequent in rural areas at 4.4% of total rural households. The Voivodeship with the largest share of this type of household was Lubelskie at almost 7%. We have noted a marked fall in the share of this type over the last two years only in rural areas of over 1 p.p., with the highest rise in separate rooming registered in Lubelskie and Małopolskie by over 4 and 2 p.p. respectively.

In February/March 2013, among the households taking part in the survey, the average usable floor area of an apartment per person was over 31 m^2. In relation to February/March 2009, this area did not show a marked change.

The highest occupancy density was observed among the households of employees in February/March 2013 (around 26 m^2 per person). In the period 2011-2013, a rise in occupancy density was observed in all socio-economic groups of households, apart from the households living on unearned sources of income.

As regards the types of households. in February/March 2013 the highest occupancy density was recorded in the homes of married couples with many children and in multi-family households (around 17 m^2 and below 20 m^2 of useable floor area per person accordingly). In March 2013, occupancy density, in relation to March 2011, increased significantly among all types of households, with the greatest decrease in non-family multi-person households (by more than 5 p.p.).

In the unemployed members' group, dweller density was significantly higher than in that without the unemployed at an average of not quite 22 m^2 and nearly 33 m^2 per person. In both groups there was a rise in density between 2011 and 2013 of almost 2 m^2 and over 2 m^2 respectively.

Occupancy density in households in rural areas is considerably lower than in the case of urban households. When broken down by Voivodeship, the differences between the groups of households as regards occupancy density can be treated as slight while the largest was in Warmińsko-Mazurskie at not quite 28m^2 per person. In all groups of households broken down by place of residence class and in most Voivodeships, a rise in the number of persons per home was observed in the last two years. The greatest rise in occupancy density was observed in middle-sized towns with 20,000-100,000 inhabitants, in rural areas (by over 3 m^2) and in the Pomorskie and Łódzkie Voivodeships (by over 7 m^2 and by over 6 m^2 respectively).

As regards the conveniences and amenities included in the survey in February/March 2013, the most common was mains water, which only 2.9% did not have. At the same time, we observed a rise in the share of households equipped with all goods and installations included in the study over the last four years (figure 4.4.1). A rise in households with mains gas and a corresponding fall in those using gas canisters were also noted. In the last two years there was also an insignificant increase in the share of dwellings with goods and installations, though the rise was marked in the case of mains water at over 2 p.p. and sewage by 1 p.p.

[26] All changes in terms of housing conditions in 2009-2013 refer to the panel sample for those years.

Homes without running hot water were mostly occupied by households living on unearned income (over 45%) and pensioners (around 29%). There was a rise in the share of households equipped with conveniences and amenities over the last two years in all socio-economic household groups with the exception of hot running water in those living on unearned sources of income.

In the unemployed members group, household conveniences and amenities were significantly less widespread than in in the group without unemployed. For example, over 28% and around 19% of households respectively were equipped with hot running water. The state of household equipment in these two analysed groups improved across all goods and installations over the last two years with the exception of hot running water.

Relatively the highest percentage of homes without hot running water were non-family households (over 26%). In last two years, there was a rise in the percentage of households with hot running water in all categories of household, most strongly in the single-person non-family group (over 5p.p.).

Rural households were without hot running water (over 30%) relatively most often. There was a marked improvement for the analysed installations in all place of residence classes, with the exception of cities of 200,000 to 500,000 residents and the smallest towns in the case of a flushing toilet and bathroom with a bathtub and shower.

Households without hot running water were most frequently reported in the Świętokrzyskie and Warmińsko-Mazurskie Voivodeships (over 41% and nearly 31%). In 2011-2013, there was an improvement in the vast majority of Voivodeships as to the level of households with conveniences and amenities.

Households most often had individual or collective central heating (nearly 45% and around 42% respectively). However, over 12% used coal or wood-fire heating, most often recorded among unearned income households and pensioners (nearly 36% and over 24% respectively) as well as non-family multi-person households (around 26%), 21% of households with unemployed members and only in just under 11% without. Households in rural areas most often used coal or wood-fired heating (over 20%) and those in Lubelskie, Warmińsko-Mazurskie and Kujawsko-Pomorskie Voivodeships (over 15% in each case).

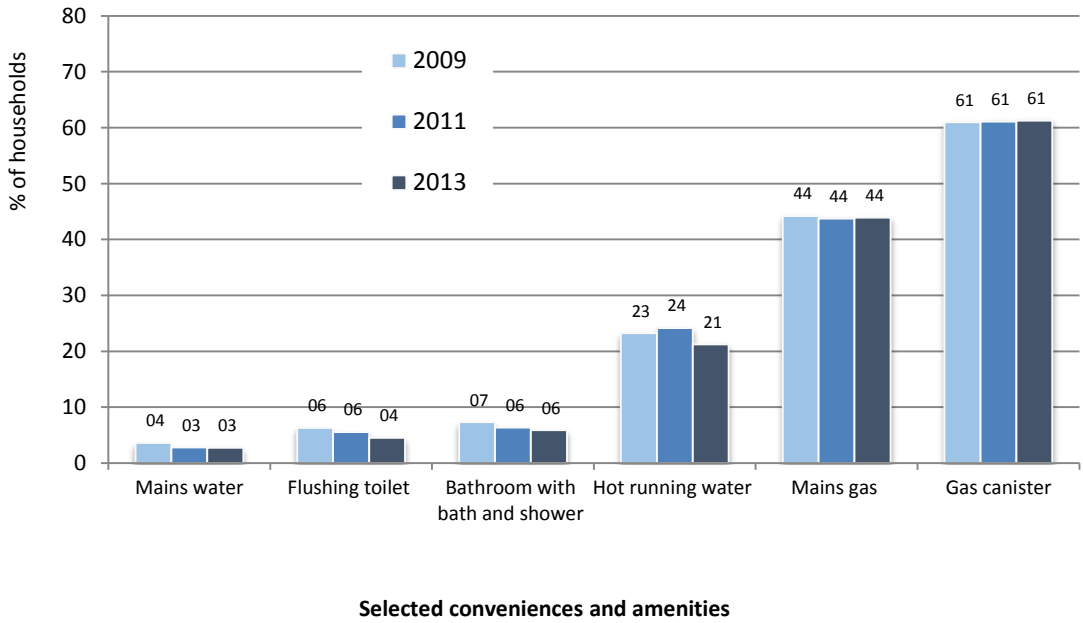


Figure 4.4.1. Percentage of households without selected conveniences and amenities between in 2009-2013 in panel sample

In the last four years there has been a marked fall of over 1 p.p. in the share of households with coal or wood-fired heating in favour of central heating (figure 4.4.2). Between 2011 and 2013 the fall in the share with coal or wood-fired heating in favour of central heating was insignificant (less than 0.5 p.p.).

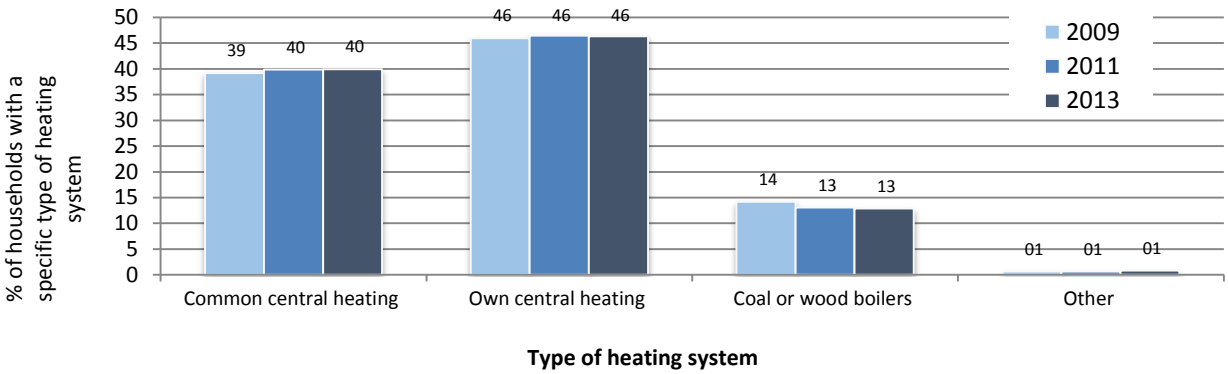


Figure 4.4.2. Households with specific types of heating systems in 2009-2013 in panel sample

Over the last two years. we have most often observed this kind of change among households of farmers and pensioners, multi-person non-family, in rural areas and in Opolskie and Podlaskie. Therefore these are the same groups of which relatively the largest share coal or wood-fired heating in 2011.

Over 7% of households were in arrears with rent in February/March 2013 and 4% with their gas and electricity bills. The first share did not change in 2009-2013 (figure 4.4.3) while that for gas and electricity changed significantly (figure 4.4.4). However. in the last two years this share was no longer significant..

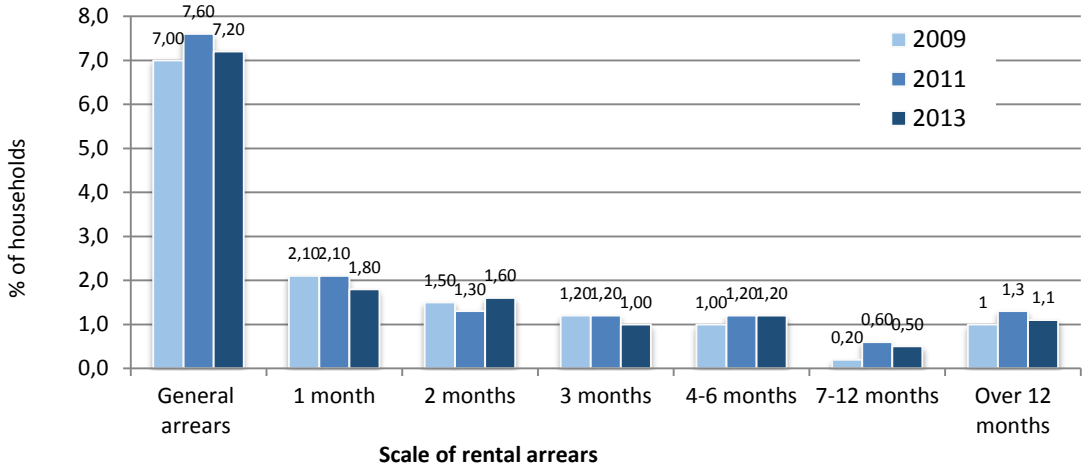


Figure 4.4.3. Rental arrears in the 2009-2013 panel sample

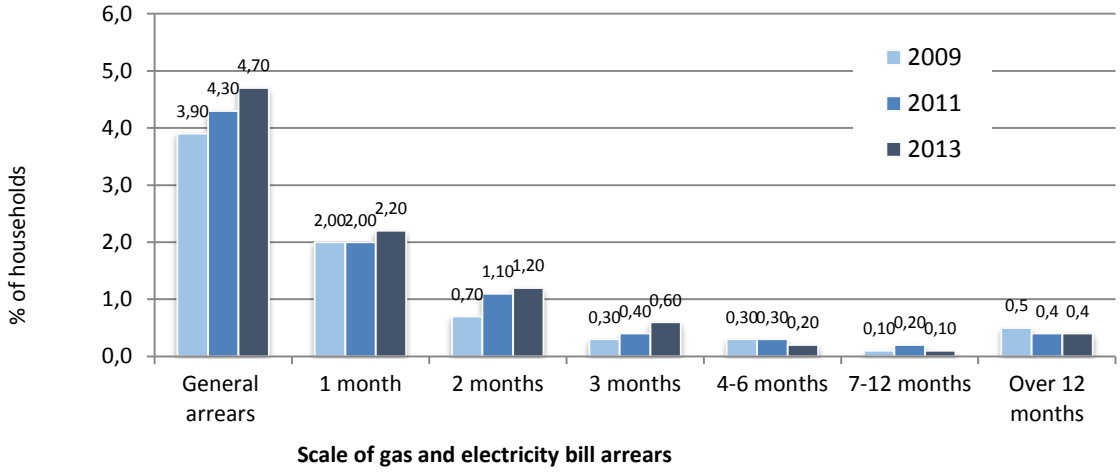


Figure 4.4.4. Gas and electricity bill arrears in the 2009-2013 panel sample

Households in arrears on rent, gas and electricity bills were most frequent among those living on unearned sources (over 29% and nearly 22% respectively), incomplete families (over 14% and nearly 9%) and couples with many children (over 14% and over 9%).

In the last two years, there has been a marked rise in the share of households in rent arrears observed among those living on unearned sources of income and households of pensioners by over 2 p.p. and multifamily at almost 2p.p. In the case of gas and electricity bills, there was a marked growth in those behind on payments only in those living on unearned sources (over 7 p.p.), pensioners (around 2 p.p.) and multifamily (over 1 p.p.).

Households in rent arrears also behind with their gas and electricity bills occurred much more often among those with unemployed members than those without.

The variability of household groups selected by place of residence class in relation to rent arrears and gas and electricity bill payments was not significant. However, as far as household payments are concerned, city households tend to be slightly more in arrears than those in rural areas, though in the case of gas and electricity bills, the opposite was observed. Between March 2001 and March 2013, there was no marked growth in the share of households in arrears in any of the selected residence classes. In the case of gas and electricity bills, there was only a marked growth in the share of households in arrears in the smallest towns.

The largest percentage of households in arrears on rent and behind with their gas and electricity bills was in Warmińsko-Mazurskie at around 10% of all households.

3.5% of households studied in February/March 2013 were in arrears with their mortgage payments, and most often these households occurred in the group living on unearned sources at almost 17% of households and in that of incomplete families (nearly 9%). Between 2009 and 2013, there was a marked rise of almost 2 p.p. in the share of households in arrears with their mortgage payments (figure 4.4.5).

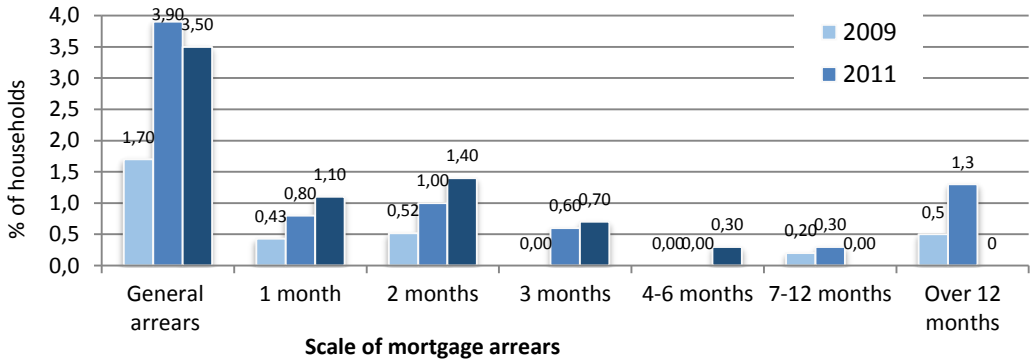


Figure 4.4.5. Mortgage arrears in the 2009-2013 panel sample

Compared to the panel sample of 2011, there was also a marked growth in the share of households in arrears with their mortgage payments.

Households with unemployed members were insignificantly more in arrears with their mortgage payments in February/March 2013 than households without. However, in the last two years there was a significant rise of almost 3 p.p. in the share of households with unemployed members with this kind of financial problem.

Households in arrears with their mortgage payments were most frequent in middle-sized towns at over 7% of households and in Małopolskie (over 8%). We observed a significant change in the share of households in arrears with their mortgage payments in both the largest and the smallest towns by nearly 4 p.p. and over 2 p.p. respectively between March 2011 and March 2013.

The vast majority of the studied households at over 81% claimed that their housing conditions had not changed in March 2013 compared to March 2011. Nearly 8% reported that these had deteriorated, and 11% that they had improved. Compared to the assessment from March 2011, the share making positive assessments increased by 1 p.p., while negative assessments were most common among households of employees and the entrepreneurs (over 10% and nearly 10% respectively) and at over 10% among households with many children and couples with 1 child.

The variation in households reporting deterioration in housing conditions in relation to two years ago in terms of class of place of residence was not significant. Most often, those residing in the largest towns claimed conditions had worsened at nearly 10% of all households, and were most frequent in Lubelskie and Kujawsko-Pomorskie at nearly 12% and 11% respectively.

4.4.2. Changes of housing conditions between 2000 and 2013

An analysis of housing conditions between 2000 and 2013 in entire samples reveals a fall in the percentage of households without mains water from 5.5% to 2.9%, a flushing toilet (11.2% to 5.3%), a bathroom with a shower or bath tub (13.8% to 5.3%) and hot running water (from 29.5% to 20.5% figure 4.4.6).

In particular, changes in the late payment of household bills were less systematic over the last decade. The largest share of households over 2 months in arrears occurred in 2003 and 2005. Later we have observed a marked fall in the share of these households (figure 4.4.7). In 2013, rent arrears stabilized at the level of 2009 and 2011.

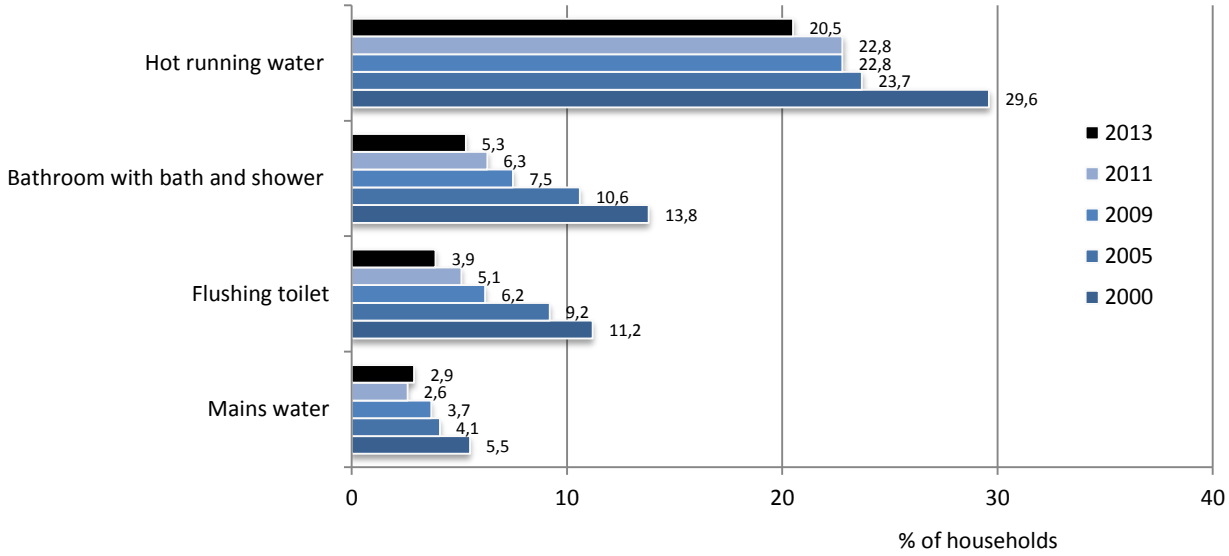


Figure 4.4.6. Percentage of households lacking selected conveniences and amenities in whole samples between 2000 and 2013

The dynamic of change for arrears in gas and electricity payments is similar to that for rents (figure 4.4.8). Currently 4.4% reported being late with payments compared to 6.1% in 2005. This may indicate a more rigorous approach by suppliers to households behind on payments and their resulting fears of getting cut off.

Mortgage arrears rose compared to 2011 though these are still smaller then they were at the beginning of the century (figure 4.4.9).

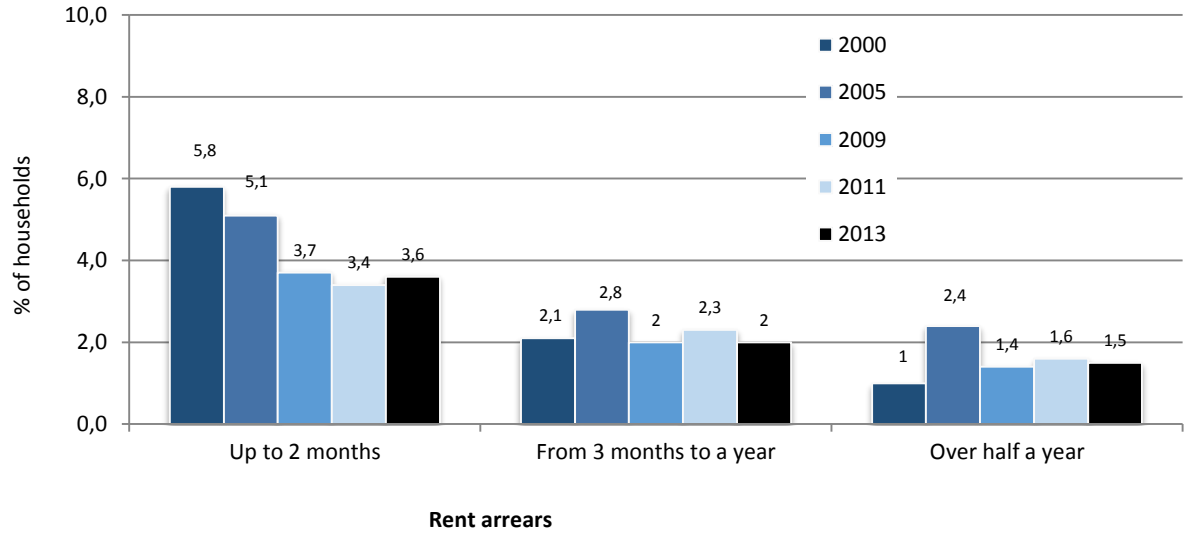


Figure 4.4.7. Rent arrears between 2000 and 2013 in whole samples

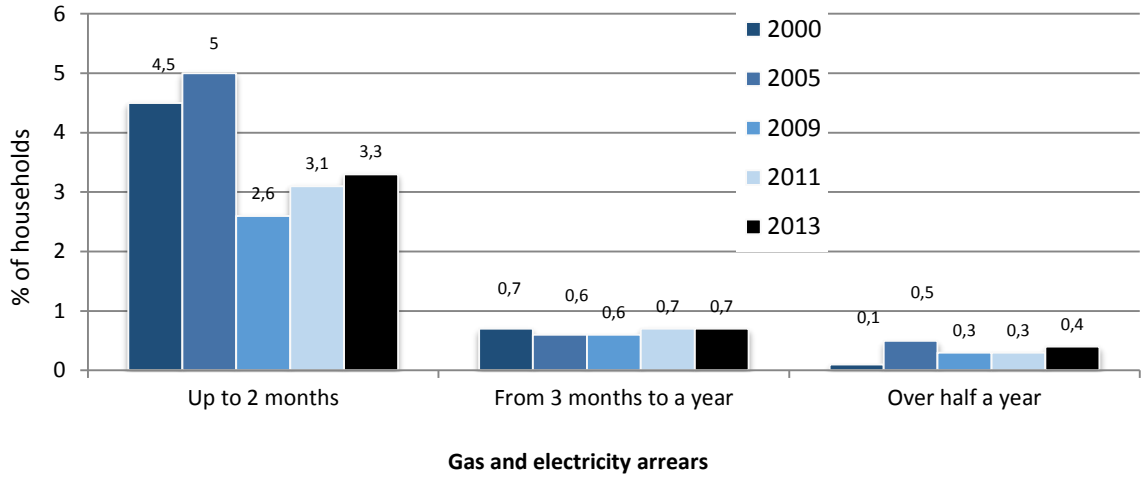


Figure 4.4.8. Gas and electricity arrears between 2000 and 2013 in whole samples

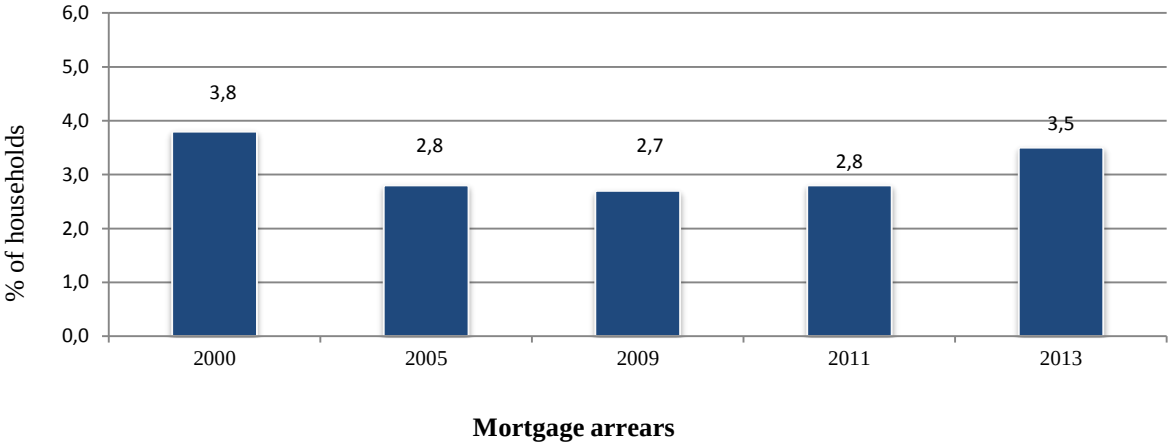


Figure 4.4.9. Percentage of households with mortgage arrears between 2000 and 2013 in whole samples

4.5. Education and human capital

Izabela Grabowska, Dorota Weziak-Białowolska, Irena E. Kotowska, Tomasz Panek

4.5.1. Educational status of household members

This assessment of educational activity of the population is made on the basis of the extent of use of a specific educational service within the school system (education in schools in full-time, evening or extramural mode, all postgraduate studies) or outside it. The percentage of persons in a particular age group using a specific form of educational service is the basis for assessing the extent to which such form of service is used. This measure for educational services provided within the school system corresponds to the schooling rate. For the services addressed to children aged 6 and below it is equivalent to the coverage rate and is used for assessing the scope of institutional care for children, and in the case of persons aged 25 and above it may be used to assess their educational activity. While analysing the educational activity of adults (persons aged 18 and above), also the forms of educational activity and the status of respondents on the labour market are taken into account.

In the case of schooling rate, *Diagnosis* values differ from those provided by the Central Statistical Office (GUS), as net schooling rate indicators. The *Diagnosis* indicator includes all educational activities, both those at school and beyond it, as opposed to that of GUS, which apply only to study at school. Moreover, the GUS reading is from 31st December of a given year, and not the given moment of study as is the case here.

4.5.1.1 Educational activity of household members

Table 4.5.1 shows the indicator values of the use of educational services for the years 2000, 2003, 2005, 2007, 2009, 2011 and 2013, where in the research from 2003 also the educational activity outside the school system was taken into account, which has has an impact on the assessment of adults' educational activity. In the comments, we focus on the results of the last four waves and examine the changing trends between 2000-2013.

The results of 2013, like in 2011, demonstrate an important increase in the use of childcare and education in kindergartens and nurseries (33.6% compared to 29.1%). Up to 2009, apart from in 2003, only one in five children aged 6 and below used these services in the country as a whole. The improved access to these services occurred in all place of residence classes, especially in middle-size and small towns from 200,000 to 500,000 inhabitants by 6.7 p.p., from 100,000 to 200,000 by 15.2 p.p. and below 20,000 by 8.5 p.p. This indicates a change in dynamic for place of residence class on 2011 when the greatest rise was noted in the largest cities of over 500,000 by 17% in comparison with 2009 and in rural areas by 7% compared to 2009. However, despite the changes observed in 2013, still the largest share of children attending playschool and nurseries was recorded in towns of over 500 thousand residents at 49.1%. Children in the towns still spent time in educational-childcare units more often than children in rural areas where only 21.9% in 2013 and 20% in 2011 from this age group had access to this type of care (in the past this fluctuated between 8% and 11-13%).

Contrary to the results of the research form 2011, which indicated a marked narrowing in the gap between urban (including the largest cities) and rural areas between 2009 and 2011, in 2013 there was a widening in the spatial access to care and educational services between towns (even in the case of small towns) and rural areas, similar to that between 2000 and 2009. There was a rise in the number of births observed in Poland between 2004 and 2010 as a result of baby boom mothers postponing pregnancy for many years, which further increased the demand for places in nurseries and kindergartens. The market in terms of such services in the towns, particularly in the case of private service providers, adapted to the higher demand faster, which in the previous study periods additionally widened the territorial discrepancies in availability of these services. In 2011, this considerable growth in use of childcare offered by kindergartens and nurseries was undoubtedly connected with the accessibility of funds from the European Social Fund under the Human Capital Operational Programme offering co-financing for kindergartens especially in rural areas. It is however difficult to assess the influence of other state intervention in this field, i.e. the implementation of the Act of 4 February 2011 on care of children aged three and below (Dz.U. of 2011. no. 45. item 235) on the basis of the study data available.

Table 4.5.1. Household population by educational status and place of residence (percentage of a given age and place of residence receiving a specific educational service) in 2000-2011 (in %)

Educational status	Place of residence class						Total
	Towns >500k	Towns of 200k-500k	Towns of 100k-200k	Towns of 20k-100k	Towns under 20k	Rural areas	
Total percentage receiving education services	25.10[7]	23.90	24.20	21.20	23.20	23.50	23.30
	25.30 [6]	25.70	24.50	22.30	24.00	24.20	24.10
	26.60 [5]	28.00	25.00	25.10	25.30	25.60	25.80
	27.09 [4]	27.26	27.59	25.17	27.26	26.61	26.60
	28.20 [3]	27.88	29.55	27.85	30.03	26.84	27.94
	25.43 [2]	23.78	26.73	23.97	25.76	22.22	23.91
	27.02 [1]	26.41	24.01	27.17	27.39	24.64	25.94
Children aged 0-6 at nursery or kindergarten	49.10	44.60	46.10	33.80	41.30	21.90	33.60
	47.90	37.90	30.90	30.00	32.80	20.00	29.10
	31.50	32.10	27.00	21.70	23.00	12.60	20.50
	25.92	25.19	22.80	22.39	18.40	12.09	18.75
	24.17	31.23	20.46	32.12	20.84	10.78	19.77
	19.13	19.52	20.42	19.93	12.18	7.74	13.51
	31.16	22.33	14.51	33.71	27.34	12.58	21.40
Children aged 7-15 at school	85.20	92.00	94.30	87.80	89.00	90.30	89.70
	91.60	90.00	87.50	88.70	92.20	91.60	90.70
	88.00	89.00	93.50	91.40	92.20	89.90	90.50
	96.37	97.41	97.36	99.03	96.98	98.75	98.15
	92.80	91.95	92.64	95.97	95.55	93.22	93.92
	76.74	77.07	81.36	78.27	79.88	80.14	79.23
	99.41	98.74	99.17	98.79	98.17	97.89	98.48
16-19 year-olds at school	93.60	97.40	96.10	93.80	93.90	93.50	94.10
	98.10	93.10	86.40	98.20	91.20	92.50	93.50
	96.50	94.70	97.10	97.10	96.40	94.20	95.40
	97.43	98.92	93.54	91.66	98.65	95.09	95.29
	92.78	93.67	94.34	91.69	89.68	92.93	92.39
	93.67	91.07	93.85	89.12	94.01	87.74	90.39
	89.40	97.63	86.30	90.03	87.55	85.43	88.47
20-24 year-olds receiving education services within and outside the school system	78.80	75.30	63.10	61.20	52.50	48.00	57.60
	73.50	72.80	57.10	61.20	60.10	49.40	58.80
	83.00	72.60	66.90	65.80	58.00	47.60	60.90
	80.23	72.82	57.50	64.64	62.75	49.23	60.76
	70.44	67.61	63.80	57.34	53.64	50.76	57.51
	61.64	61.51	61.02	53.92	46.33	38.98	49.90
	61.06	58.22	23.93	45.18	45.77	25.99	40.55
25-29 year-olds receiving education services within and outside the school system	20.20	16.90	13.30	14.40	16.80	8.50	13.30
	26.80	24.50	10.50	13.80	16.60	9.00	15.10
	28.70	26.30	21.20	19.50	16.40	11.40	18.40
	34.39	19.01	26.88	16.80	15.75	8.53	17.19
	24.68	15.55	21.66	12.29	18.30	8.90	14.08
	18.29	17.32	14.99	17.01	10.02	7.56	12.69
	16.69	18.63	2.44	18.25	8.49	7.11	11.45
30-39 year-olds receiving education services within and outside the school system	9.20	8.30	2.60	3.70	5.40	2.70	4.75
	7.10	6.80	6.90	3.40	6.00	1.90	4.30
	7.50	10.80	8.60	7.60	6.90	3.80	6.20
	11.61	8.85	10.84	8.83	8.01	2.52	6.99
	11.09	8.14	4.32	5.59	5.92	1.84	4.98
	8.10	9.64	9.01	4.64	4.88	3.19	5.44
	4.70	2.53	5.35	3.20	1.88	0.32	2.29
39+ year-olds receiving education services within and outside the school system	3.10	2.30	2.00	1.30	1.50	0.80	1.60
	3.20	2.20	2.30	1.00	0.80	0.50	1.30
	2.70	2.40	1.50	1.40	1.50	0.90	1.50
	4.62	2.52	2.88	1.61	1.36	1.08	1.90
	2.10	0.90	1.77	1.30	1.45	0.93	1.26
	2.45	0.85	2.03	0.85	2.22	0.61	1.22
	0.47	0.92	0.33	0.80	1.29	0.32	0.61

[7] survey results from 2013
[6] survey results from 2011
[5] survey results from 2009
[4] survey results from 2007
[3] survey results from 2005
[2] survey results from 2003
[1] survey results from 2000

Moreover, as in previous years, the majority of children are placed in public nurseries and kindergartens in 2013, with the public education share at 89.7% as in 2011. In 2013, this varied from 83.7% in the towns of more than 500,000 to 92.4% in rural areas compared to 90.4% and 93.1% in 2011 respectively. The importance of non-public units rose quite steadily up to 2011, while 2013 saw a marked retreat in the largest towns with a stabilization of their share in terms of the country as a whole.

Despite these positive changes, availability of this form of educational and care service in Poland is still among the lowest in the European Union. This on-going deep lack of institutional childcare in rural areas may be a factor which limits the increase in women's professional activity in rural areas and their employment outside the farming sector in particular. In the light of the necessary changes in the structure of employment among the rural population, in order to shift some part of labour force outside the farming sector, more institutional childcare availability in rural areas seems particularly important. Moreover, it is commonly underlined that high quality childcare services, available to parents for an appropriately low price, are an effective solution to educational and economic inequalities (cf.. for instance. Kotowska. Sztanderska. Wóycicka 2007. Szukalski. Warzywoda-Kruszyńska. 2005).

As in previous years, there were no very significant territorial differences observed in education availability for children aged 7-15 in 2013. In 2013, at the national level and in rural areas around 90% of children at this age were in education, which is a result similar to that of 2011. In the towns this percentage was between 85% and 94% while in 2011 this was between 88 % and 92 % respectively. In comparison with the results from the 2005 and 2007 waves, a slight decrease in the level of schooling among children from this age group was recorded as was already observed in 2009, which can however be explained by methodological factors. 7 year-olds between January 2013 and the date of study are included in the 7-15 year schooling rates group even though they can still go to playschool. After adding up playschool children in this group as well as that of the schooling rate indicator, territorial differences almost disappear and the share of children in both forms of education was around 97-99% in 2013. This procedure yielded similar results in previous years with the exception of 2003.

The educational reform of 1999 had an influence on the 2003 indicators. At that time, this age group included not only children and youth from primary schools but also from lower secondary schools for the first time. The significance of private schools was not great in this age group in all study rounds (no more than 10-12% in the largest towns), and this further fell in the last round.

In contrast to the results from the previous research waves, in 2011 and 2013 significant territorial differences in schooling of 16-19 year-olds were observed (both as regards full-time, evening and extramural education, though the direction of change in the two periods were different). In 2011, the share of this age group attending any type of school increased slightly in the towns of more than 500,000 by 1.6 p.p. compared to 2009 and 20,000-100,000 by 1.1 p.p. to around 98%, while it fell in other towns types and in rural areas, with the greatest recorded for medium-sized towns (100,000-200,000 residents) to around 86.4% by 10.7 p.p., while in rural areas the fall in the rate of youth attending various types of schools was lower by 1.7 p.p. reaching 92.5% in 2011. These changes translated into a fall in the use of educational services in this age group in 2011 by 1.9 p.p. to 93.5%, which halted a growing trend observed in previous years. In 2013, compared to 2011, the share of young students in towns of over 500 thousand fell by 4.5 p.p., while in towns of 200 to 500 thousand, 100 to 200 thousand and in the smallest towns of less than 20 thousand it rose by 4.5 p.p., 9.7 p.p. and 2.7 p.p. respectively. In rural areas there was also a rise of 1 p.p. This marked growth in the educational service indicator in middle-sized and smallest towns balanced out that noted in the largest towns and contributed to the small overall growth of just over 0.6 p.p. Furthermore, the low share of non-public schools for this age group is still noteworthy. No more than 3% of young people attended non-public schools regardless of place of residence class, which is much fewer than in the case of 7-15 year-olds.

Adult educational activity is the participation of persons aged 18 or more in various forms of education. However, due to the age groups assumed above, our analysis to which we refer below, concerns only the over-20s.

The territorial discrepancies in access to educational services as described for 7-19 year-olds are considerably different in the case of educational activity of persons in older age groups. In 2013, the slight falling tendency in the share of persons aged 20-24 at school and outside the school system slightly decreased by 0.8 p.p. compared to 2011 and remained at 57.6% (58.8% and 61% in 2007 and 2009 respectively). On the other hand, the use of educational services in this group in terms of territorial distribution changed significantly. In the towns with more than 500,000, between 200–500 thousand and from 100 to 200 thousand, the share of educational service rose by 5.5 p.p., 2.5 p.p., and 6 p.p.

respectively, which was contrary to the falling tendency previously observed (bigger towns and towns of 100–200 thousand) or growth after the stabilisation period (towns of 200–500 thousand). In towns from 20 to 100 thousand, the indicator of the use of educational services stabilized after earlier falls and in smaller towns of fewer than 20,000, and similarly in rural areas it fell by 7.6 p.p. and 1.4 p.p. respectively. To sum up, as far as the territorial differences in the use of educational services decreased to the level observed in the first half of the decade, this positive trend was reversed in 2013. At this level, the role of non-public units is more visible as in 2013 16.2% of students attended such units in the largest towns (15.6% in 2011) in comparison to 11.2% (11.9% in 2011) in rural areas.

It should be underlined that some rising differences in the educational activity of men and women in this age group are emerging. Women study visibly more often than men (68.7% of women in 2013 in comparison to 47.9% of men in 2013). The growing tendency of educational activity among women is gradually slowing (68.1% in 2011, 67% in 2009 and 63% in 2007), however, the on-going decrease in educational activity of men aged 20-24 (52.5% in 2011, 55% in 2009 and 57% in 2007) increases the educational service gender gap.

There are visible differences in the educational activity of women and men aged 20-24 in terms of their place of residence. In 2013, women aged 20-24 in urban areas used educational services to a greater extent in comparison with 2011, unlike women in rural areas. For the cities, the relevant rate fluctuates between 66% and 92% depending on their size (80% in 2011), returning to the rising tendency observed in earlier study rounds (in 2009 64-87% and in 2007 60-84%). In rural areas the share of women using educational services decreased from 60.8% in 2011 to 59% in 2013 (in 2009 54.5% and in 2007 54%) thus increasing the gap between women in rural areas and towns in terms of educational services. Among men in towns who use educational services in the school system and outside the indicator is from 50.5% to 70%, and is, as opposed to that for women, lower than results for 2011 when the share ranged from 54.1% to 72.9% (in 2009 51-81%. in 2007 57-81%). Just like for women, in the countryside there was a fall in educational services use from 40.9% in 2011 to 38.5% in 2013 (42% in 2009 and 43% in 2007), which translates into a fall in spatial variation of educational activity of men with low levels of educational service indicator. Undoubtedly, the increased educational activity of women in towns is a positive phenomenon. However, its fall in the countryside for both genders and for men in towns is most concerning and the causes require deeper analysis. The persistent decrease in educational activity of men both in the towns and in rural areas has widened the gender gap for educational activity particularly in rural areas.

The extent of educational service use is significantly lower in the next age group as 25-29 year-olds participated less than two years before, which means a continuation of the fall noted after 2009. In 2011, the share of 25-29 year-olds actively using educational services amounted to 13.3% compared to 15.1% in 2011. This change is a result of mainly the lower rates for towns of over 500 thousand inhabitants (a fall of 6.6 p.p.), for that of 200 to 500 thousand by 7.6 p.p. and rural areas by 0.5 p.p. while the remaining town types noted a minor rise. The educational service indicator did not exceed 20.2% in towns, and in rural areas it amounted to only 8.5%. Territorial differences in educational activity in this age group remained, especially in terms of urban to rural areas, while relations between the rates for towns changed with lower results in largest towns.

The retreat from educational services among 24-29 year-olds applies to men and women, though the gap to the disadvantage of men remains at 15,4 % of women in 2013 and 18,1% in 2011 compared to 11,7 % of men in 2013 and 13.4 % in 2011 with 19% of women and 17% men in 2009 and 2007 respectively. This age group is characterised by highest female fertility, which may limit women's educational activity and increase men's motivation to work and gain income. Territorial disproportions continue to grow as the percentage of women in rural areas aged 25-29 actively using educational services is 3.1 times lower than the highest percentage for towns (2.75 times in 2011 and 2.5 in 2009), which is between 7.6% and 27.2%. In the case of men, the disproportions between towns and rural areas are also high, although smaller than for women, and lower than in the previous survey wave with only 8.6% of inhabitants from rural areas (in 2009 and 2011 10.4%, in 2007 9%) using educational services within the school system or outside it, compared to 10%-19.2% from towns (7.8%-28.9% in 2011, 17%-26% in 2009 and 13%-35% in 2007). Largest and smallest towns stand out negatively in the case of men and medium towns of 100-200 thousand residents for women.

Territorial differences in educational activity are present among people aged 30-39. In order to maintain a comparable size of sample in relation to the age groups analysed above, the 30-34 and 35-39 year-olds have been presented together. However, it is the group aged 30-34 that has the decisive influence on the indicators discussed below. 30-39 year-olds used various types of educational services

2.8 times less often than 25-29 year-olds (over three times that in 2011). In 2013, the share actively using educational services at this age was 4.75%, somewhat more than two years than previously mainly as a result of changes in towns of over 200 thousand residents and in rural areas. The percentage of women using educational services in this age group was 5.8%, while for men it was 3.7%

To sum up, the analysis of educational activity conducted separately for adult women and men, and from the point of view of their age and place of residence, demonstrates a continuation of the falling trend of educational service use among 20-24 and 25-29 year-olds. In the case of the first group, this should not be a worrying signal as, unlike the second group, almost 58% is active educationally. However, the relative fall in the small share of 25-29 year-olds in educational services cannot be seen as a positive development. The continued visibly growing educational aspirations of women should also be noted. However, it is also worth emphasising that territorial disproportions in educational activity refer not only to residents of urban and rural areas but also to marked differences between various types of towns.

4.5.1.2. Forms of adult educational activity

In 2013, educational activity of the over-18s took place mainly in schools or higher education at 90.1% (in comparison with 93.3% in 2011), where 86.7% attended state schools. The share of state schools clearly rises (84.1% in 2011, 83.6% in 2009 and 80% in 2007). This is connected with the age structure of the educationally active population of respondents. In 2013, around 68.1% of respondents using educational services were aged 18-24 (in comparison with 72.8% in 2011, 70.2% in 2009 and 74% in 2007), 25-29 year-olds made up 12.3% compared to 12.7% in 2011, 14% in 2009 and 11% in 2007 and only 9.6% were 30-39 compared to 7.2% in 2011, 8.7% in 2009 and 8% in 2007.

In 2011, the age structure of the group using educational services changed in relation to 2009 as the share of 18-24 increased while that of 25-29 and 30-39 decreased, which is a sign of the selective nature of the process of continuous training among adult persons in relation to age. However, in 2013 this tendency partially reversed as the share of 18-24 year-olds fell while that of 30-39 rose with a stabilization of that of 25-29 year-olds.

Among the over-24s using educational services, there is a higher use of services outside the school system organised in the form of courses and trainings, both at work and outside the workplace, financed by various sources (personal, employers or European Union Social Fund). For 25-29 year-olds, this form of service is not that significant as only around 7.6% of persons aged educationally active used this type of training in comparison to 6.5% in 2011, 7.5% in 2009 and 14% in 2007. There was a marked rise in the next 30-39 year-old age group with 28.7% of the educationally active using these forms of self-improvement compared to 13.3% in 2011, 31% in 2009 and 30% in 2007.

In comparison to earlier survey waves, results from 2011 indicated there was a considerable drop in the use of courses and trainings among 30-39 year-olds that was higher than the general decrease in the educational activity in this age group. This suggested a shift of educational activity towards schools and higher education schools in particular. In 2013 however, this trend fell away and the share of educationally active 30-39 year-olds in courses or training returned almost to the 2009 level. The visibly lower percentage of persons aged 25-29 using educational services outside the school system in comparison with 30-39 year-olds results also from the more frequent use of postgraduate studies within the school system, a general development of services within the school system or better adjustment to the requirements of the labour market (connected with, for instance, computer skills) among younger persons. It is worth underlining that 74.3% of persons using educational services outside the school system had completed higher education in 2013 compared to 69% in 2011, 53% in 2009 and 47% in 2007 and 18.7% secondary and post-secondary education in comparison to 28% in 2011, 35% in 2009 and 32% in 2007. Thus, the process of selective use of educational services depending on educational attainment of persons aged above 24 deepened as the persons who undergo additional training mainly have higher education. Like in the previous round, the share with completed secondary education and above increased, though in the current survey the share participating in continuous education with lowest level education increased.

4.5.1.3. Educational service use and labour market status

Around 63.8% of 18+ year-olds using educational services considered in terms of labour market status were inactive as professionals compared to around 60% in 2011, 2009 and 2007, of which around 86.8% were up to 24 years of age and still in education (89% in 2011, 91% in 2009 and 95% in 2007). Among the active professionals of this age-group who also used educational services, only 13.2% were unemployed (13.6% in 2011, 8.5% in 2009 and 14% in 2007. The over 24s year-olds in education were mainly employed with relatively higher qualifications than the unemployed or inactive as professionals. Educationally engaged women over 18 were 58.3% of the unemployed and 58.5% of those in employment (65.5% and 58.2% in 2011, 54.5% and 53.7% in 2009 and 57% and 58% in 2007 respectively). The professionally and educationally active mainly used education system services as 81.7% of users were unemployed and 70.2% were in employment (87.2% and 80.7% in 2011, 93% and 78% in 2009 and 96.6% and 80% in 2007 respectively). It is worth noting the rise in importance of educational services provided beyond school in 2013 especially in the case of those in employment.

Important in the analysis of the future fate of 15-24 year-olds on the labour market is the share of those neither in employment, nor engaged in education in the state system or beyond it (i.e. NEET – not in employment. education or training). Table 4.5.2 presents the share of 15-24 year-olds in this category between 2000 and 2013.

While between 2000 and 2005, the share of professionally and educationally inactive 15-24 year-olds remained at around 13%, after a fall and stabilization at 9%, a rise to 10.2% was noted in 2013. There was a falling trend for women up to 2011 with a rise of 1.8 p.p. noted in 2013. Meanwhile, there was a clear fall for men after 2005 and in 2013 there was also a rise to 10.5%. These differences in the NEET indicator in terms of gender over the whole period analysed may be associated with the greater activity of women especially between 2000 and 2005. The 'general passivity' indicator is generally smaller for women, with women's smaller professional activity in this age group compensated for by their greater educational activity.

A breakdown of the NEET indicator by place of residence reveals differences to the disadvantage of rural areas, especially in 2013 when the gap with respect to urban areas increased by 4.2 p.p., which is a reversal of the tendency hitherto observed.

The value of the NEET indicator for Poland on the basis of 2012 *Eurostat* data also shows a falling tendency up to 2009, situating Poland in the group of European countries below the UE-27 average, which is largely due to this age-group's relatively high schooling levels.

Table 4.5.2. Persons inactive both as labour and in terms of education between 15-24 by gender and place of residence between 2000-2013 (%)

Place of residence/gender	2000	2003	2005	2007	2009	2011	2013
Total	12.7	12.8	12.6	10.4	8.6	8.7	10.2
Women	14.7	11.8	11.9	10.7	7.8	8.2	10.0
Men	11.3	13.8	13.3	10.1	9.4	9.2	10.5
City	10.8	11.2	11.6	9.6	7.3	7.2	8.3
Rural area	16.0	15.3	14.5	11.5	8.6	8.7	12.5

4.5.1.4. Educational migration

Accession to the European Union in 2004 increased the opportunities to take up university study abroad. Below we present an analysis of educational migration and returns in 2005-2009, 2007-2011 and 2011-2013. As opposed to the 2009 wave, the 2011 and 2013 *Social Diagnosis* questionnaire does not contain questions about educational migration intentions and therefore is limited only to migration for both analysed periods.

Analysis of educational migration in 2005-2009 (N=157), 2007-2011 (N=107) and 2011-2013 (N=68) is limited by the small size of respondent group. Merely 0.2% of household members went abroad for education in 2011-2013, which is similar to 2007-2011 and 2005-2009, when the share was 0.4% and 0.5%. The vast majority of those who did go abroad in 2007-2011 were 18-34 year-olds at around 61.2% in 2007 and 67.3% in 2009 and 74% between 2005 and 2009, of whom 62% were women in the three compared periods. The share of educationally motivated migrating women is greater than

differences in the schooling rate indicator for that age-group would suggest and points to a greater readiness to undertake this type of migration. Due to the high age selectivity of educational migration, further analysis will concern the 18-34 age group.

Only 0.5% of 18-34 year-olds went abroad for educational purposes in 2011-2013 compared to 0.8% in 2007-2011 and 1.2% in 2005-2009, while the figure was 0.7% in 2011-2013, 1.6% in 2007-2011 and 2.2% in 2005-2009. This suggests an immeasurably low level of educational migration, which recently has even fallen further. Because of their low number, a breakdown of respondents who emigrated for educational purposes in 2011-2013 is not presented for place of residence or migration destination.

Education migration experience suggests its minor significance, which may have numerous reasons, like for example cost or the continued lack of information on the possibilities of travel. Educational migration in fact concerns young people exclusively - mainly students from large cities attending the main academic institutions. Their educational activity abroad is often combined with work, though it is difficult to judge whether this is undertaken as a means of support or rather as an additional activity.

4.5.1.5 Summary

2013 survey information on recourse to educational services and changes in 2011-2013 may be summarized as follows:

- compared to 2011, in 2013 availability of institutional care for 0-6 year-olds increased in all place of residence classes, especially in small and middle-sized towns,
- there is little territorial variation in availability of education for 7-19 year-olds,
- educational activity among 20-29 year-olds fell compared to the previous study round with a slight rise in that of 30+ year-olds,
- the general fall in the share of 20-24 year-olds carrying on in education in the smallest towns and in rural areas and its rise in middle-sized and large towns has contributed to the widening of the already marked spatial differences in recourse to education, contrary to the changes observed in 2011,
- in 2013, 20-24 year-old women in towns and cities used educational services to a greater degree than in 2011 as opposed to those in rural areas, which increased territorial differentiation in this respect. The share of men in towns and cities at school and beyond fell in relation to 2011. In rural areas, like for women, there was a fall in educational service use and a resulting fall in spatial variation of men's educational activity with a low level of educational service use indicator,
- the general fall in share of 25-29 year-olds using educational services is above all due to a worsening of indicators for large and middle-sized towns while in the remaining town types there was a small rise, which is a reversal of the tendency observed in 2011. Territorial variations in educational activity of this age group were maintained especially in terms of urban-rural areas, while the mutual relation between towns changed to the detriment of small towns,
- in 2013, 25-29 year-old men and women used educational services more rarely than in the previous three study rounds, while the gap to the disadvantage of men remained as urban/rural disproportions for men are also large though smaller than that for women and lower than in previous study rounds. Men are at a disadvantage in the largest and smallest towns, while women from middle-sized towns do less well,
- the educational activity of 30-39 year-olds remains very low despite a small improvement,
- 39+ year-olds continue to be reluctant to use educational services,
- the process of adult qualification raising remains selective in terms of age, gender, place of residence, educational attainment and labour market status.

Social Diagnosis results continue to indicate that further adult education, considered one of the basic conditions of raising employment potential, remains narrow in scope in Poland, and the positive tendencies observed in 2009 suffered a reversal to a marked extent in 2011 and 2013. This is an alarming signal as a comparison of results for adult educational activity with the structure of educational level and civilizational skills reveals a disproportion in developmental opportunities in small towns and villages and for people over 35, especially the immobile. Differences in educational attainment, foreign languages or internet use between those younger than 35 and those older indicate a competence gap that

deepens with age. This is borne out by analysis referring to the synthetic human capital gauge in terms of age (see chapter 4.5.2).

The disparity between the demand for educational services resulting from existing educational attainment and qualification and educational activity pattern of selected groups presented above proves the necessity of permanently intensifying the adult education process in Poland. The development of various forms of educational support and qualification raising (night classes, part-time or correspondence learning, post-graduate study, courses and training etc.) as well as promotion of education services. This is especially true for the elderly and immobile.

Placing these results side by side with insights into the poor readiness of the elderly for functioning in modern society and labour market as far as human capital is concerned leads to the conclusion that keeping this group in employment requires special measures to increase their capacity to take on work.

4.5.2. Human capital

As a result of the development of the knowledge-based economy and information society, however they might be defined, there has been a shift in the focus of discussions on the conditions of contemporary processes of development from material resources to non-material resources (cf. e.g. Drucker, 1999; Kukliński, 2004; Zacher, 1999; OECD, 1998). The latter are often defined as intellectual resources. Their most important element is human capital, which is also considered to have the greatest growth potential. The size and productivity of intellectual resources are extremely difficult to measure and assess. However, without an attempt to measure them, we cannot analyse the past course of these development processes.

In the current edition of *Social Diagnosis*, the conceptualisation and operationalization of human capital of Poles was conducted as in previous years. Human capital was defined as the supply of knowledge, skills and qualifications of specific persons, groups of persons and the entire society defining their ability to work, adapt to change and also act creatively. The analysis covered the level of human capital and its diversification according to selected demographic, economic and social characteristics. It enabled an assessment of differences in the level of human capital in various socio-economic groups, as well as comparison of changes in the level of human capital between the subsequent editions of *Social Diagnosis*. In order to make comparisons over time, the same measurement method as in the previous years was applied.

4.5.2.1. Measurement of human capital

Data from *Social Diagnosis* from 2007, 2009, 2011 and 2013, served to measure human capital on the basis of the following procedure:

- a theoretical model of human capital was formulated – a definition of human capital,
- a measurement model of human capital was formulated – a selection of manifest variables,
- the correctness of the model aimed at measuring human capital was verified with the use of exploratory and confirmatory factor analysis,
- a composite human capital index was created using the categorical principal component analysis (CATPCA).

The methods mentioned in point 3 and 4 of this procedure have been described in more detail in the previous editions of *Social Diagnosis*, hereby we shall go back to some of the results of methods used to measure human capital.

Similarly as in the previous years, in order to measure human capital on the basis of *Social Diagnosis* 2013, information on the educational attainment of respondents aged 16 and above was gathered. This included not only number of years spent in education system, but also their civilizational competence and participation in life-long learning to gain new professional qualifications and other skills.

The selection of manifest variables resulted from the adopted definition of human capital. Over a dozen years ago this definition covered mainly educational attainment though now it is much broader. The information society and knowledge-based economy require constant updating of knowledge, skills and competences. Now, not only meeting the requirements of the contemporary labour market, but the mere functioning in society and adjustment to change requires different skills than over a dozen years ago. Such skills include for instance:

- knowledge of information and telecommunications technologies (ICT),

- ability to obtain and use information from electronic sources,
- fast communication,
- ability to use foreign languages, in particular English as it is the main language of the internet and science.

Apart from the skills mentioned above, it is important to be aware of the necessity of continuously expanding and updating one's knowledge and skills through appropriate educational activities.

These were the factors taken into consideration when selecting the manifest variables to measure human capital on the basis of *Social Diagnosis* data. Therefore, the following variables were used:

- education – measured with the number of years of education completed[27],
- civilizational competence – it was assumed that these are manifested through:

1. use of internet,
2. command of English,
3. participation in life-long learning – a measurement made on the basis of answers on new professional qualifications or other skills gained in the preceding two years.

The variables defining human capital are considered to act as its stimulants, meaning that their higher values are correlated with a higher level of human capital.

The quality of the human capital measurement model was verified by confirmatory factor analysis for each study wave separately as well as on the combined data set. In the latter case, the estimated model imposed equality conditions for all factor loadings, as well as the intercept for the variable (years of completed education) and the thresholds of the scales of answers for the remaining four manifest variables.

Thus, the results obtained confirmed that not only do education and trainings but also civilizational skills determine the level of human capital, though the importance of the former two should not be underestimated.

The CATPCA[28] was used to construct the synthetic human capital index. In order to compare levels of human capital in 2007, 2009, 2011 and 2013, analysis was conducted on the combined set of data for *Social Diagnosis* 2007, 2009, 2011 and 2013. It was confirmed that the set of variables proposed well reflect the latent variable "human capital". It turned out that in the four waves, in total four indicator variables might be replaced with one synthetic variable that explains 55.57% of the total variability of the set of manifest variables. Moreover, the first principal component may be also considered as a synthetic human capital index. In order to better highlight the differences in the level of human capital, its synthetic index, which was a standardised variable (with the average equalling 0 and standard deviation of 1), was normalised so as to take values from 0-100[29]. All comparative analyses were conducted with the normalised variable.

4.5.2.2. Human capital in Polish society between 2007 and 2013

Since 2007, human capital has been growing systematically in Poland. In 2007, its index was 41,72 and in 2013 45,68 (figure 4.5.1). Apart from that, the measurement errors were small enough to consider all changes statistically significant.

This result corresponds to observations based on analysis of the dynamics of specific manifest variables in 2007-2011 (figure 4.5.2). In this period there was a considerable increase in the percentage of persons using internet. The percentage of persons taking part in activity aimed at gaining new qualifications or skills first increased (in 2009 in relation to 2007) and then decreased (in 2011 in relation 2009). The share of persons with the command of English (active or inactive) was stable.

[27]The square brackets include abbreviated names of the variables – these names will be used in the further text.

[28]As mentioned by Górniak (2000, p. 316), categorical principal component analysis, as opposed to the factor analysis, allows for unambiguous calculation of the value of variables representing the dimension measured by the set of manifest variables.

[29]Value 0 and 100 were ascribed with non-normalised value of the human capital index, corresponding to the minimum and maximum values of manifest variables. In the case of the number of years of completed education the assumed minimum value was 0 and the maximum 30.

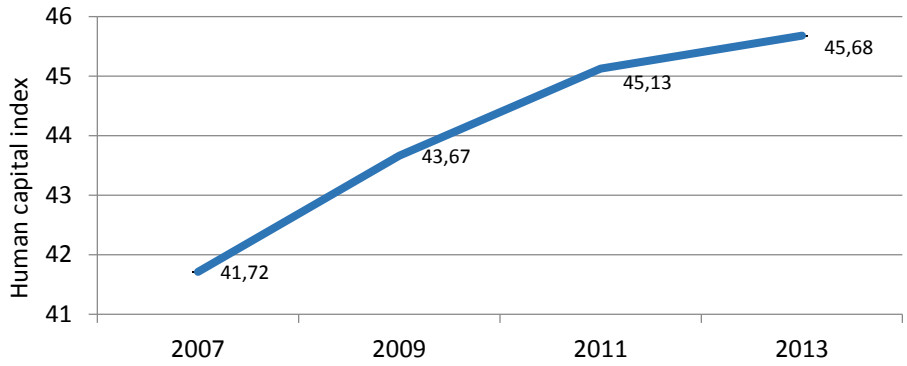


Figure 4.5.1. Human capital in 2007, 2009, 2011 and 2013.

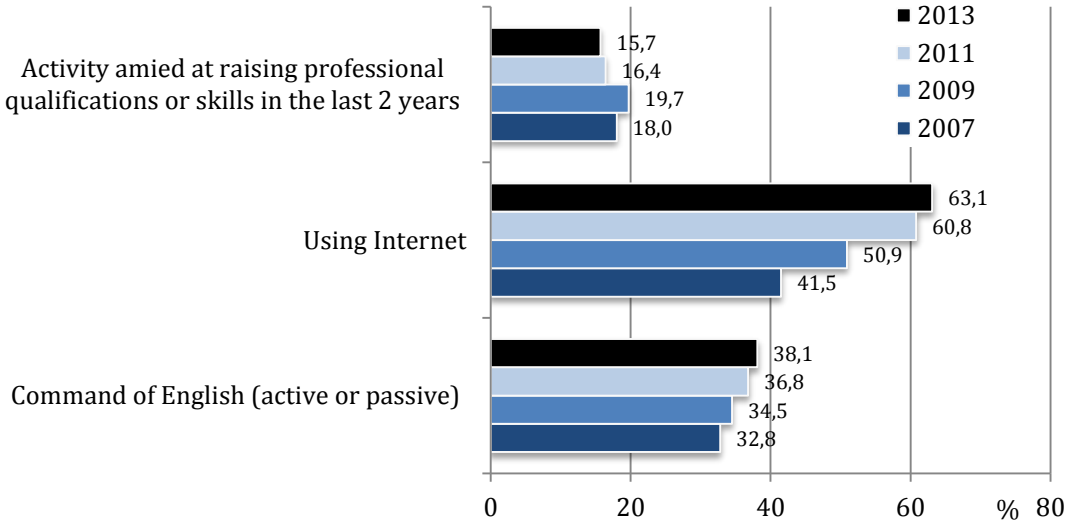


Figure 4.5.2. Percentage of persons with a command of English (active or inactive) who use the internet and acted to raise their professional qualifications or skills in the last 8 years

These changes are undoubtedly the consequence of the greater computerisation of socio-economic life in Poland. The very dynamic development of computer tools also has a considerable impact as it allows for more effective search for information in the internet, as in the case of a greater availability of professional software dedicated to certain types of businesses.

The results show that greater availability of technologies is reflected in their more common use. The consequent development of human capital will contribute to the closing of the gap between Poland and other European Union countries with a high level of human capital.

4.5.2.3. Diversification of human capital by socio-economic group

In order to assess the level of Polish human capital in 2013, an average level of this asset was compared for the population groups based on:

- gender.
- age.
- size of place of residence.
- status on the labour market.
- social and professional status.

The results of calculations have been presented in tables 4.5.3-4.5.6 and figures 4.5.3-4.5.7. The comparison of the values of human capital level for specific demographic and social groups has led to the following synthetic observations:

- Though since 2009, men have been characterised by a higher human capital than women, in 2013 the difference is insignificant,
- The level of human capital decreased with age; the highest level of human capital was recorded for persons aged 15-34 and the lowest among persons aged 45 and more. The discrepancy between the persons in the non-mobile age and persons aged 35-44 increased with time, though the latter group reduced its distance to the youngest persons,
- The level of human capital decreased together with the diminishing size of place of residence. Thus, the inhabitants of the largest towns were characterised by the highest level of human capital and the inhabitants of rural areas by the lowest, although the relatively greatest improvement in the level of human capital was observed among the inhabitants of rural areas. A growth trend was recorded also among the inhabitants of other place of residence classes with an exception of cities with 20,000-100,000 and 200,000-500,000 residents.
- Persons who were professionally active demonstrated a higher level of human capital than the persons who were professionally inactive. Among the professionally active, persons the employed demonstrated a higher level of human capital. The distance between professionally active and the professionally inactive persons has continued to grow.
- The significant improvement in the level of human capital among the unemployed observed in 2009-2011 was reversed, which with the steady growth of capital among those in employment contributed to the renewed widening of the gap between the employed and the unemployed as regards the level of human capital.
- There are four stable groups of persons in terms of status on the labour market and level of human capital: the highest level was observed among students. The second group comprises public sector employees, private entrepreneurs and private sector employees listed from the lowest to the highest value of this indicator. The third group, with a considerably lower level of human capital, consists of the unemployed and other professionally inactive persons. Retirees and pensioners belong to the fourth group with the lowest level of human capital; the relative improvement in the level of human capital concerns the retired and farmers, pensioners and other professionally inactive persons, as among the unemployed, human capital decreased compared to 2009.

In 2007, no difference in the level of human capital between men and women was observed. However, this difference appeared in 2009 and remained in 2011 and in 2013, it is once again statistically insignificant.

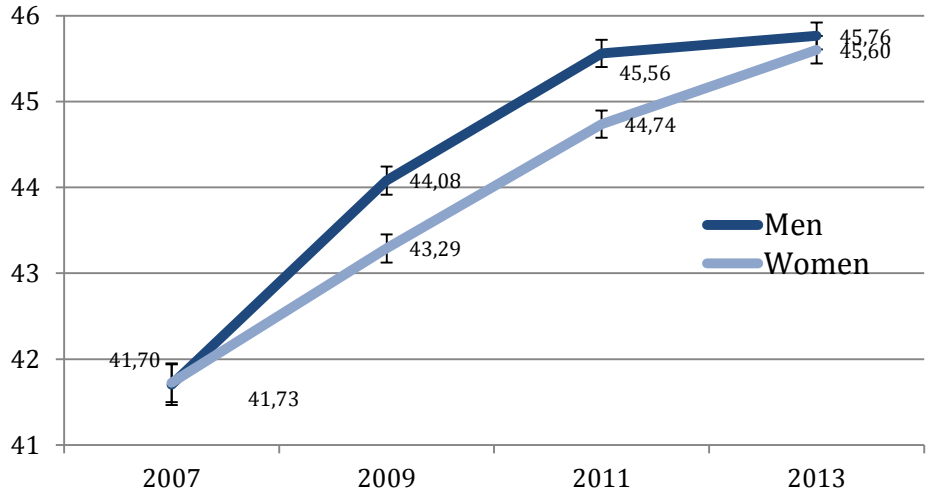


Figure 4.5.3. Average level of human capital in 2007-2013 according to gender

The level of human capital decreases very dynamically with age, which seems to be a feature of contemporary times. The technologies that are in use and are recognised as modern have a short history.

In the past, people had a lot more time to learn new skills that remained useful for a large part of their life. In the knowledge-based economy, an individual's position on the labour market and competitiveness, as well as efficient functioning in society, are determined by their ability and willingness quickly to learn how to gain information about new technologies and skilfully use them. Young people are better at dealing with these challenges, hence the highest level of human capital in the age group 15-34.

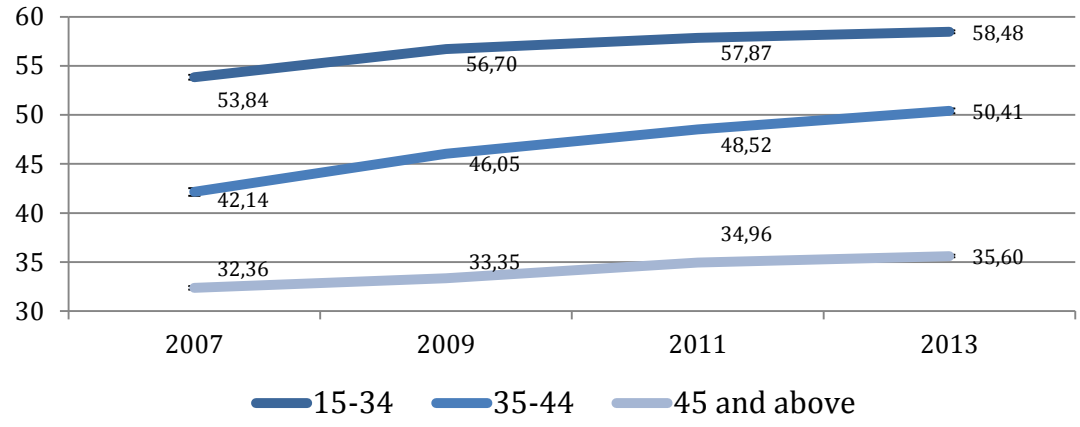


Figure 4.5.4. Average level of human capital in 2007-2013 by age

A fall in the level of human capital with the decrease of the place of residence class stems from several factors. Firstly. large towns offer a much better selection of education. All towns with more than 500,000 inhabitants are academic centres with a considerable level of human capital. They have also the best secondary and often also primary schools. They offer a much better infrastructure for school and university students providing, for instance, access to libraries and places where state-of-the-art technologies are available. Secondly. the persons with the highest educational attainment migrate to large towns where. thanks to the concentration of human capital, they are more mobile and able to receive better job offers. Thirdly, the head offices of large enterprises are located in large towns. hiring employees with higher qualifications and attracting persons with higher human capital.

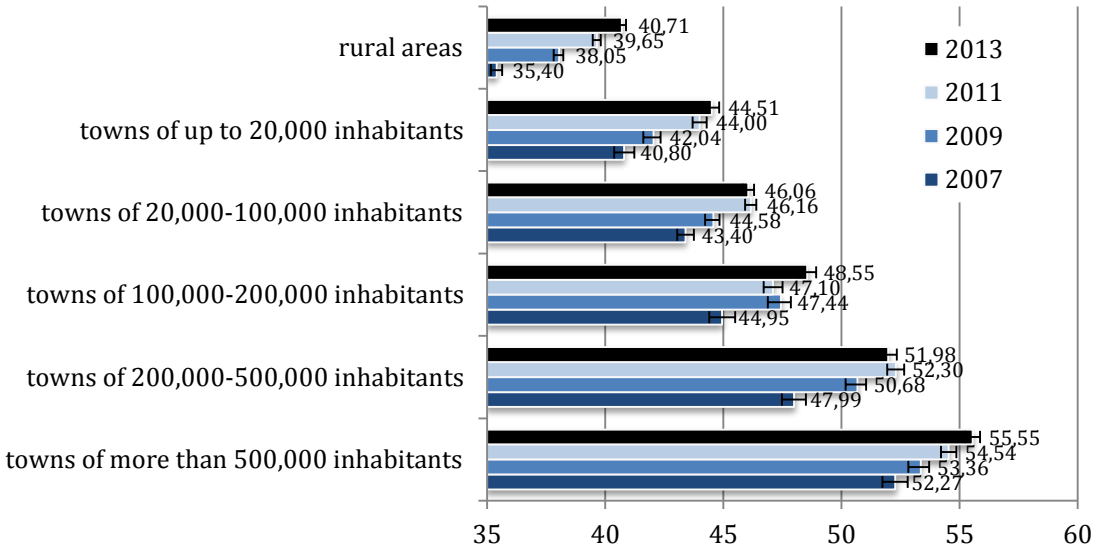


Figure 4.5.5. Average level of human capital in 2007-2013 by place of residence class

Professional activity contributes to maintenance of the level of human capital as well as to gaining new skills. Remaining outside the labour market usually leads to a gradual depreciation of skills and contributes to a decrease in the level of human capital. which in turn may be an obstacle to becoming professionally active.

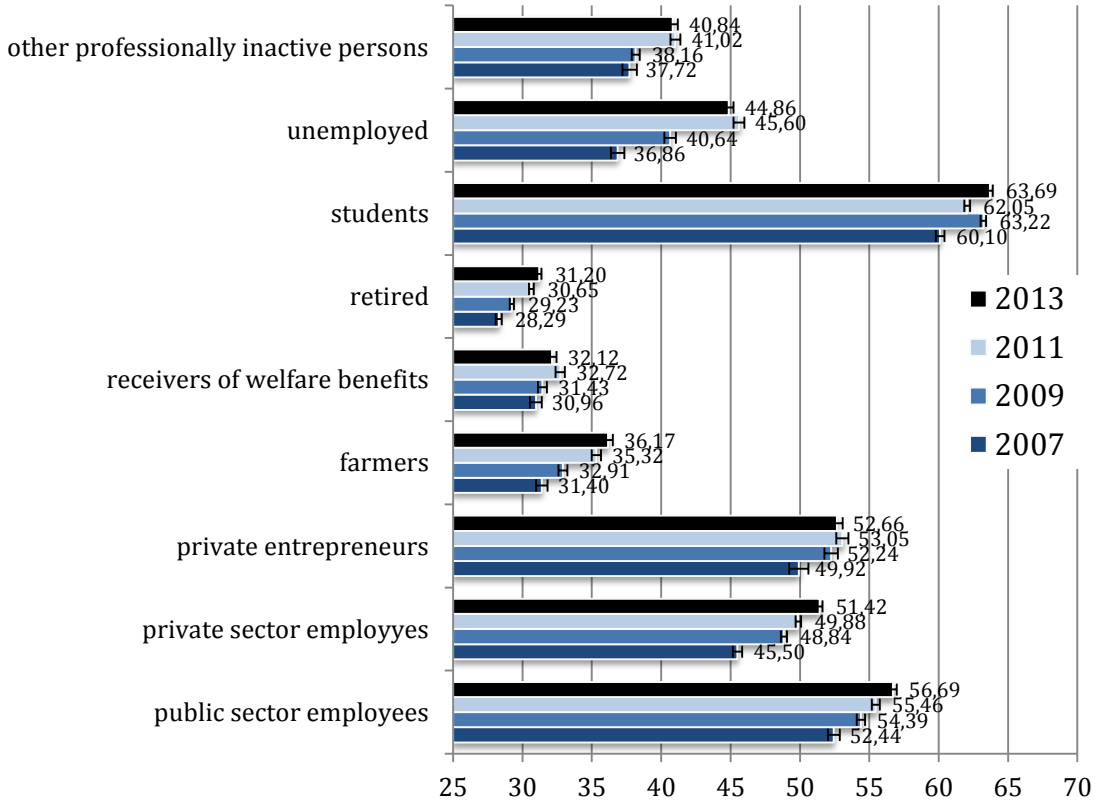


Figure 4.5.6. Average level of human capital in 2007-2013 by social and professional status

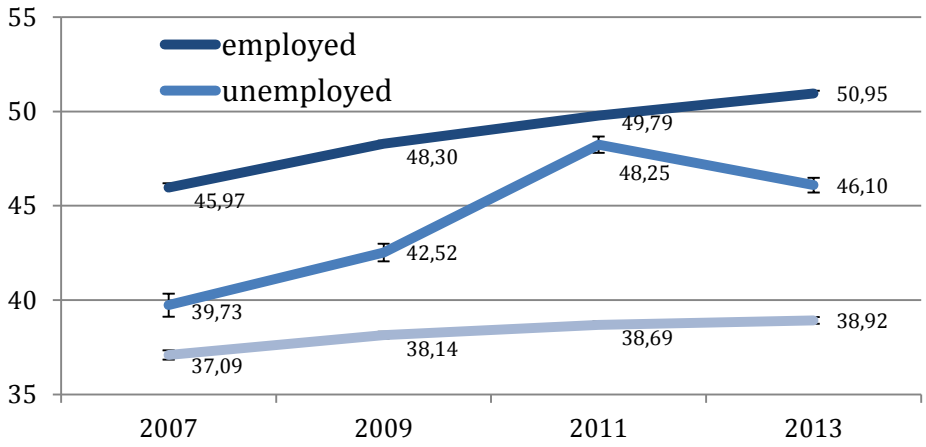


Figure 4.5.7. Average level of human capital in 2007-2013 by labour market status

In order to take a closer look at the level of human capital in Poland, we examined its level with respect to gender and the following characteristics:

- age,
- size of the place of residence,
- social and professional status,
- status on the labour market.

The results were presented in table 4.5.3 (for gender and age) and table 4.5.4 (for gender and the remaining three characteristics) and table 4.5.5 (for age and the remaining three characteristics). The synthetic human capital index demonstrates that in 2009 and 2011 men were characterised by higher level of human capital than women (figure 4.5.3). However, having takingen age into account, helped to correct this conclusion (table 4.5.1). Namely, in all years under analysis, i.e. in 2007, 2009, 2011 and

2013, among persons aged 15-34 and 35-44, women were characterised by a higher level of human capital, and among persons aged 45 and above this was the case forit was men. The observed differences between women and men in all groups were statistically significant for all analysed periods .

The higher level of human capital among women aged 15-44 is undoubtedly a consequence of the higher number of years spent by women in formal education and the higher female tertiary enrolment rate. The higher level of human capital among men aged 45 and above in comparison to women may result from the differences in educational attainment in the older age groups, to the disadvantage of women, as well as from the fact that women leave the labour market earlier than men. Therefore, they lose contact with innovations that one has to be familiar with while being on the labour market.

Table 4.5.3. Level of human capital by gender and age

Age group	Gender	Human capital 2007		Human capital 2009		Human capital 2011		Human capital 2013	
		Average	Standard error	Average	Standard error	Average	Standard error	Average	Standard error
15-34	M	52.35	0.37	55.50	0.24	56.65	0.21	56.64	0.22
	F	55.17	0.34	57.94	0.23	59.13	0.21	60.37	0.20
35-44	M	41.85	0.55	45.53	0.38	47.84	0.37	49.53	0.34
	F	42.40	0.54	46.58	0.40	49.21	0.37	51.30	0.35
45 and above	M	32.82	0.27	34.01	0.18	35.70	0.19	36.17	0.19
	F	32.01	0.24	32.81	0.17	34.37	0.17	35.15	0.18

As has already been underlined, with respect to the labour market status, the highest level of human capital was recorded among the employed, then the unemployed and the lowest among the professionally inactive. This observation does not change significantly when we compare men and women. The one exception was unemployed women who in 2011 were characterised by a higher level of human capital than employed men. The observed difference in the level of human capital between the two groups was statistically significant[30]. It should be also underlined that women were characterised by a higher level of human capital among employed and unemployed persons (in all periods under analysis) while among persons who were professionally inactive men had a higher level of human capital. The observed difference in the level of human capital was statistically significant[31] for all compared groups with the exception of unemployed women and men in 2007 and 2009.

In the groups broken down by social and professional status in all periods under analysis, women were characterised by higher level of human capital than men within groups of public sector and private sector employees, entrepreneurs, the unemployed, other professionally inactive persons and school and university students. Men were, however, better equipped in human capital among farmers, retirees and pensioners.

The observed differences in the level of human capital between women and men in the social and professional status groups were statistically significant[32] for all the group of the unemployed and entrepreneurs with the exception of farmers and other professionally passive. Moreover in 2007, among unemployed and other professionally inactive, differences between women and men were statistically insignificant and to the advantage of women.

As regards social and professional status, in each period under analysis the highest level of human capital was recorded for female school and university students, followed by male school and university students and women employed in the public sector as well as working as entrepreneurs. The lowest level of human capital was observed among female retirees and pensioners as well as among male retirees and women agricultural workers.

Analogical analyses were conducted for age in order to examine how the level of human capital was shaped in different age groups, as well as in relation to the place of residence class, labour market status and social and professional status. The results were presented in table 4.5.5.

Again, the highest level of human capital was observed among the youngest age group of 25-34 year-olds and the lowest among persons aged 45 and above. This regularity was true for all assessed cross sections and with respect to place of residence class, labour market status and social and professional status.

[30]At the significance level of 0.01.
[31]At the significance level of 0.01.
[32]At the significance level of 0.01.

Table 4.5.4. Level of human capital by gender. place of residence class, labour market, and social and professional status

Values for independent characteristics	Gender	Human capital in 2007		Human capital in 2009		Human capital in 2011		Human capital in 2013	
		Average	Standard error	Average	Standard error	Average	Standard error	Average	Standard error
Place of residence class									
Towns of over 500k	M	52.52	0.83	53.65	0.50	55.41	0.47	56.29	0.45
	F	52.10	0.70	53.13	0.47	53.82	0.44	54.93	0.44
Towns of 200k-500k	M	48.68	0.75	50.96	0.52	52.72	0.52	52.39	0.52
	F	47.41	0.69	50.44	0.51	51.95	0.50	51.63	0.51
Towns of 100k-200k	M	45.42	0.81	48.85	0.59	48.53	0.58	48.95	0.54
	F	44.57	0.74	46.14	0.58	45.88	0.55	48.22	0.53
Towns of 20k-100k	M	44.26	0.52	45.60	0.37	46.64	0.33	46.23	0.34
	F	42.73	0.48	43.67	0.35	45.74	0.33	45.91	0.34
Towns of 20k and less	M	40.61	0.60	42.95	0.43	45.40	0.41	45.28	0.43
	F	40.97	0.60	41.21	0.43	42.66	0.41	43.80	0.44
Rural areas	M	35.17	0.33	38.30	0.24	39.83	0.23	40.66	0.23
	F	35.61	0.34	37.82	0.25	39.47	0.25	40.75	0.25
Labour market status									
Employees	M	43.88	0.31	46.60	0.21	48.38	0.19	49.00	0.19
	F	48.21	0.34	50.42	0.24	51.53	0.22	53.32	0.21
Unemployed	M	38.43	0.90	41.98	0.65	46.18	0.63	44.09	0.54
	F	40.78	0.83	43.08	0.67	50.19	0.59	48.30	0.56
Inactive labour	M	38.85	0.40	39.80	0.28	40.13	0.28	40.17	0.28
	F	36.03	0.30	37.14	0.22	37.83	0.21	38.15	0.22
Social/professional status *									
Public sector employees	M	49.19	0.68	52.01	0.46	53.74	0.45	54.13	0.46
	F	54.59	0.54	56.23	0.37	56.81	0.36	58.48	0.35
Private sector employees	M	43.60	0.43	47.31	0.29	48.64	0.26	49.85	0.25
	F	48.06	0.51	51.16	0.36	51.67	0.31	53.68	0.30
Entrepreneurs	M	49.26	0.81	50.91	0.56	51.54	0.51	50.59	0.51
	F	51.43	1.31	55.54	0.93	56.54	0.83	56.95	0.72
Farmers	M	31.73	0.61	33.01	0.41	35.52	0.48	36.45	0.47
	F	31.05	0.56	32.74	0.53	35.08	0.46	35.81	0.46
Pensioners	M	33.11	0.65	34.50	0.50	35.73	0.51	33.99	0.48
	F	29.46	0.57	29.17	0.40	30.62	0.42	30.76	0.46
Retirees	M	28.88	0.37	29.99	0.26	31.56	0.29	32.00	0.28
	F	27.91	0.28	28.74	0.20	30.07	0.21	30.68	0.22
School and university students	M	59.33	0.45	62.66	0.30	60.89	0.30	63.36	0.30
	F	60.79	0.42	63.74	0.27	63.10	0.28	64.00	0.29
Other inactive labour	M	36.47	1.03	37.67	0.54	39.89	0.72	39.73	0.71
	F	38.09	0.59	38.38	0.35	41.43	0.41	41.31	0.40

*the unemployed form a separate group on the grounds of its socio-professional status. though due also to their inclusion in the classification according to labour market status it was decided not to repeat the results of their human capital reading; SA – stands for standard error

Table 4.5.5. Level of human capital among 15-34. 25-44 and 45+ age-groups by place of residence class. labour market. social and professional status

Values for independent characteristics	Age group	Human capital in 2007		Human capital in 2009		Human capital in 2011		Human capital in 2013	
		Average	Standard error	Average	Standard error	Average	Standard error	Average	Standard error
Place of residence class									
Towns >500k	15-34	64.35	0.62	65.73	0.40	65.50	0.35	65.23	0.36
	35-44	56.54	1.31	58.07	0.81	60.37	0.74	62.27	0.59
	45+	40.91	0.69	42.28	0.44	44.39	0.43	45.95	0.45
Towns 200k-500k	15-34	59.62	0.69	63.68	0.42	65.37	0.41	64.23	0.44
	35-44	52.11	1.26	56.77	0.82	57.68	0.73	60.07	0.72
	45+	37.24	0.60	38.13	0.42	41.23	0.44	41.58	0.45
Towns 100k-200k	15-34	57.72	0.79	60.59	0.53	58.27	0.56	61.50	0.48
	35-44	47.10	1.31	52.22	1.05	53.92	0.93	53.25	0.77
	45+	35.52	060	36.96	0.46	37.69	0.46	39.25	0.46
Towns 20k-100k	15-34	56.18	0.50	57.46	0.37	58.59	0.32	59.21	0.33
	35-44	44.43	0.85	48.76	0.58	51.86	0.53	52.15	0.51
	45+	33.99	0.39	34.61	0.27	36.32	0.26	36.40	0.27
Towns up to 20k	15-34	51.30	0.69	54.89	0.45	57.27	0.40	57.18	0.44
	35-44	41.81	0.94	45.13	0.74	46.57	0.72	50.18	0.72
	45+	32.10	0.46	33.07	0.32	34.56	0.31	35.67	0.34
Rural areas	15-34	47.47	0.41	51.32	0.27	53.30	0.24	54.64	0.24
	35-44	33.83	0.46	37.79	0.34	40.33	0.35	42.97	0.33
	45+	26.83	0.21	27.89	0.16	28.92	0.16	29.68	0.16
labour market status									
Employees	15-34	53.27	0.37	56.20	0.24	58.12	0.21	58.82	0.20
	35-44	44.06	0.44	47.80	0.31	49.93	0.29	52.33	0.26
	45+	39.57	0.33	40.65	0.22	41.93	0.21	42.93	0.22
Unemployed	15-34	48.57	0.90	50.47	0.66	54.99	0.50	53.55	0.49
	35-44	33.70	1.13	38.25	0.79	44.30	1.09	42.65	0.79
	45+	30.44	0.65	31.73	0.57	36.71	0.67	35.56	0.58
Inactive labour	15-34	55.74	0.35	58.45	0.24	58.42	0.23	59.36	0.24
	35-44	33.59	0.76	37.13	0.66	39.50	0.65	39.96	0.65
	45+	27.78	0.18	28.33	0.12	29.62	0.13	30.37	0.14
Social/professional status*									
Public sector employees	15-34	62.46	0.68	63.93	0.45	64.49	0.41	65.50	0.42
	35-44	51.49	0.78	56.01	0.54	58.78	0.53	60.91	0.48
	45+	45.60	0.62	47.42	0.41	48.59	0.40	49.63	.40
Private sector employees	15-34	51.24	0.48	55.55	0.31	57.16	0.26	58.31	0.24
	35-44	41.26	0.62	46.39	0.46	48.16	0.39	50.79	0.35
	45+	38.31	0.54	39.29	0.34	39.79	0.31	41.42	0.33
Entrepreneurs	15-34	56.80	1.16	57.69	0.81	62.23	0.71	59.16	0.75
	35-44	48.93	1.37	52.38	0.89	51.96	0.78	54.28	0.69
	45+	45.60	0.99	47.58	0.75	46.96	0.63	47.41	0.65
Farmers	15-34	37.18	1.06	38.33	0.81	44.97	0.79	46.03	0.80
	35-44	30.92	0.67	34.38	0.56	35.96	0.59	38.13	0.61
	45+	28.55	0.48	29.80	0.40	30.34	0.32	31.12	0.32
Pensioners	15-34	54.72	1.33	57.52	1.03	56.54	0.96	55.14	1.22
	35-44	31.19	1.27	33.81	0.95	38.64	1.39	37.66	1.28
	45+	26.93	0.30	27.35	0.23	28.43	0.25	28.71	0.26
Retirees	45+	28.26	0.22	29.18	0.16	30.57	0.17	31.15	0.17
School and university students	15-34	60.13	0.31	63.23	0.20	62.05	0.21	63.74	0.21
Other inactive labour	15-34	44.68	0.79	44.93	0.46	49.49	0.54	49.93	0.54
	35-44	34.52	0.94	37.57	0.58	41.68	0.74	40.50	0.73
	45+	30.28	0.64	30.42	0.35	32.29	0.41	32.69	0.41

*the unemployed form a separate group on the grounds of its socio-professional status. though due also to their inclusion in the classification according to labour market status it was decided not to repeat the results of their human capital reading; SE – standard error

In order to examine the joint influence of the examined characteristics, e.g., gender, age, place of residence class and the status on the labour market in Poland in 2013, a two-level regression model with random intercept was estimated. Household members were the first level of analysis whereas the households were the second. The use of the two-level model was necessary as it was presumed that the levels of human capital of any one household's members were visibly correlated with each other. In order to verify this assumption, an interclass correlation coefficient was calculated for the human capital index in 2013. The obtained value at the level of 0.567 is significant and implies that the impact of

belonging to a household on the human capital level is sufficiently high to be taken into consideration, and therefore application of a classical (one-level) regression model may lead to incorrect results. The estimates of the parameters of the intercepts' effects in the final model[33] have been presented in table 4.5.6.

Table 4.5.6. Assessment of effect of constant parameters in a two-level regression model with random absolute term[34] Social Diagnosis 2013

Variables	Estimation	Standard error	Significance
Constant	28.05	0.24	0.00
Status on the labour market			
The employed	7.25	0.21	0.00
The unemployed	3.03	0.42	0.00
Professionally inactive	ref.		
Age			
15-34	22.16	0.16	0.00
35-44	10.24	0.23	0.00
45 and above	ref.		
Status on the labour market and gender			
Employed man	-2.57	0.17	0.00
Employed woman	ref.		
Unemployed man	-2.50	0.52	0.00
Unemployed woman	ref.		
Professionally inactive man	0.88	0.21	0.00
Professionally inactive woman	ref.		
Place of residence class			
Towns of over 500k	13.79	0.42	0.00
Towns of 200k-500k	11.01	0.43	0.00
Towns of 100k-200k	8.37	0.47	0.00
Towns of 20k-100k	6.18	0.34	0.00
Towns of 20k and less	4.86	0.40	0.00
Rural areas	ref.		

The obtained results correspond to the results of descriptive analyses discussed above. Thus, they confirm that in terms of human capital there are considerable differences between persons of various status on the labour market (the highest level of human capital was observed among persons who are employed, lower among the unemployed and the lowest among professionally inactive persons). Professionally active women (both employed and unemployed) are characterised by a higher level of human capital than professionally active men, however men are characterised by a higher level of human capital among the professionally inactive. There are also differences between age groups as the younger the person, the greater the human capital at his/her disposal. Also place of residence class clearly determines residents level of human capital, the larger being the city, the higher the level of human capital among the household members compared to residents of rural areas.

4.5.2.4. Summary

Results of analysis of *Social Diagnosis 2013* data confirm the rising tendency in human capital in Polish society. Above all, this has arisen mainly because of the continued growth in use of new information technology, as other components of human capital measure (knowledge of English, higher education etc.) indicate stagnation or even regression. In 2013, the differences in terms of human capital with respect to age have remained. They favour the young rather than the elderly. On the one hand this is a good signal that new participants in the labour market will be able to meet market requirements in terms of modern technology. On the other hand, the disproportions in human capital level between the selected age groups shrank in 2013 compared to 2007-2011, but rose between groups with control for gender. This indicates the particular threat of growing disproportions in human capital in terms of age and confirms the key role of life-long learning to counter this threat. This result also highlights the fact

[33]Multi-level regression models are estimated in an iterative way. This means that we start with a model with the constant and at further stages other variables are included, at the same time decisions are made on taking into account the fixed and/or random effects. The quality of estimated models is assessed on the basis of the information criteria and with a likelihood ratio test.
[34]The parameters have been estimated with the residual maximum likelihood method (REML).

that keeping those in older productive age groups, especially women, in the labour market - seen as essential to counter the multiple effects of the changing age structure – demands significant efforts to improve their human capital.

Among those aged 18-44, women dispose of greater human capital than men, while for the 45+ age group the reverse is the case. Because the low professional activity of older productive age groups is strongly determined by the early withdrawal of women from the labour market, this result underlines the importance of increasing the human capital of women of this age for an improvement in the employment prospects for this age group.

For residents of rural areas, the unfavourable differences in human capital have narrowed slightly, though this group still shows the lowest levels of this capital. Despite this improvement, the low position of agricultural workers compared to other groups in terms of human capital did not improve, which underlines the scale of essential investment in the human capital of both farmers and rural residents. These are essential to reduce inequalities in levels of human capital that can hold back the development of rural areas. A higher level of human capital in the rural areas will improve farmers' capacity to adopt modern technology, which is essential to ensure the competitiveness of this sector of the economy.

Analysis of human capital in terms of labour market status reveals the significant formative role of labour market participation. However, it is worth underlining both the continuous improvement in human capital levels not only among those in work, but also the halting of the improvement observed up to 2011. The changes observed earlier were no doubt influenced by the human resources development programmes so widely implemented recently, and also by the rising threat of unemployment to those with higher education status, especially the young graduates entering the labour market. Of concern is also the continued growth in disproportion between the human capital level of the professionally active and passive. The activation of those remaining outside the labour market depends also on the growth of employment in Poland, which may be problematic precisely due to the growing difference in human capital at the disposal of the two groups.

Results of analysis also show that students are the group with the largest human capital. They gain the essential skills to use the tools of the modern technologies during their studies, though it ought to be remembered that they will have to use these skills on the labour market in coming years. Furthermore, there are indications that the structure of education is poorly adapted to the needs of the economy with too many social and humanistic qualifications and a deficit of science and technology graduates. This implies that apart from the high level of human capital of students compared to other social groups, there is still a necessity to adapt their competences to labour market needs in order to avoid the skills miss-match. This, in turn, requires change in education programmes at ministerial level.

4.5.3. Children's education

69.4% of household members reported they wanted their childern up to 26 years of age to graduate from university with a master's degree in 2013 (65.1% in 2011). Almost 15% (the same as in 2011) declared they were satisfied with technical or professional higher education and 10% (11.8% in 2011) a lower level of professional qualification.

In terms of educational aspiration, households of the entrepreneurs and that of employees indicated master's degree graduates in 2013 at 81% and 73% respectively as well as households of couples with 1 child (nearly 76%). Households without unemployed members decidedly more often indicated this educational attainment than those with unemployed members at nearly 73% and over 62% respectively. Households with these educational aspirations were most frequently located in towns of over 500 thousand residents (almost 82% of households) and Podlaskie and Świętokrzyskie (nearly 85% and 83% respectively). Households living on unearned incomes (around 45%) and incomplete families (almost 61%) least often expected their offspring to achieve this educational attainment. Low-level educational aspiration households were relatively most frequent in rural areas and in Warmińsko-Mazurskie.

Households living on unearned sources (around 36%) and couples with many children (over 25%) declared the highest share of educational aspiration at the lowest level of professional graduate qualification. This aspiration level was relatively most frequently reported by households in rural areas at over 24% and in Warmińsko-Mazurskie (nearly 25%).

Households were most frequently forced to forgo, for financial reasons, additional activities and remedial lessons for children in the 2012/2013 school year at over 15% and 12% respectively. Least frequent were changes in school on the grounds of lower fees (around 1.4% of households).

In 2009-2013[35]. we have observed a marked rise in financial reasons only in terms of extra subjects undertaken (over 1 p.p., figure 4.5.8). In the last two years[36] there were no significant changes in the frequency of households' educational drop-outs or limitation for children and young people.

Households that were most frequently forced into various forms of financially motivated resignation from their children's education were those living on unearned income and pensioners at around 36% and nearly 35% respectively in the case of additional activities. Households with unemployed members were for more often forced to limit spending on their children's education than those without. Analysis of the scale of financial limitation as regards children's education by household type reveals that incomplete family and couples with many children were most affected at over 25% and nearly 22% respectively in the case of forgoing additional activities. Relatively most frequent were forced limitations of the kind discussed among households in large cities and in Pomorskie at nearly 19 and 22% respectively.

In the last two years, there has been a marked rise in resignations, especially in the case of additional activities among households with 2 children by nearly 5 p.p., in rural areas, towns of less than 100 thousand residents by over 2 p.p. and in Kujawsko-Pomorskie, Lubelskie and Śląskie at nearly 8 p.p., 7 p.p. and over 5 p.p. respectively.

In February/March 2013 over 78% of households reported that the level of their children's educational need satisfaction had not changed since 2011, over 16% claimed it had worsened and 5% noted an improvement. Compared to 2011, household assessments regarding changes in their children's educational need satisfaction had not changed significantly. Changes for the worse were most often reported by households living on unearned sources and pensioner households at around 37% and over 24% respectively, incomplete families and those with many children (over 26% and nearly 17% respectively). Households with unemployed members are clearly more frequent than those without in claiming their children's educational need satisfaction had worsened over the last two years (over 28% and nearly 14% respectively) In this respect, households do not vary much in place of residence class, with the most frequent deterioration reported in large cities (over 20%) and in Podkarpackie at over 19%.

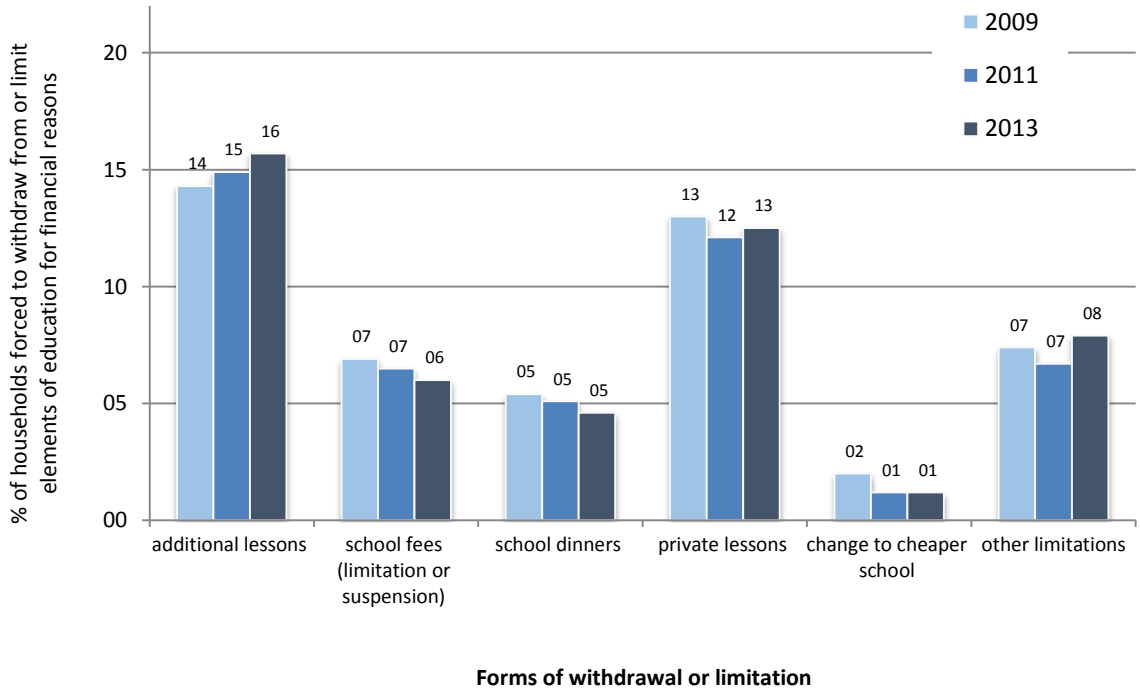


Figure 4.5.8. Households' financial difficulties in terms of children's education in the 2009-2013 panel sample

[35] All changes in terms of children's education in 2009-2013 refer to the panel sample for those years and the intervening year of 2011.
[36] All changes in terms of children's education in 2011-2013 refer to the panel sample for those years.

4.6. Culture and recreation

Tomasz Panek, Janusz Czapiński

4.6.1. Culture

For financial reasons, between 13 and 20% of examined households were forced to forgo a trip to the cinema, theatre, opera, operetta, not attend a concert, visit a museum or an exhibition or purchase a book, newspaper or magazine in 2013. The situation occurred most often for going to cinema (20% of households), while least often for visiting museums or exhibitions (12.6%).

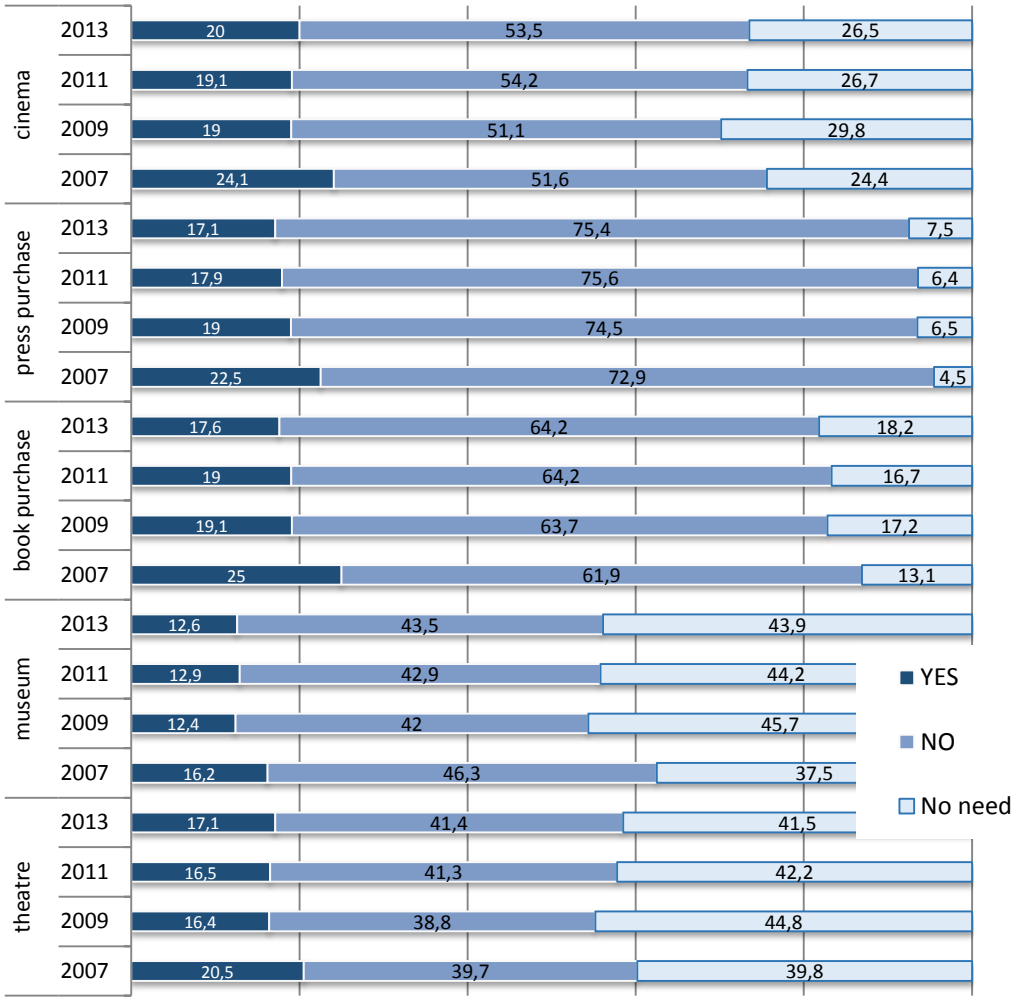


Figure 4.6.1. Households forced to forgo selected forms of participation in culture due to a lack of funds in the last year (in the 2007-2013 panel sample in % of answer)

However, a slight improvement was observed here in the last six years[37] (figure 4.6.1). In the panel sample, the share of households that had to refrain from participating in these cultural events did not however shrink significantly in the last four years'[38] panel sample (figure 4.6.2).

In 2013 as compared to 2011[39], the scale of financial trouble households faced in participating in the selected forms of participation in culture also did not significantly change (figure 4.6.3).

Definitely the largest share of those forced to withdraw from the selected forms of cultural participation were the poorest household groups living on unearned sources and those of pensioners at nearly 54% and over 45% for theatre, opera, operetta, philharmonia or concert respectively, while the

[37] All changes in household participation in cultural events in 2007-2013 refer to the panel samples for those years.
[38] All changes in household participation in cultural events in 2009-2013 refer to the panel samples for those years.
[39] All changes in household participation in cultural events in 2011-2013 refer to the panel samples for those years.

smallest at less than 19% were the entrepreneurs. At the same time, only among households of farmers did the number of withdrawals increase in 2013 compared to 2011 (by nearly 6 p.p. in the case of cinema and over 1 p.p. in the other selected forms).

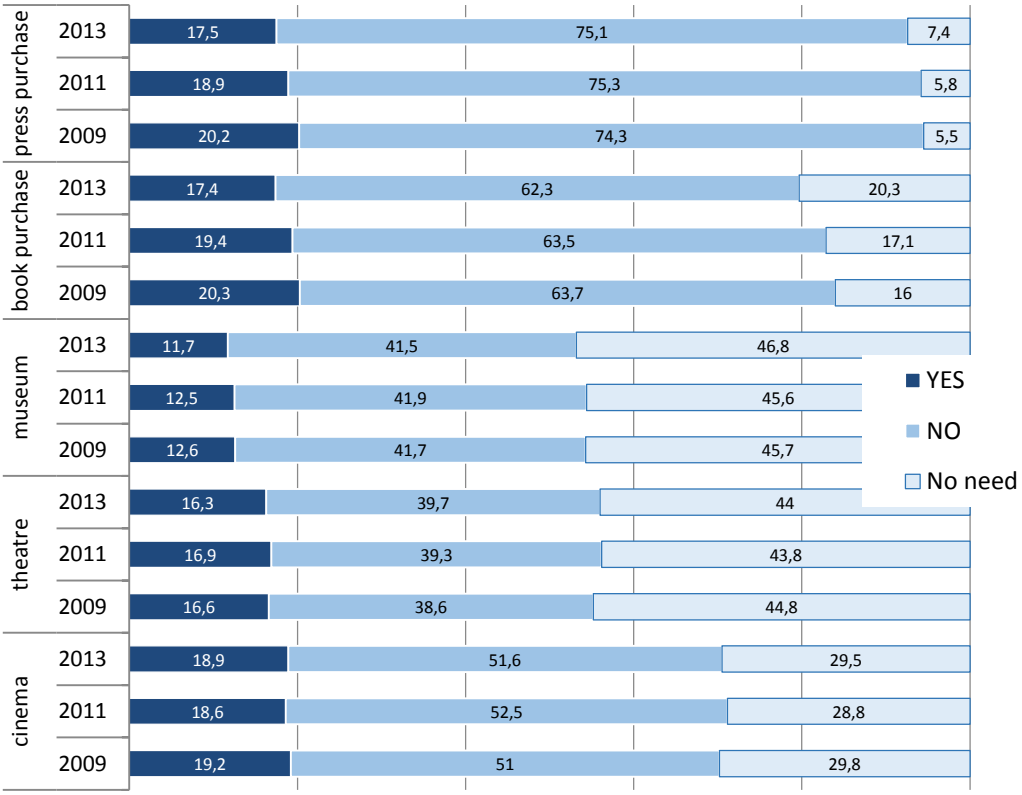


Figure 4.6.2. Households forced to forgo selected forms of participation in culture due to a lack of funds in the last year (in the 2009-2013 panel sample) (in % of answers)

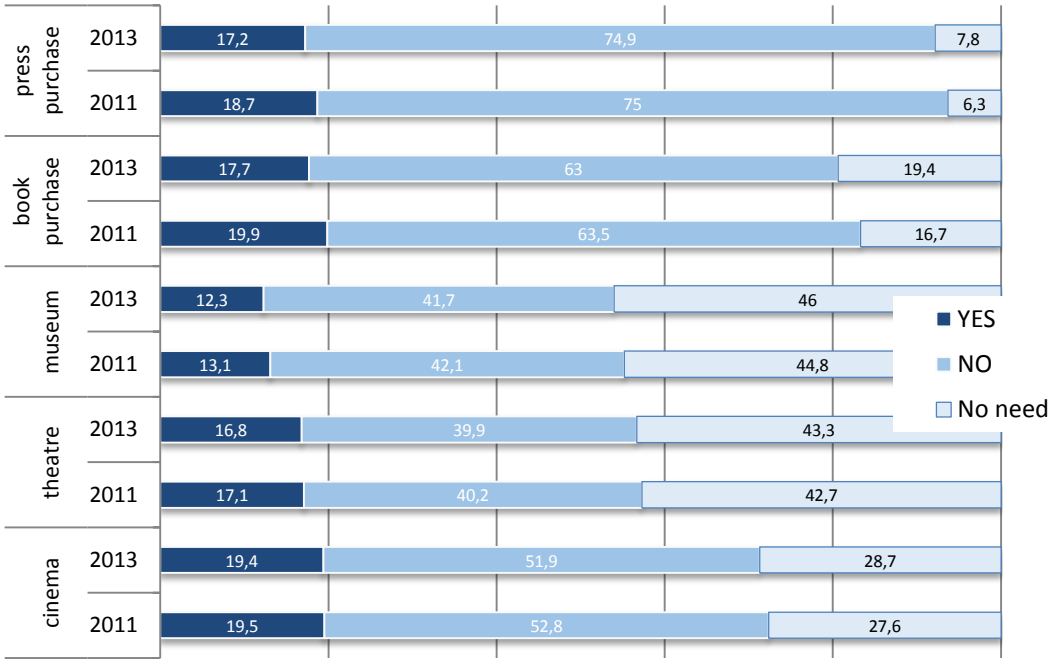


Figure 4.6.3. Households forced to forgo selected forms of participation in culture due to a lack of funds in the last year (in the 2011-2013 panel sample in % of answers

Among groups of households broken down by type, forgoing selected forms of participation in cultural events mostly concerned single parent families and families with 3 or more children where cancellation frequency exceeded even 40 per cent. In 2013, compared to the situation reported two years ago, there was a marked rise in the frequency of cultural event attendance cancellations observed in the group of non-family multi-person households from nearly 6 p.p. in the case of theatre, opera, operetta, philharmony and concerts to nearly 9 p.p. for the cinema, couples with many children from nearly 2 p.p. for museum or exhibitions to nearly 8 p.p. for theatre, opera, operetta, philharmonia and concerts and incomplete families from over 1 p.p. for museum and exhibition to over 3 p.p. for the cinema.

Financially motivated withdrawals from all analysed forms of cultural participation in households with unemployed members were in 2013 around 20 p.p. higher than in those without. In the last two years, we have observed a marked fall in the share of households without unemployed members forced into withdrawals for financial reasons.

In 2013, the differences between respective groups of households broken down by class of place of residence in terms of their need to forgo attendance at selected forms of cultural events for financial reasons were not very significant, though greatest in the case of households from the largest towns at as much as 34% for theatre, opera, operetta, philharmonia and concert. In terms of Voivodeship, households that most often reported withdrawals were from the Łódzkie at almost 41% for theatre, opera, operetta, philharmonia and concerts. In the last two years, a fall in cancellations of attendance at cultural events for financial reasons was observed in the smallest towns and rural areas for the cinema by over 1 p.p. Reduced opportunities to attend cultural events in that period were reported most often by households from Lubelskie (an increase from over 4% to over 8%), Wielkopolskie (from almost 5% to almost 8%), Podkarpackie with the exception of the cinema (a rise of over 5p.p.) and Warmińsko-mazurskie (a rise of over 10 p.p. in the case of the cinema).

Over 21% of analysed households were forced to abstain from purchasing a book for financial reasons last year. This number decreased in 2013 by almost 3 p.p. with respect to 2009 (figure 4.6.1). In the last two years, the percentage of abstentions from purchasing a book for financial reasons dropped by over 2 p.p. (figure 4.6.2).

In 2013, resignations from book purchase were clearly the most frequent in households living on unearned source (nearly 47% of those households), households of single-parent families, couples with many children (nearly 32% and almost 31%. respectively) as well as in households with the unemployed (over 36%). Only in the group of households of farmers and couples with many children did the proportion of financially motivated resignations from book purchase increase in 2013 as compared to 2011 (at 8 p.p. and nearly 2 p.p. respectively).

The necessity to abandon book purchase was reported by rural as often as urban households though those that most frequently reported resignations were in towns of over 200 thousand at over 22%. The differences across Voivodeships in terms of households that had to forgo buying books for financial reasons were marked. The necessity was most often reported in Łódzkie at nearly 29%. In 2013, only households from the largest cities had to forgo buying books in all types of residential area, with the largest in middle-sized towns significantly more often than in 2011 (a fall by nearly 4 p.p.). In terms of Voivodeship, a significant increase was only recorded in the Wielkopolskie (nearly 3 p.p.), Podkarpackie and Mazowieckie (nearly 2 p.p. respectively).

Household cultural participation is also indirectly revealed by the size of book collections and book purchase. The size of book collections has remained at a similar level since 2007 with a slight falling tendency (table 4.6.1). The number of households without a single book and that with collections of more than 100 volumes increased and the number of the larger collections of more than 100 volumes has fallen.

We also note this falling trend in panel samples (figure 4.6.4), showing that not only do new households fail to create libraries, but also the number of books is falling in previously studied households.

Table 4.6.1. Percentage of households with book collections of a specific size in 2007- 2013

Number of volumes	2013	2011	2009	2007
0	13.2	12.5	12.8	10.1
up to 25	21.9	21.9	22.3	23.1
26-50	22.9	22.1	21.6	21.5
51-100	20.4	21.2	20.7	20.6
101-500	16.5	16.9	17.2	19.8
over 500	5.0	5.4	5.5	5.9

In 2013, the lack of a book collection was most often reported by the households living on unearned sources of income and pensioner households at more than 35% and nearly 28% respectively. The largest collections of more than 500 volumes were reported by the households of the entrepreneurs at over 9%. The past two years have seen a significant increase in the percentage of households living on inactive sources of income, farmers and pensioners households that reported not having a book collection by 10 p.p., 6 p.p. and nearly 6 p.p. respectively.

Differences between households with and without unemployed members in terms of book collections were significant at over 17% and 12% without collections respectively. The share without book collections increased in both groups in the last two years.

Among the household types analysed within the study, in February/March 2013 book collections were absent the most often from multiperson and non-family one-person households at around. The largest book collections (more than 500 volumes) were the most common among households of married couples without children at more than 6%.

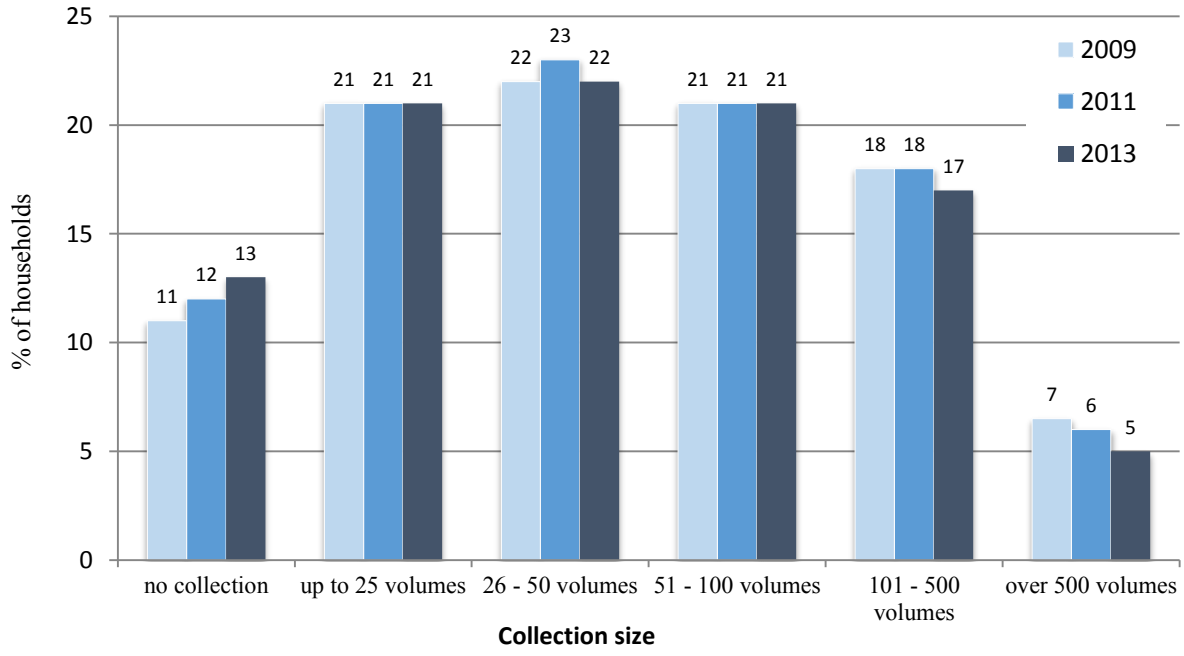


Figure 4.6.4. Book collection size in households in the 2009-2013 panel sample

In the last 2 years there has been a marked rise in the households with book collections only among couples without children.

Households in rural areas do not have book collections much more often than those in urban areas at more than 21% of households in rural areas compared to less than 5% in the largest cities. Households with the largest book collections most often lived in the largest cities at more than 12% from that group. In the last two years, there was a fall in the percentage without book collections residing in rural areas and in the largest towns. Households that were least likely to have a book collection in February/March 2013 were most frequent in Świętokrzyskie at nearly 28%.

Just over 40% purchased books other than school text books and instructions in the last year (table 4.6.2).

Table 4.6.2. Percentage of households that purchased books. whether paper or electronic versions. other than school text books or instructions in the last year

Purchased books	Number of books purchased (%)				
	1-3	4-6	7-10	11-20	20+
40.6%	30.2	28.1	21.8	12.3	7.6

Households of pensioners and farmers bought no books at almost 88% and nearly 70% respectively, while those without unemployed members bought books relatively more often at over 49% than those with the unemployed at 38%. Among the most rarely purchasing books in the last year were single-person. non-family households at only just over 39%. In the last year urban households purchased books far more often than their rural counterparts at 65% in the largest towns and over 36% in rural areas. Households in Warmińsko-Mazurskie least often bought books in the last year at 32% of the total.

Households most often reported that the degree of their cultural need satisfaction had not changed over the last two years at almost 78%. By contrast, nearly 18% think that the situation had deteriorated and only 5% reported an improvement. The percentage that negatively evaluate the degree of their cultural need satisfaction increased significantly by nearly 2 p.p. on March 2011.

This year we asked whether there is a musical instrument in the household and whether there is a playing household member. 16.1% answered positively, of which 72.1% reported a playing member. This means that in merely one in ten Polish households is live music to be heard from time to time.

As of February/March 2013, households living on unearned sources of income were the most pessimistic in evaluating changes in the degree of their cultural needs satisfaction (approx. 30% reported a decrease in this respect). In terms of household types, incomplete families and couples with many children are the most likely to formulate negative opinions about the changes at nearly 24%. In the group with the unemployed members, around 29% provided negative answers, while in the group without this ratio only amounted to nearly 16%. Negative opinions on changes in degree of cultural need satisfaction were the most frequent among households in the largest cities at over 24%. The greatest percentage of pessimistic evaluation of the change in degree of cultural need satisfaction were reported in Łódzkie and Pomorskie Voivodeships at nearly 24% and more than 20% respectively.

The size of the book collection, similarly to the forms of cultural participation discussed above, is related to material well-being (income and household equipment) and is also strongly correlated to civilisation level (the number of modern communication devices). Since both material well-being and civilisation level depend on educational attainment, one may expect that many forms of cultural participation will correlate with the educational attainment of household members, which is indeed the case (tables 4.6.3. and 4.6.4). Nearly all households with heads with a higher education have a book collection of some sort, most often (33%) comprising between 100 to 500 volumes, and the lack of interest in buying newspapers, books, going to exhibitions, the theatre and the cinema is the least frequent here. In the last two years, interest in buying newspapers and books fell in all households selected by household head's educational attainment with the exception of those with higher education.

Table 4.6.3. Percentage of households with book collections by household head's education

Household head's educational attainment	Size of book collection					
	no collection	up to 25 volumes	26-50 volumes	51-100 volumes	101-500 volumes	over 500 volumes
Primary or lower education	39.1	33.6	16.5	7.1	3.0	0.7
Basic vocational	16.3	31.8	26.5	17.1	7.6	0.6
Secondary	6.7	19.1	27.9	24.5	18.0	3.7
Higher or post-secondary	2.3	9.1	17.5	26.6	31.3	13.2

Chi-square = 3920. $df = 15$. $p < 0.000$

Table 4.6.4. Percentage of households not interested in various forms of cultural participation by the household head's level of education in 2007. 2009 and 2011

Household head's educational attainment	Lack of interest									
	cinema		theatre		exhibitions		book purchase		press purchase	
	2013	2011	2013	2011	2013	2011	2013	2011	2013	2011
Primary or lower education	56.6	59.8	69.6	71.6	71.1	72.9	45.2	43.3	17.2	15.8
Basic vocational	31.2	27.4	52.4	48.0	54.1	51.5	21.6	17.9	8.2	5.9
Secondary	22.0	20.3	37.7	36.3	40.7	38.4	13.3	10.0	5.5	4.2
Higher or post-secondary	9.1	8.9	18.3	20.5	21.6	21.9	4.5	4.0	3.5	2.9

In general, financial restraints on cultural participation, lack of expectation related to participation, the assessment of the extent to which one's cultural expectations are met and the size of book collection largely depend on the financial situation, educational attainment and civilisation level. Only television and increasingly the internet are commonly available as carriers of cultural content, with the TV more in use among those who do not have other cultural needs (see section 5.11 for a discussion of the role of television).

4.6.2. Recreation

The percentage of households forced to cancel recreational holiday travel plans for financial reasons in 2013 was over 38% in the case of children (camps etc.) and almost 47% for adults[40]. However, we have observed a marked improvement from 2009[41] (figure 4.6.5). The fall in this kind of cancellation was nearly 2 p.p. for adults, 3 p.p. for family trips and around 2 p.p. for children. In the last two years, there was however been a marked fall in the need to forgo adults' trips for financial reasonsby nearly 3 p.p.

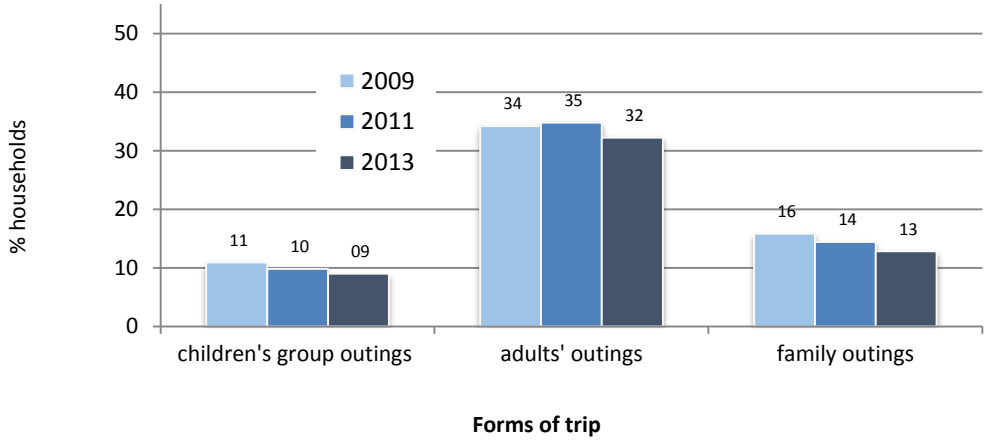


Figure 4.6.5. Percentage of households forced to forgo selected forms of trip in the 2009-2013 panel sample

By far the most frequent cancellations took place among households living on unearned sources and pensioners at over 69% for children to over 72% for family trips in the first group and from around 66% for adults and nearly 72% for children in the case of the second group, and the least frequent were among households of the entrepreneurs (from over 23% for family trips to nearly 30% for adults). The rise in cancellations was marked in 2013 compared to 2011 in the case of children's group trips among households of employees and those living on unearned sources at 5 p.p. and 1 p.p. respectively and adult trips only among pensioners at over 1 p.p.

In 2013. households most frequently forced to cancel their holidays for financial reasons were those of multi-children couples and incomplete families (from nearly 58% for children's trips to over 64% for adults in the first group and nearly 52% for children to nearly 62% for adults in the second group). In the last two years the frequency of holiday cancellations for financial reasons increased significantly in the case of adults among multi-children couples and those with one child at 6 p.p. and 3 p.p. respectively.

[40] All changes in household participation in recreation in 2007-2013 refer to the panel samples for those years.
[41] All changes in household participation in recreation in 2007-2013 refer to the panel samples for those years.

The rise in cancellations for financial reasons in children's holidays most strongly affected incomplete family households and those of couples with one child at 12 p.p. and 5 p.p. respectively. The same situation occurred in the case of family holidays with a rise by 3 p.p. and 1 p.p. respectively for these groups.

The frequency of financially motivated holiday cancellations in 2013 was significantly higher among the households with unemployed members than it was in the group without at nearly 64% and nearly 37% for children to nearly 71% and nearly 43% for adults. Between 2011 and 2013, in the households without unemployed members the frequency of cancellations for children's holidays rose by over 2 p.p., while the rise was nearly 3 p.p. for adults in the unemployed members' group.

In 2013, definitely the largest share of households forced to cancel, for financial reasons, their holidays of the selected kinds resided in rural areas. In the case of adults, this was true for almost 56% of households, and for children and families almost 49%. The worst situation for family holidays was in Świętokrzyskie and Zachodnio-Pomorskie with 49% reporting cancellations, and for adults in Łódzkie, Podkarpackie and Świętokrzyskie at nearly 56%, nearly 55% and over 52% respectively. Children's holidays were most often cancelled in Lubelskie, Pomorskie and Świętokrzyskie at over 50%.

In the last two years, we observed clearly the largest growth of financially motivated holiday cancellations in the largest towns. In the case of family holidays, this was nearly 5 p.p., adults nearly 7 p.p. and for children it was as much as almost 15 p.p. There was also a marked growth in children's holiday cancellations in rural households at over 4 p.p. and large towns by 4 p.p.

In the last two years, the most marked growth in children's holiday cancellations took place in Łódzkie and Zachodnio-Pomorskie by almost 19 p.p. and over 17 p.p. respectively, in adults' holidays in Łódzkie (by nearly 6 p.p.), Dolnośląskie and Kujawsko-Pomorskie (by over 3 p.p.) and family holidays in Małopolskie by over 5 p.p.

Apart from household financially motivated cancellations of the selected forms of holiday, we also studied their lack of noticing such a need for a holiday. In February/March 2013, households most rarely did not feel the need for adult holidays at nearly 31%. and most often children's holidays at nearly 78%. In the last four years there has been a marked growth in the lack of noticed need for all selected holiday forms by 5 p.p. for children, 6 p.p. for family and nearly 2 p.p. for adults (figure 4.6.6). Also, in the last two years we noticed a similar growth trend, with a lack of interest in children's holidays increasing by nearly 3 p.p., adult by nearly 2 p.p. and family holidays by over 2 p.p.

In February/March 2013, most often households of pensioners and retirees declared a lack of interest in the analysed forms of holiday at over 40% for adults to 90% for children and least frequently those of the entrepreneurs from nearly 23% in the case of adults' holidays and nearly 64% for children.

Multi-person households and that of incomplete families most frequently reported a lack of need for children's holidays at nearly 95% and nearly 74% respectively and in the case of adults' holidays non-family households at nearly 39%. For family holidays the largest shares were among non-family multi-person and incomplete family households at nearly 92% and almost 65% respectively.

Differences in the frequency of lack of interest in the selected holiday types according to place of residence were not especially great in 2013. Household most often lacking interest in children's family holidays were in the largest towns at nearly 83% and almost 69% of households. For adults, mostly rural households showed a lack of interest at around 42%. Also territorial variation in a lack of interest in holidays was insignificant with only households in Lubelskie and Podkarpackie showing a marked lack of interest in group holidays for adults at over 43% and over 41% respectively.

In 2013, nearly 72% of households stated that their holiday needs satisfaction had not changed compared to two years before. At the same time, nearly 26% indicated a worsening of the situation and only not quite 3% an improvement. In relation to the assessment of changes in 2011, there was a rise in negative change ratings by over 3 p.p. Most pessimistic were households living on unearned sources at nearly 38% and couples with many children and incomplete families at nearly 37% and 32% respectively. Negative ratings were most often reported in the largest towns at nearly 33% and in Dolnośląskie (around 32%) and Warmińsko-Mazurskie (nearly 32%).

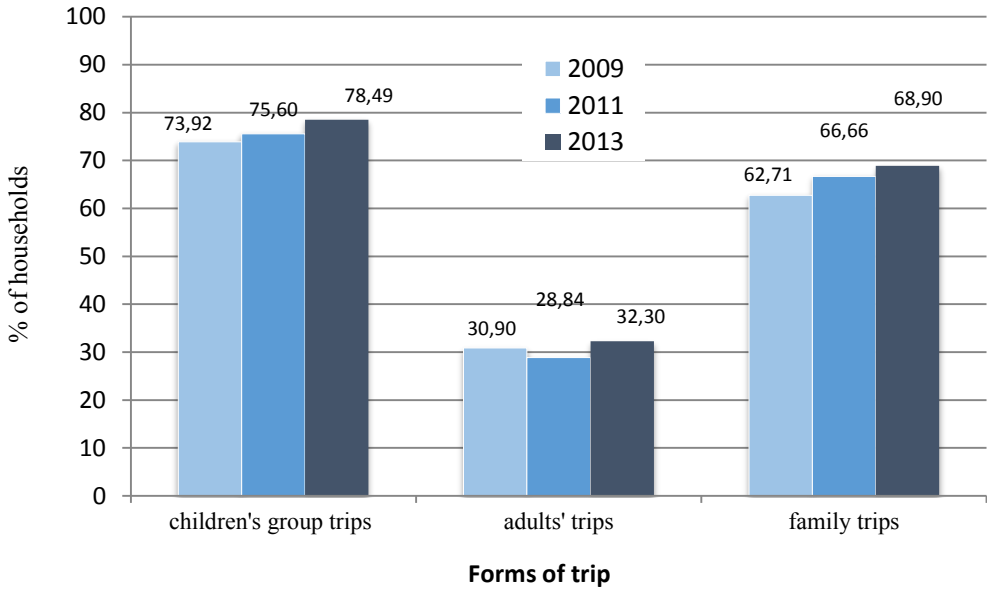


Figure 4.6.6. Households' lack of need to take selected forms of holiday trip in the 2009-2013 panel sample

4.7. Healthcare

Janusz Czapiński, Tomasz Panek

4.7.1. Use of the healthcare system

As reported by households in 2013, more than 92% used healthcare facilities funded by the National Health Fund (*Narodowy Fundusz Zdrowia, NFZ*), but also over half took advantage of services provided by establishments for which they paid themselves, and 7% took advantage of the services paid for by employers who purchased subscription or insurance. The percentage of households that took advantage of medical services paid from all three sources increased significantly compared to previous years (table 4.7.1).

Table 4.7.1. Percentage of households that use healthcare facilities by the source of funding

Year of study	Public funding	Private funding	Subscriptions
2000	86.4	38.6	4.9
2003	89.6	35.6	4.5
2005	91.2	37.4	4.3
2007	92.4	44.0	5.0
2009	92.0	49.0	5.1
2011	91.3	49.2	6.5
2013	92.4	50.6	7.0

Between 2009-2013[42], the percentage of households that used services paid by employers that had bought a subscription increased very slightly within the margin of statistical error (by 1 p.p., figure 4.7.1). In the last two years, the utilization frequency by households from the selected kinds of health service centres did not change significantly.

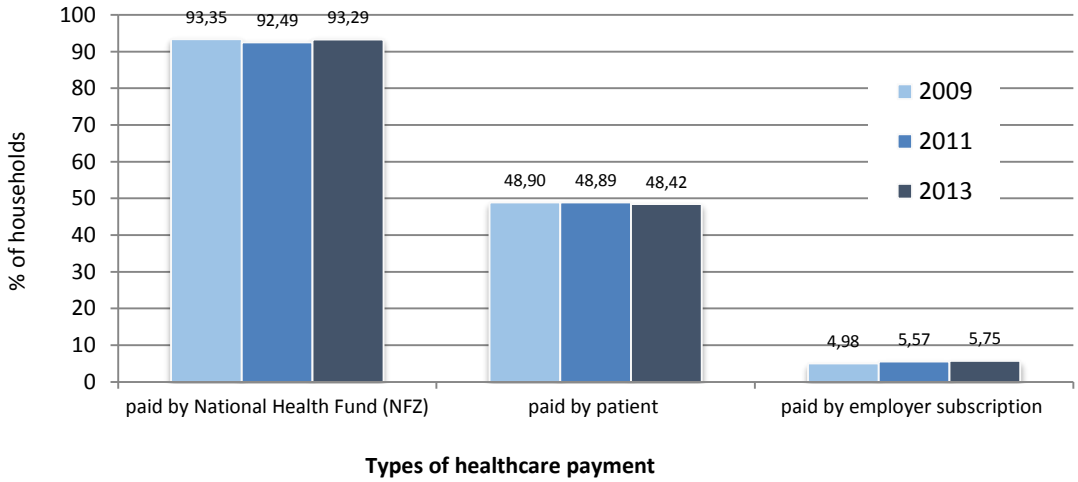


Figure 4.7.1. The extent of healthcare service use in the 2009-2013 panel sample

The most prosperous households relatively most often used health services payable on the spot in the last year (over 70%), couples with 1 or 2 children (over 60%) and those resident in the largest cities (nearly 60%). Households without unemployed members significantly more often used paid health services than those with the unemployed at over 52% and not quite 42% respectively, as did urban households compared to those in rural areas at nearly 60% of those in the largest cities and only 45% in rural areas. This kind of health service was clearly used by most rarely by households in Warminsko-Mazurskie Voivodeship (only not quite 27%). In the last 2 years, we observed a rise in the share of households using paid health services among pensioners (nearly 2 p.p.), childless couples (nearly 2 p.p.) and those residing in the smallest towns (over 2 p.p.).

[42]Changes in respect of healthcare between 2009 and 2013 pertain to the panel sample for those years; i.e. the households that were subject to the study in 2009, 2011 and in 2013.

Table 4.7.2. The percentage of households using healthcare in the last year

Group	Paid by the National Health Fund (NFZ)		Paid by patient		Paid by employer subscription)	
	2013	2011	2013	2011	2013	2011
Socio-economic group						
Employees	92.3	90.6	57.9	55.5	12.2	11.1
Farmers	90.8	90.0	49.0	48.7	-	-
Entrepreneurs	90.0	88.5	70.2	71.0	6.4	5.9
Retirees	94.9	93.8	42.7	41.9	1.1	1.4
Pensioners	96.1	94.4	29.4	28.3	-	-
Living on unearned sources of income	78.1	82.5	26.7	29.4	-	-
Type of household						
Single family:						
Couples without children	92.5	92.5	55.2	52.2	6.7	6.4
1 child	95.1	93.5	60.3	60.5	10.8	9.5
2 children	95.0	93.7	61.6	59.6	11.4	9.6
3+ children	97.5	95.3	50.4	51.5	6.1	6.3
Incomplete families	94.0	91.7	42.4	41.4	5.3	4.8
Multi-families	98.1	95.3	58.1	53.7	6.4	5.9
Non-family:						
Single person	85.4	84.9	36.3	34.1	3.9	3.5
Many person	87.8	89.3	40.9	40.4	1.9	1.0
Place of residence class						
Towns of over 500k	87.3	89.8	59.6	60.3	17.8	17.3
200k-500k	93.7	90.7	55.4	55.4	9.9	9.3
100k-200k	93.6	92.2	50.3	46.6	8.8	7.1
20k-100k	94.1	92.1	51.6	49.3	4.4	4.5
less than 20k	93.5	91.1	48.8	44.2	4.3	4.2
Rural areas	92.7	91.5	45.3	44.7	3.5	2.7
Voivodeship						
Dolnośląskie	93.3	91.6	61.1	53.0	7.5	8.0
Kujawsko-pomorskie	93.8	90.9	45.6	43.3	4.0	2.8
Lubelskie	94.9	92.9	48.7	48.4	8.0	5.2
Lubuskie	95.6	94.2	54.8	56.4	4.2	5.8
Łódzkie	94.7	92.7	46.0	50.2	3.3	2.9
Małopolskie	92.4	92.5	56.6	54.4	6.3	6.3
Mazowieckie	88.3	88.5	53.5	52.6	16.0	13.5
Opolskie	94.1	88.9	43.9	39.7	6.9	2.8
Podkarpackie	95.7	95.1	51.8	56.9	2.7	2.6
Podlaskie	93.5	93.3	45.3	49.5	3.4	2.7
Pomorskie	94.1	91.3	60.2	52.2	10.5	9.9
Śląskie	93.7	91.6	50.3	46.4	5.8	5.7
Świętokrzyskie	91.6	88.9	49.6	47.1	4.3	3.1
Warmińsko-mazurskie	90.2	89.6	26.9	27.0	2.5	1.9
Wielkopolskie	91.9	91.8	52.5	50.2	4.6	6.7
Zachodniopomorskie	87.2	89.8	36.7	42.8	4.6	5.0
Income per person						
Lower quartile	92.2	91.8	33.0	29.7	2.1	1.3
Middle 50%	94.8	94.0	50.3	48.9	5.2	4.6
Upper quartile	89.6	89.1	68.3	68.1	14.5	14.5

- represents too small a number of cases.

On the other hand, the variation to the use of services paid for by the households themselves is considerable. These are used the most often by households of the entrepreneurs (more than 70%). married couples with one child or two children (approx. 60%), households with income per equivalent unit above the upper quartile (more than two-thirds), and households that live in the largest cities (60%). Such services are used the least often by the households of pensioners (29%), retirees (42%), non-family one-person households (34%), households with income below the bottom quartile (30%) and households from the Warmińsko-Mazurskie Voivodeship (27%).

Members of households stayed in hospital for reasons other than pregnancy in nearly 23% of households during the past year. The frequency of hospital attendance does not have a marked variability among the selected household groups and did not change much over the last two years (table 4.7.3).

Table 4.7.3. Percentage of households with a member who had spent time in hospital in the last year

Group	2013	2011
Socio-economic group		
Employees	20.7	22.5
Farmers	21.7	25.9
Entrepreneurs	18.2	23.3
Retirees	27.8	27.6
Pensioners	27.9	31.1
Living on unearned sources of income	16.0	22.0
Type of household		
Single family:		
Couples without children	25.4	28.6
1 child	22.0	24.5
2 children	23.5	24.8
3+ children	26.8	28.7
Incomplete families	20.4	28.6
Multi-families	33.1	24.5
Non-family:		
Single person	17.8	24.8
Many person	21.3	28.7
Place of residence class		
Towns of over 500k	23.8	23.7
200k-500k	20.2	23.9
100k-200k	22.1	24.6
20k-100k	25.4	24.9
less than 20k	23.0	26.5
Rural areas	21.9	24.8
Voivodeship		
Dolnośląskie	24.1	29.1
Kujawsko-pomorskie	22.3	26.7
Lubelskie	24.0	26.7
Lubuskie	21.7	25.2
Łódzkie	27.3	28.1
Małopolskie	21.0	22.8
Mazowieckie	25.0	23.4
Opolskie	21.8	25.5
Podkarpackie	27.4	26.1
Podlaskie	20.9	29.0
Pomorskie	21.1	19.7
Śląskie	20.8	23.7
Świętokrzyskie	27.6	28.5
Warmińsko-mazurskie	18.8	18.0
Wielkopolskie	21.2	26.0
Zachodniopomorskie	19.4	20.3
Total	22.9	24.8

4.7.2. Withdrawal from healthcare

A lack of funds forced the largest group of households to forgo purchasing medicines, dental care and doctor's care (figure 4.7.2). As far as the needy were concerned, the most financially motivated withdrawals concerned trips to sanatoria at nearly 29% of households, purchase of dental prosthetics (over 24%) and dental treatment (over 22%).

Households living on unearned sources and those of pensioners most frequently withdrew from healthcare of financial reasons in the last year at 12% and nearly 5% for hospital treatment, over 51% and 41% for dental prosthetics and 53% and nearly 45% in the case of dental care (table 4.7.4).

Among households with unemployed members, the frequency of such withdrawals was markedly higher than in those without, where the largest difference was noted in the case of dental care at nearly 39% and 19% respectively, and dental prosthetics at over 40% and over 21% respectively. Incomplete family and many-children households most often declared financially motivated withdrawals at nearly 4% and 3% for hospital treatment, nearly 25% for prescription realization or purchase of indicated medicines and 33% and over 31% in the case of dental care.

Households in rural areas were significantly more likely to forgo treatment or medicines than those in towns and cities, with the highest frequency in Warmińsko-Mazurskie.

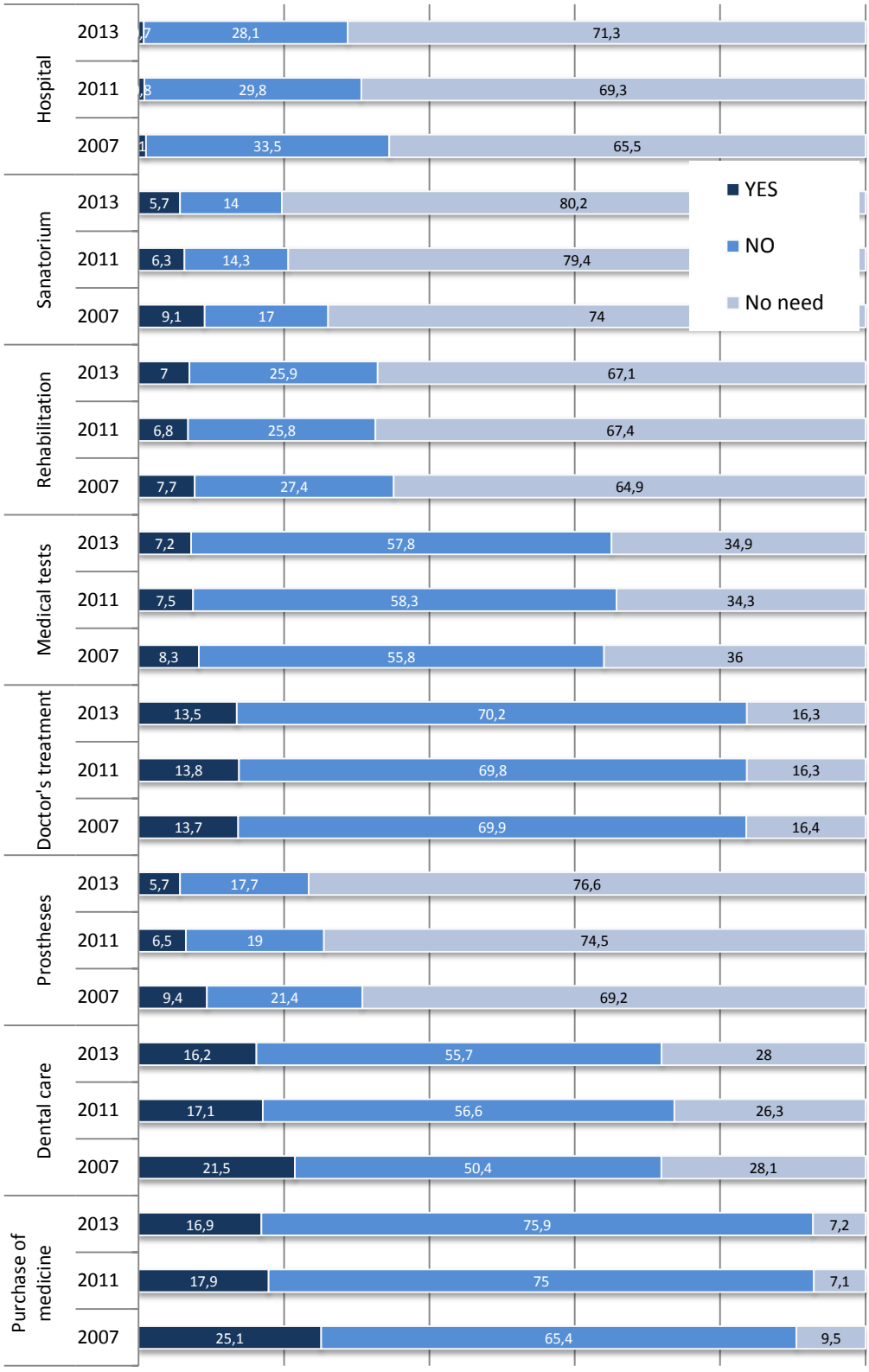


Figure 4.7.2. Percentage of households that did not use selected healthcare services due to financial difficulties in 2007, 2011 and 2013 in whole samples

Table 4.7.4. Percentage of households that did not use needed selected healthcare services due to financial difficulties

Group	Percentage of households that did not use selected healthcare services:							
	purchase of medicine	dental treatment	prostheses	doctor's treatment	diagnostic tests	rehabilitation	sanato-rium	hospital
Socio-economic group								
Employees	13.3	20.6	21.9	13.7	9.1	19.0	22.9	1.5
Farmers	13.7	21.8	23.4	13.2	9.1	20.0	33.3	1.8
Entrepreneurs	5.3	10.7	14.1	5.9	3.0	6.5	11.4	2.2
Retirees	21.0	20.5	21.4	17.2	11.8	20.8	30.1	2.0
Pensioners	39.8	44.8	41.1	31.5	20.7	35.2	45.7	4.5
Living on unearned sources of income	45.1	53.4	51.6	34.3	31.9	34.0	44.6	11.9
Type of household								
Single family:								
Couples without children	14.3	18.6	20.6	13.7	9.1	16.7	25.4	2.2
1 child	12.1	16.9	22.7	11.7	8.0	15.7	22.8	1.3
2 children	11.4	19.3	23.9	10.2	6.9	14.6	22.4	1.4
3+ children	24.7	31.2	29.6	21.8	15.1	28.6	36.7	3.2
Incomplete families	24.5	33.3	32.8	22.4	16.9	29.8	38.3	3.7
Multi-families	16.7	23.2	22.3	17.9	10.6	21.8	28.3	1.4
Non-family:								
Single person	26.0	24.1	23.8	20.7	14.6	26.7	33.2	3.3
Many person	15.2	18.5	30.0	15.6	14.3	36.4	27.6	0.0
Place of residence class								
Towns of over 500k	17.0	20.7	19.1	13.8	10.9	17.2	21.0	1.0
200k-500k	15.3	19.4	20.3	13.9	9.9	22.5	21.9	4.5
100k-200k	16.3	20.1	22.4	14.4	9.2	18.6	29.4	1.6
20k-100k	18.5	21.4	23.1	16.3	11.9	22.2	30.3	2.7
less than 20k	16.8	21.3	22.5	14.8	9.9	21.4	29.9	3.0
Rural areas	20.5	26.4	29.6	18.7	12.2	22.9	35.7	1.9
Voivodeship								
Dolnośląskie	20.6	29.4	32.4	22.0	17.6	31.2	27.4	5.1
Kujawsko-pomorskie	20.0	23.4	20.4	18.4	14.4	23.6	22.7	2.5
Lubelskie	18.2	24.6	30.1	16.7	11.4	18.1	35.6	1.0
Lubuskie	21.1	25.5	28.2	18.6	10.3	21.7	45.7	2.7
Łódzkie	24.8	23.8	24.5	18.5	11.8	17.4	30.4	1.5
Małopolskie	18.4	19.5	15.8	15.3	10.7	23.6	23.5	1.7
Mazowieckie	18.0	22.9	27.6	14.6	10.0	16.8	25.4	1.0
Opolskie	12.5	11.9	6.8	11.6	3.7	16.5	11.3	0.0
Podkarpackie	15.9	25.0	27.4	15.1	10.0	16.6	27.7	2.9
Podlaskie	13.7	18.2	22.0	12.7	12.8	18.8	32.6	1.0
Pomorskie	17.3	21.0	22.8	17.8	8.7	21.5	31.8	3.3
Śląskie	17.3	19.0	19.4	12.6	9.4	20.9	26.2	2.0
Świętokrzyskie	19.2	24.0	28.1	17.9	14.6	21.5	33.9	5.2
Warmińsko-mazurskie	20.4	35.2	40.0	20.1	12.3	24.0	60.0	6.8
Wielkopolskie	15.9	18.4	19.7	16.0	11.4	21.3	35.1	1.8
Zachodniopomorskie	14.5	21.4	26.3	12.1	7.2	23.0	29.9	1.4
Income per person								
Lower quartile	40.1	48.3	46.8	33.5	25.1	34.8	48.3	5.0
Lower middle quartile	20.7	26.2	25.3	19.8	12.3	25.1	36.0	2.2
Upper middle quartile	10.4	14.4	15.9	10.0	7.2	17.4	22.5	1.5
Upper quartile	4.2	7.3	7.9	4.1	3.8	8.3	9.7	1.3
Total	18.2	22.6	24.2	16.1	11.1	21.3	29.1	2.4

Over the last four years (figure 4.7.3), the share of households forced into this kind of withdrawal did not rise significantly for any health service treatments. However, there was a marked fall in the case of medicine purchase, trips to sanatoria and dental prosthetics (over 4 p.p., nearly 4 p.p. and over 3 p.p. respectively). In 2011-2013, the share of households forced into financially motivated withdrawals fell significantly. In the case of trips to sanatoria, prescription realization and purchase of medicine the falls amounted to nearly 3 p.p. and 2 p.p. respectively. Over the same period there was no rise in the share of households forced into financially motivated withdrawals from the remaining health service treatments. However, there was a strong rise in withdrawals for dental prosthetics reported among households living on unearned sources, employees and farmers at almost 8 p.p. and nearly 6 p.p. respectively, those of couples with one child and couples with many children at nearly 9 p.p. and around 7 p.p. respectively,

and those dwelling in the largest and smallest towns (over 8 p.p. and nearly 6 p.p.). It is also worth noticing the marked growth in the share of households living on unearned sources forced into financially motivated withdrawals from hospital treatment.

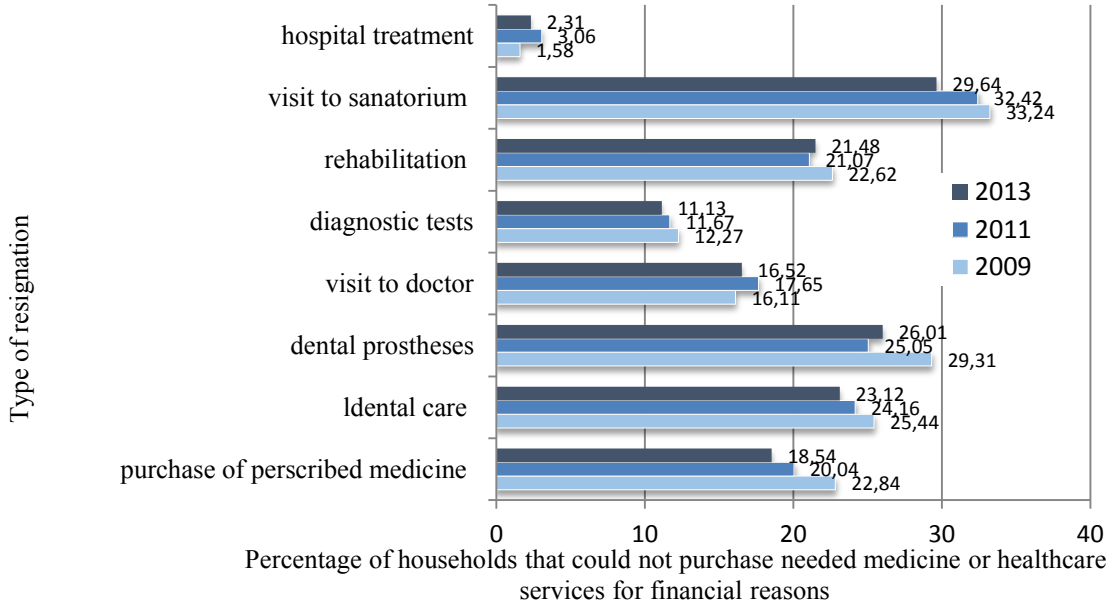


Figure 4.7.3. Households financial difficulties in purchase of medicine and healthcare services in the 2009-2013 panel sample

4.7.3. Household expenditure on healthcare services

We have already mentioned that already nearly half of households pay for some healthcare services out of their own resources. Let us see now what this money was spent during just one quarter prior to the study, and in what amounts (table 4.7.5, figure 4.7.4).

Table 4.7.5. Percentage of households that paid for healthcare in one quarter and average expenditure in whole samples between 2009-2013 in whole samples

	Medicines and pharmaceuticals			Purchase of outpatient healthcare services			Informal payments. "expressions of gratitude" (bribes)			Gifts as expressions of true gratitude			Payments in public hospitals		
	2013	2011	2009	2013	2011	2009	2013	2011	2009	2013	2011	2009	2013	2011	2009
Percentage of households that incur such expenditure	91	87	89	39	39	35	1.4	1.7	1.3	1.9	1.6	1.9	1.8	2.1	1.6
Average amount of expenditure in PLN	412	366	378	596	555	526	273	309	310	128	142	136	261	290	198

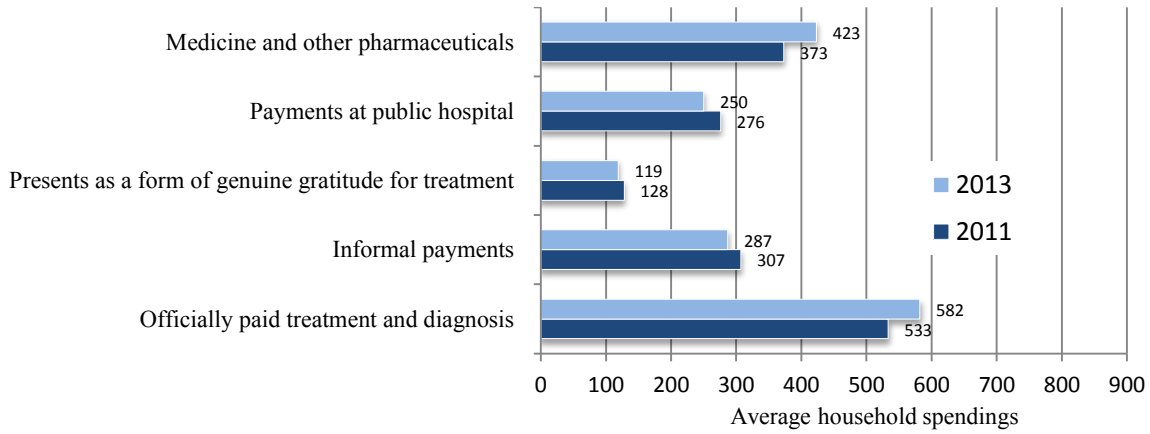


Figure 4.7.4. Household spending on healthcare in the last three months in the 2011-2013 panel sample

Table 4.7.6. Households' spending on treatment, diagnosis, medicine and other pharmaceutical products by socio-economic group. household type, place of residence class, Voivodeship and PLN income in whole samples for 2011 and 2013 in household groups bearing selected cost categories (data for three months)

Group	PLN spending on:			
	treatment and diagnostics		medicine and other pharmaceuticals for treatment of a condition	
	2013	2011	2013	2011
Socio-economic group				
Employees	620	580	374	330
Farmers	629	448	430	388
Entrepreneurs	622	827	427	376
Retirees	537	466	477	433
Pensioners	428	391	429	369
Living on unearned sources of income	498	461	297	261
Type of household				
Single family: Couples without children	628	566	474	440
1 child	624	566	408	370
2 children	657	614	402	344
3+ children	657	597	379	360
Incomplete families	628	536	474	317
Multi-families	624	602	408	461
Non-family: Single person	657	432	402	318
Many person	657	399	379	278
Place of residence class				
Towns of over 500k	699	775	445	408
200k-500k	496	525	391	343
100k-200k	601	517	386	335
20k-100k	595	475	409	361
less than 20k	633	593	399	361
Rural areas	560	492	416	367
Voivodeship				
Dolnośląskie	662	603	428	395
Kujawsko-pomorskie	600	583	383	350
Lubelskie	466	468	373	354
Lubuskie	554	604	433	343
Łódzkie	438	405	392	365
Małopolskie	519	555	418	395
Mazowieckie	801	782	467	385
Opolskie	602	605	514	371
Podkarpackie	581	472	446	370
Podlaskie	540	451	366	351
Pomorskie	738	524	449	333
Śląskie	496	508	376	352
Świętokrzyskie	523	484	346	340
Warmińsko-mazurskie	312	266	269	280
Wielkopolskie	625	580	443	419
Zachodniopomorskie	587	524	389	314
Household equivalent income				
1st quartile	405	406	350	324
2nd quartile	495	463	415	410
3rd quartile	606	502	428	377
4th quartile	715	718	449	387

On average, households spent the most on outpatient treatment and examinations (PLN 596), followed by on medicines and other pharmaceutical articles (PLN 412). So-called "expressions of gratitude" i.e. bribes used in attempts to obtain better or quicker healthcare (e.g. greater interest in the patient's problems, more care for their health, choice of surgeon or the physician taking care of the patient in hospital, accelerating service etc.) amounted to PLN 273 on average. The average payment in a public hospital amounted to PLN 261 and the amount of a true expression of gratitude for care already received amounted to PLN 128 on average.

In the last two years, only households' expenditure on medicine and pharmaceutical articles (by 7.6%) and out-patient services (by 4%) rose significantly in real terms. At the same time, public hospital payments fell by as much as 3.6% in real terms (figure 4.7.5).

In the three months preceding the last study households of farmers, entrepreneurs and employees spent the most on treatment and diagnosis at 629 zł, 622 zł and 620 zł respectively. Couples with 2 or more children spent on average 657 zł, those in the largest and smallest towns on average 699zł and 633zł and in Mazowieckie on average 1967zł (table 4.7.6). In the households without unemployed members, expenditure was significantly higher than in those with unemployed members. The most prosperous households spent the most on treatment and outpatient tests and in terms of region Mazowieckie (highest spend at 801 zł) and Warmińsko-Mazurskie (lowest spend at 312 zł) stand out.

In the last two years, expenditure on treatment and tests rose significantly among households of farmers, retirees and incomplete families and fell among that of entrepreneurs.

Households of retirees, that is those with the eldest members, spent relatively the most on medicines and other pharmaceuticals among the households with expenditure of this kind at 474 zł on average. As regards household types, incomplete families spent the most at 474 zł on average. The highest household expenditure on medicines and other pharmaceuticals was noted in the largest towns, and the lowest in middle-sized towns at 445 zł and 386 zł respectively.

4.7.4. Readiness to purchase additional health insurance

In the last two editions of the *Diagnosis* we asked household representatives about their readiness to purchase additional health insurance if that guaranteed improved access and quality of medical treatment. We offered the choice of two variants, one below and one above 100 zł. In both editions, interest in additional health insurance was not large and falling (figure 4.7.6). This year. $^{3}/_{4}$ of households refused the opportunity to purchase insurance of this kind and no more than 3% was prepared to pay more than 100 zł per month for additional health insurance. This fall in interest in additional insurance is all the more odd as in this period households' real spending on outpatient treatment and healthcare rose significantly. While wealth does have an influence on declared interest in additional insurance, even in the of 1/5th most affluent households, half say „no", and only 11% are ready to spend more than 100 zł (figure 4.7.7). Education also differentiates interest in additional insurance, though in this case over half of households with higher education refuse this option (4.7.8). Other variables such as socio-economic group, household type and place of residence class have a minor effect on readiness to purchase additional health insurance (figures 4.7.9-4.7.11).

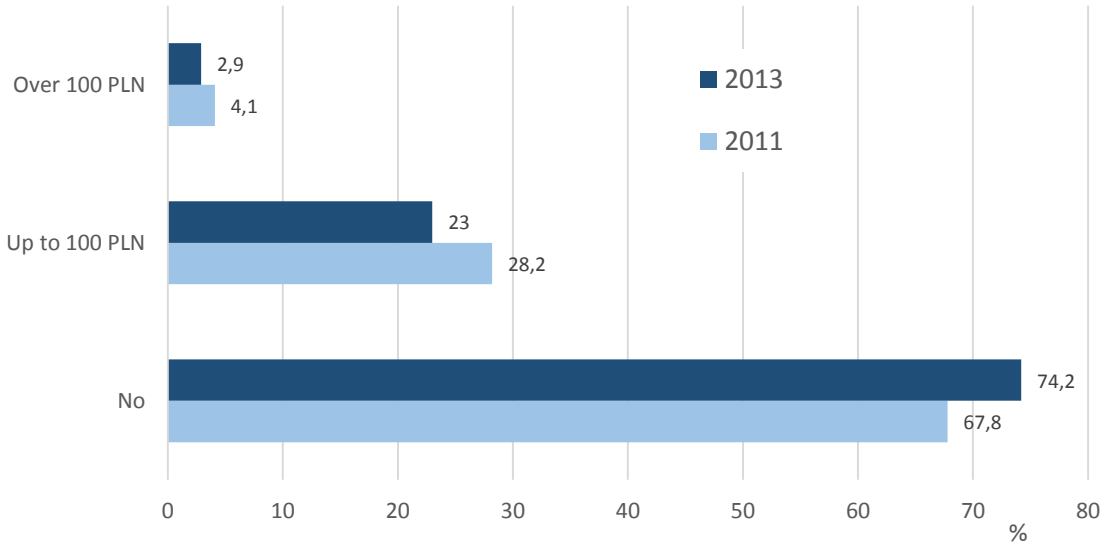


Figure 4.7.6. Percentage of households interested in purchase of additional health insurance for up to 100 PLN and over 100 PLN per month in the 2011-2013 panel sample

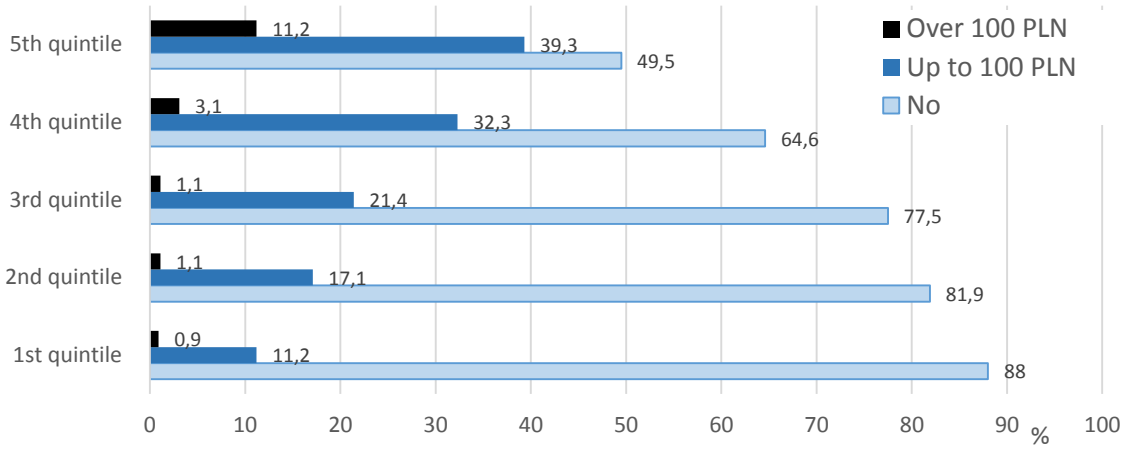


Figure 4.7.7. Percentage of households interested in purchase of additional health insurance for up to 100 PLN and over 100 PLN per month in 2013 by level of equivalent income

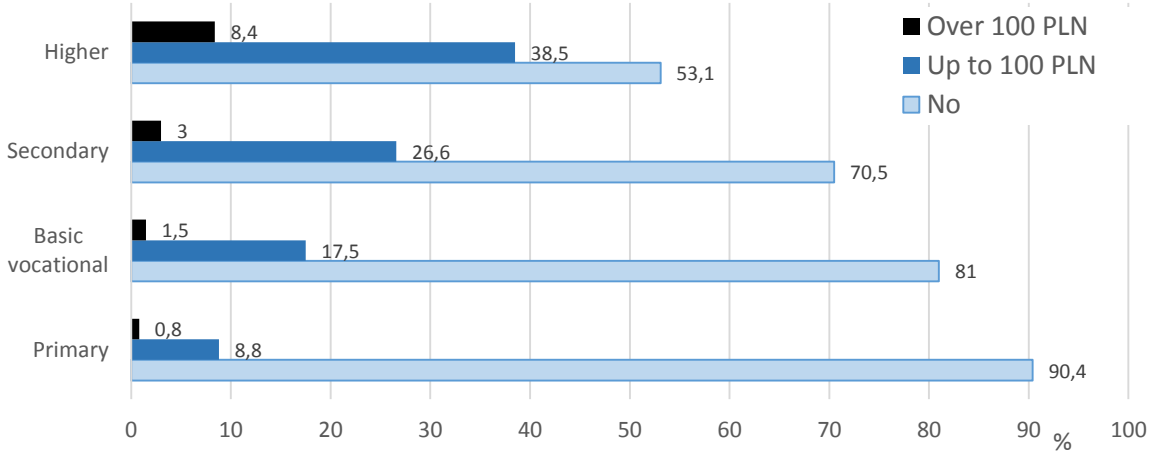


Figure 4.7.8. Percentage of households interested in purchase of additional health insurance for up to 100 PLN and over 100 PLN per month in 2013 by level of household head's education

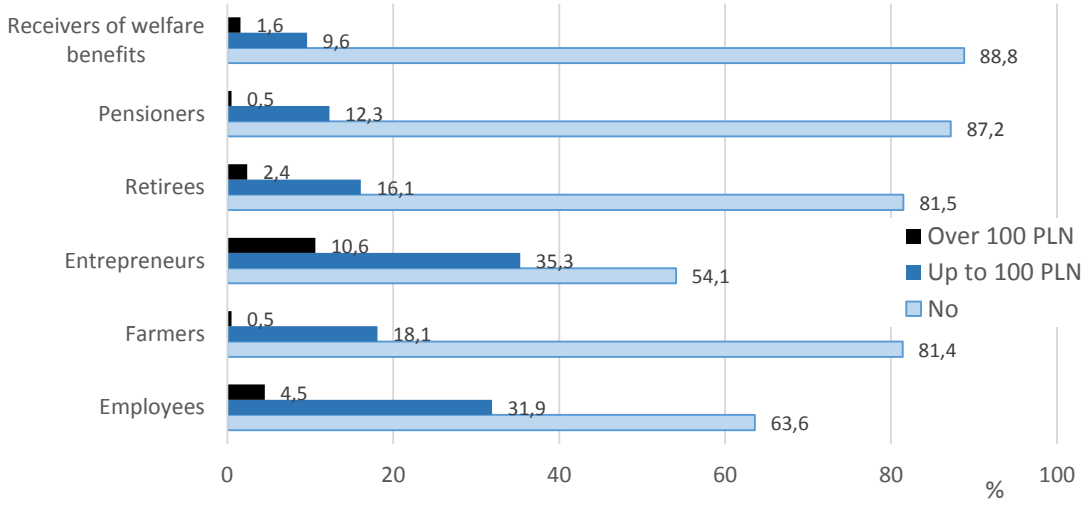


Figure 4.7.9. Percentage of households interested in purchase of additional health insurance for up to 100 PLN and over 100 PLN per month in 2013 by socio-economic group

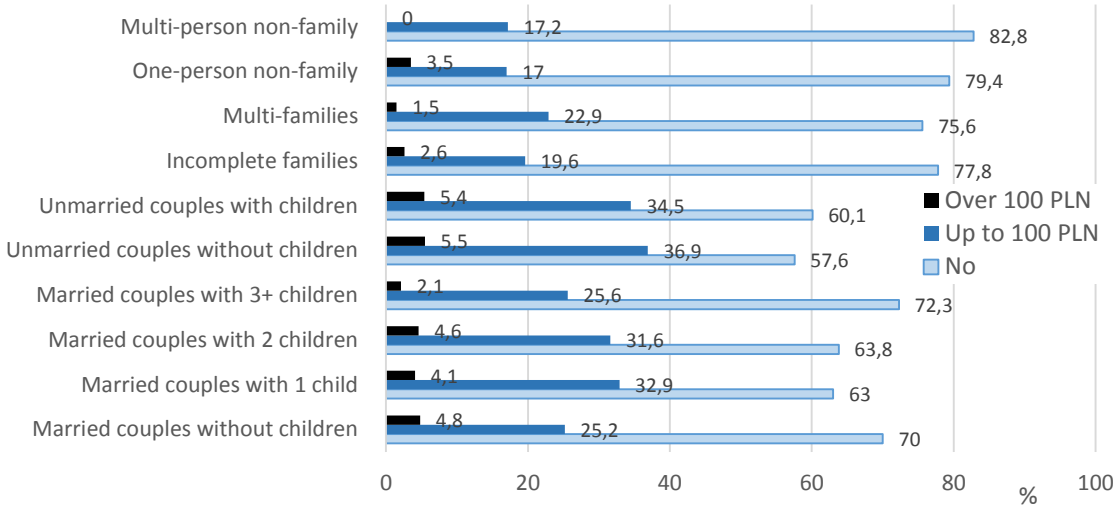


Figure 4.7.10. Percentage of households interested in purchase of additional health insurance for up to 100 PLN and over 100 PLN per month in 2013 by type of household

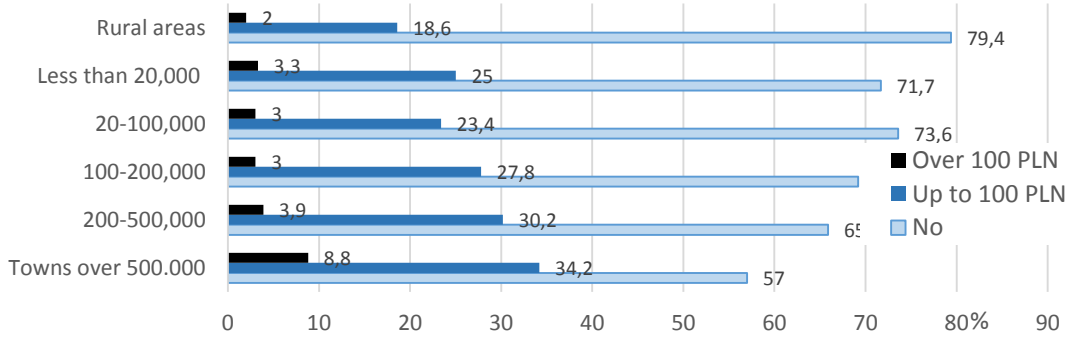


Figure 4.7.11. Percentage of households interested in purchase of additional health insurance for up to 100 PLN and over 100 PLN per month in 2013 by place of residence class

4.7.5. Assessment of change in degree of healthcare need satisfaction

Despite continuing public criticism of the healthcare system, the percentage of negative retrospective evaluations of change in degree of healthcare need-satisfaction fell systematically from 41% in 2000 to 25% up to 2009, though in the last four years there has been a rise, admittedly small, in negative ratings (table 4.7.7). However, the unusually low percentage of positive opinions is not rising.

In comparison with 2011, in the group of households with the unemployed there were significantly more negative opinions about changes in healthcare need- satisfaction than in those without at over 36% and over 26% respectively reporting negative opinions. In terms of the household types adopted here, negative opinions were formulated most often in the households of single-parent families and in non-family multi-person households in over 35% and nearly 30% respectively. The households that negatively evaluated changes in degree of healthcare need-satisfaction lived mostly in largest towns and small towns of 20,000-100,000 at over 29% from these groups and in Łódzkie, Warmińsko-Mazurskie and Dolnośląskie at nearly 35% and more than 33% respectively.

Table 4.7.7. Assessment of change in degree of healthcare need satisfaction in recent years (since the last wave) in subsequent waves (%)

Healthcare need satisfaction	2000	2003	2005	2007	2009	2011	2013
Worsened	41	38	38	27	25	26	28
Improved	3	4	3	4	3	2	2
Did not change	57	58	59	69	72	72	70

4.8. Analysis of households' living conditions by Voivodeship

Tomasz Panek

4.8.1. Comparison of households' living conditions

Households' living condition levels by Voivodeship were compared on the basis of a taxonomic measure of living conditions[43].

The taxonomic measure of living conditions is the composite indicator being the product of the input of all the variables (indicators) describing the financial need-fulfilment capacity for all living condition types selected in the research and arranged according to Voivodeship.

Household living conditions in each Voivodeship are estimated by comparison of selected variable values for each Voivodeship with values of these variables for a hypothetical model Voivodeship.

The variables used in the construction of taxonomic measure of living condition are different in nature, namely:

stimulant – variables the rising value of which indicate improvement in household living conditions in a Voivodeship.

destimulant – variables the rising value of which indicate deterioration in household living conditions in a Voivodeship.

The starting point for building up a taxonomic measure of living conditions is selecting variable values for the model Voivodeship. These are the optimal values of each variable describing household living conditions in the Voivodeships with the stimulant variables as maximum values and the destimulants the observed minimals from all compared Voivodeships. When the comparative analysis refers to a number of periods at the same time, optimal values are set as the smallest or largest among all compared Voivodeships in all analyzed periods. The model Voivodeship therefore is an ideal model against which each Voivodeships is compared. In formal terms, compared Voivodeship and the model are represented by points in the space of variables that describe them. The dimension of this space (the number of axis defining the dimension) is equal to the number of variables describing living conditions in the Voivodeships.

The next step of the procedure is to standardise the values of the selected variables. This allows both elimination of measure units and the avoidance of a share prevalence of high-value variables in the living condition number values.

Values of synthetic measure of living conditions (like group measures of living conditions in each of their dimension) are obtained by calculating the distance between individual points representing Voivodeships in relation the point representing the model Voivodeship. The better the households' living conditions in a given Voivodeship the smaller the distance between its point and that of the model. Thanks to appropriate normalisation both group measures of living conditions in each of its dimension. and the synthetic measure of living conditions always appear as values from interval [0; 1]. The better the living conditions. the closer the appropriate measure of living conditions is to 0 and the worse the conditions the higher the value.

The comparative analysis of living conditions by Voivodeships was conducted as already mentioned from the point of view of households' financial means of fulfilling needs in selected areas. This means that assessment of the level of certain needs' fulfilment especially as regards culture and recreation may include a lack of feeling certain needs. which then causes a lack of financial problems in this respect.

Śląskie, Mazowieckie, Opolskie and Wielkopolskie were the Voivodeships reporting the highest standards of living (column 10 in table 4.8.1) in 2013 with the lowest recorded for Lubelskie, Łódzkie, Świętokrzyskie and Warmińsko-Mazurskie.

The hierarchy of Voivodeships was varied in terms of needs fulfillment levels in each area of living conditions. In the case of income, clearly the best situation was noted in Mazowieckie, Pomorskie and Zachodnio-Pomorskie and the worst in Lubelskie. Świętokrzyskie and Podkarpackie.

As far as nutrition was concerned, the highest needs fulfilment was recorded in Wielkopolskie, Opolskie and Podlaskie and the lowest in Warmińsko-Mazurskie, Dolnośląskie and Lubelskie.

Needs in terms of material affluence were most fulfilled in Pomorskie and Dolnośląskie and least in Warmińsko-Mazurskie, Łódzkie and Podkarpackie.

[43] The alogarythm of taxonomic estimated measure of life conditions is presented in Annex 4.1. The taxanomic measure of life conditions was based a development measure of taxanomic construction (Hellwig, 1968; Panek, 2013).

The highest needs fulfilment for housing conditions occurred in Zachodnio-Pomorskie, Podkarpackie and Śląskie with the lowest in Lubelskie and Świętokrzyskie.

Children's education was at the highest level in Opolskie and Świętokrzyskie and at the lowest in Lubelskie and Podlaskie.

Healthcare needs were best satisfied in Opolskie and Śląskie with the poorest service in Świętokrzyskie, Dolnośląskie and Warmińsko-Mazurskie.

Needs to participate in culture and recreation/activity were met at the highest level in Opolskie, Śląskie and Podlaskie, and the lowest occurred in Dolnośląskie, Łódzkie and Świętokrzyskie, while recreation was best in Opolskie and Kujawsko-Pomorskie and worst in Podkarpackie and Świętokrzyskie.

Table 4.8.1. Household living conditions by Voivodeship in 2013 from best to worst

Voivodeship	Living condition dimensions								
	income	nutrition	material affluence	housing conditions	children's education	healthcare	participation in culture	recreation	total
Śląskie	0.380	0.301	0.435	0.324	0.339	0.266	0.225	0.271	0.278
Mazowieckie	0.000	0.324	0.642	0.340	0.482	0.427	0.320	0.253	0.334
Opolskie	0.537	0.109	0.525	0.617	0.243	0.232	0.192	0.128	0.393
Wielkopolskie	0.445	0.102	0.674	0.470	0.654	0.527	0.292	0.195	0.449
Zachodniopomorskie	0.322	0.326	0.533	0.262	0.358	0.456	0.504	0.613	0.459
Małopolskie	0.347	0.276	0.602	0.369	0.643	0.356	0.481	0.566	0.501
Kujawsko-pomorskie	0.546	0.368	0.695	0.678	0.355	0.498	0.425	0.193	0.569
Pomorskie	0.325	0.344	0.301	0.335	0.698	0.570	0.709	0.606	0.571
Dolnośląskie	0.401	0.542	0.316	0.401	0.626	0.723	0.741	0.225	0.590
Lubuskie	0.489	0.342	0.421	0.686	0.545	0.705	0.423	0.320	0.598
Podlaskie	0.558	0.259	0.523	0.608	0.718	0.455	0.234	0.597	0.606
Podkarpackie	0.680	0.425	0.745	0.304	0.548	0.468	0.353	0.629	0.657
Warmińsko-mazurskie	0.567	0.925	0.767	0.664	0.693	0.722	0.460	0.292	0.723
Świętokrzyskie	0.709	0.429	0.631	0.682	0.317	0.731	0.728	0.631	0.739
Łódzkie	0.548	0.490	0.745	0.684	0.451	0.628	0.738	0.627	0.757
Lubelskie	0.726	0.522	0.631	0.699	0.732	0.686	0.394	0.610	0.772

4.8.2. Grouping of Voivodeships by similarity of living condition structure

The underlying aim of grouping Voivodeships was to define a group of most similar regions in terms of living condition structure as described by variables representing assessment of need fulfilment levels gained from the taxonomic measure of living conditions (table 4.8.1). The Voivodeships were grouped with the aid of the *k*-means method[44] (Panek, 2009), which maximalises inter-group variation and minimalises variation inside the groups.

The starting point of the *k*-means method is a decision on the number by which to divide the population of Voivodeships:

Group 1: Kujawsko-Pomorskie, Mazowieckie, Opolskie, Śląskie and Wielkopolskie;

Group 2: Małopolskie, Podkarpackie, Podlaskie and Zachodnio-Pomorskie;

Group 3: Dolnośląskie, Lubuskie and Pomorskie;

Group 4: Lubelskie, Łódzkie, Świętokrzyskie and Warmińsko-Mazurskie.

Group 1 is characterised by relatively the highest average need fulfilment level in all selected living condition areas with the exception of material affluence and housing conditions.

In Group 2, we observe the lowest average need fulfilment level in terms of rest and recreation and the highest for housing conditions. However, in the remaining living condition areas the average need fulfilment is also relatively low.

Group 3 were, in 2013, relatively the weakest at fulfilling needs in the areas of children's education and participation in culture with relatively the highest average need fulfilment level in the remaining analysed living condition areas in relation to other groups. In this group, satisfaction was relatively the highest in the case of management of material needs.

Finally, in Group 4, need fulfilment was relatively the weakest in all the selected living condition areas apart from children's education and participation in culture and rest and recreation.

[44] Please see Annex 4.2 for a discription of the *k*-means method.

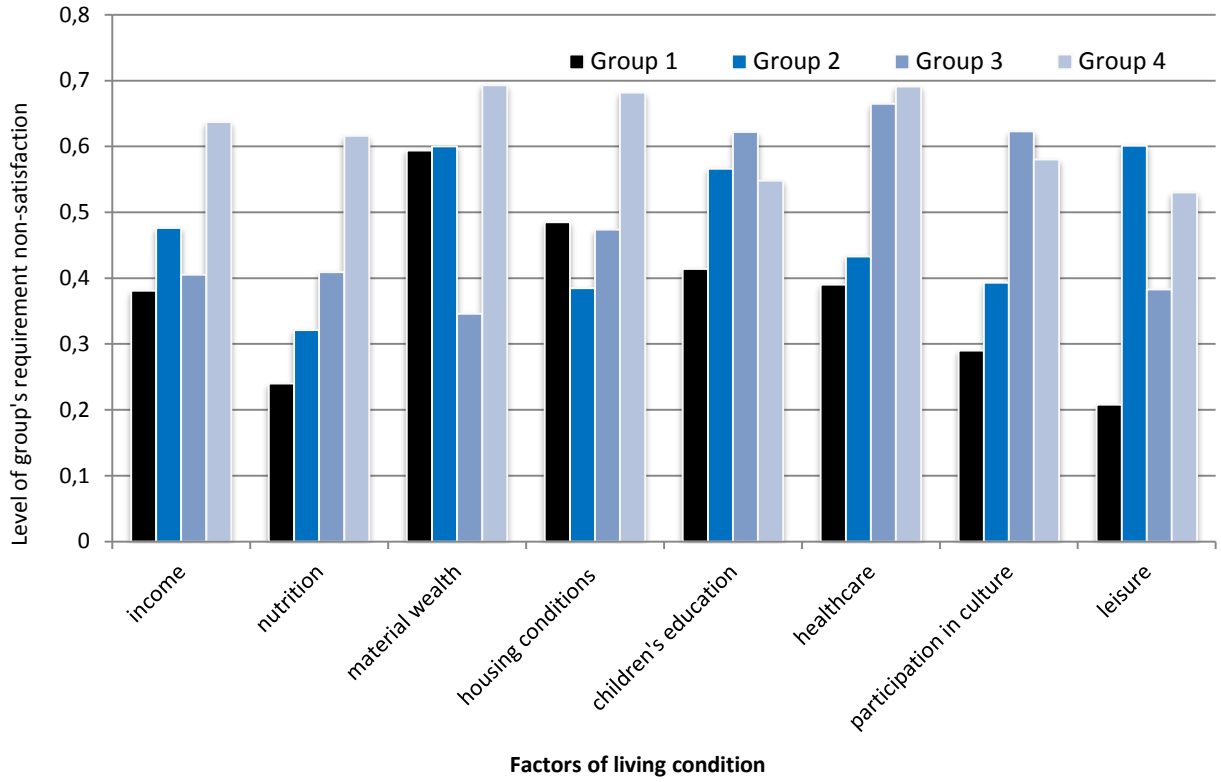


Figure 4.8.1. Households' assessment of living conditions for Voivodeship groups in 2013

4.9. The labour market

Paweł Strzelecki, Katarzyna Saczuk, Izabela Grabowska, Irena E. Kotowska

At the end of 2012 and at the beginning of 2013, faltering economic growth also reduced the demand for labour, resulting in a fall in employment in the economy as a whole. The situation on the labour market was somewhat worse in 2013 than in 2011. though demand for labour did not collapse as it did in 2009.

Between 2011 and 2013, the rise in the number of economically active persons continued though, unlike in previous years this was almost exclusively related to the growing labour force participation rate of persons about to retire (45-59 year olds). An important characteristic of the Polish labour market is the large share of limited-time and civil-law work agreements. A wider assessment of this phenomenon demands an assessment of its real frequency in the population and an analysis of to what extent it leads to detrimental labour market segmentation and the extent of job finding probability even in times of economic slow-down.

First, the general trends in the labour market are presented in the light of the results of current edition of the *Social Diagnosis 2013* as well as previous editions. Second, we analyse in more detail those who work on the basis of various types of contract and at the same time look for another job, and then we discuss the sources of increased labour force participation of those aged 45-59. Furthermore, similarly to the previous report, we discuss separately the opinions of respondents concerning the solutions aimed to facilitate reconciling parenthood with economic activity.

As in previous editions, *Social Diagnosis* 2013 included questions on work emigration. Though the time period changed from 2011 to 2013 and previously questions concerned a four-year period, the data gained allow a precise analysis Poles' emigration activity, including an assessment of work-emigration intentions.

4.9.1. General trends

Table 4.9.1. presents a comparison of the results of the 2011 and 2013 surveys. Following a period of slight improvement in 2011, the following two years saw shrinking demand for work, reflecting the slowing economic growth. The employment indicator rose in 2011 only to fall in 2013 both according to *Social Diagnosis* data and the referential indicator based on Labour Force Survey data. On the other hand, we observe a steady rise in the labour force participation rate, though there is a rising share of those employed or looking for employment among those of working age. As a result, despite the rise in demand for labour in 2011, the rate of unemployment has continued to rise over the last four years.

Table 4.9.1. Basic labour market indicators (%) in Social Diagnosis surveys between 2000 and 2013

Labour market indicators	2000	2003	2005	2007	2009	2011	2013
Social Diagnosis labour market indicators*							
Unemployment rate	17.6	18.6	13.4	10.6	8.8	9.7	11.2
Labour market participation	61.3	56.8	56.8	56.3	56.3	58.3	58.4
Employment rate	50.5	46.2	49.3	50.4	51.3	52.6	51.9
Labour market indicators according to LFS (2nd quarter of each year)							
Unemployment rate	16.3	19.4	18.1	9.6	7.9	9.5	10.4
Labour market participation	56.4	54.6	54.5	53.5	54.7	55.6	55.9
Employment rate	46.9	43.7	44.3	48.0	50.4	50.7	50.0

*Labour market indicators from the *Social Diagnosis* are calculated in a way comparable to the LFS; the unemployment rate is calculated for a group of people aged 15 and above. based on the definition of the International Labour Organisation, LFS data have been corrected by NSP results from 2011, sources: *Social Diagnosis*, GUS and own calculations

Though there has been a steady increase in unemployment since 2009, data concerning share in the population of household members classified according to members' labour market status does not indicate that in 2011 the share of household members in the most difficult circumstances, that is the unemployed in households without working members (table 4.9.2) increased. However, the share of respondents from this kind of household did rise in 2013, which may indicate that increasing unemployment has led to problems with subsistence among the weakest households in the labour market. There has been a marked fall of 2 p.p. in the share of households who do not feel unemployment

on a daily basis (all those wanting to work do so). A similar change in 2011 was much smaller and helped to explain why the rise in unemployment is relatively less strongly felt in terms of household situation. The current change indicates that a rise in unemployment of a similar scale may be more painful. Compared to 2011, there has also been a minor rise in the share of households without a single member active on the labour market, as well as households with both working and unemployed members.

*Table 4.9.2. The share of individuals from households classified by members' professional between 2003 and 2013**

Household group	2003	2005	2007	2009	2011	2013
Without unemployed or employed members	15.6	19.9	17.3	19.3	17.8	18.2
With unemployed. without employed members	6.9	5.4	3.3	3.2	2.9	3.6
Without unemployed. with employed members	57.7	60.4	67.7	68.1	67.3	65.3
With unemployed and with employed members	19.7	14.2	11.7	9.4	12.0	12.9

*Percentage of registered unemployed

Falling demand for labour is correlated with a steady reduction in the share of employed describing themselves as managers. On the other hand, the share of office workers is also falling, confirming the hypothesis of the shrinking role of office service professions resulting from technological progress (table 4.9.3). The worsening labour market situation did not however significantly change the share of specialists among the employed as a whole. It should be noticed that professions requiring relatively lower qualifications maintained a relatively stable share of employment.

Table 4.9.3. Breakdown of employees by occupational group between 2005 and 2013 (%)

Occupational group	2005	2007	2009	2011	2013
Managers, senior civil servants	5.1	5.5	5.7	5.1	4.9
Specialists	14.3	15	16.5	17.9	17.8
Technicians and associate professionals	12.7	11.1	11.7	10.5	9.9
Clerical support workers	8.2	7.6	7.5	7.3	6.7
Service and sales workers	12.8	12.5	11.5	13.3	12.6
Skilled agricultural, forestry and fishery workers	14.4	13.3	12.8	11.5	12.8
Craft and related trades workers	16	17.5	18	16.2	16.8
Plant and machine operators and assemblers	8.6	8.3	8.8	10.3	10.0
Elementary workers	7.9	9.1	7.6	8.0	8.4

Changes in the structure of demand for labour find their reflection in that of the formerly employed who have lost their jobs.

In comparison with 2011, the share of former managers currently seeking work rose once more (table 4.9.4). Among the unemployed, the greatest rise in share concerned former industrial workers, craftsmen, elementary workers and service workers. However, the share of unemployed previously in occupations that require high qualifications, such as specialists or technicians decreased. Interestingly enough, there was a smaller share of unemployed former office workers.

Comparing registered unemployment with unemployment according to LFS definitions leads to the conclusion that since 2007, the percentage of those registered that really seek work and are ready to start amounted to just over 60% (table 4.9.5). This indicator increases insignificantly when unemployment is rising and newly unemployed job-seekers register. Around 25% of those who are registered in employment offices do not seek work. This share was slightly greater than that in 2011, but this number is quite stable, indicating that the size of this category employment office client is more related to institutional solutions than labour demand. Data from 2009 to 2013 indicate that labour market demand has a positive influence on the percentage of people signing on, but also in work. This may indicate that in a slow period, it is more difficult to find not only legal but also illegal employment.

Table 4.9.4. Breakdown of unemployed by previous occupation between 2005 and 2011 (in % of unemployed previously in work)

Previous occupation	2005	2007	2009	2011	2013
Managers, senior civil servants	1.8	1.7	0.5	1.3	1.6
Specialists	3.5	3.0	3.0	6.1	5.0
Technicians and associate professionals	9.1	6.3	7.2	6.3	4.6
Clerical support workers	8.3	11.1	8.2	10.2	6.6
Service and sales workers	15.7	23.6	20.1	21.9	21.5
Skilled agricultural, forestry and fishery workers	2.9	3.9	1.4	1.3	1.1
Craft and related trades workers	30.5	21.8	29.4	23.8	27.2
Plant and machine operators and assemblers	9.6	8.9	8.5	6.8	6.9
Elementary workers	18.6	19.6	21.6	22.2	25.5

Table 4.9.5. Registered unemployed between 2003 and 2013 (total unemployed persons registered in a given year = 100)

Groups according to definition of unemployment	2003	2005	2007	2009	2011	2013
Registered unemployed by LFS definition *	69.9	56.6	60.6	62.0	61.9	63.1
Registered. not seeking work	21.3	31.9	38.6	30.1	23.7	25.6
Registered in paid work	8.8	11.5	0.8	7.9	14.4	11.3
Unregistered unemployed by LFS definition*	17.0	24.6	27.6	29.1	21.7	20.2

* The LSF definition of the unemployed person does not make reference to registration and covers those work, those seeking work and those availeble to start in the next week of study. Source: *Social Diagnosis* calculations

Social Diagnosis 2013 data also indicate that a large part of all job-seekers (those making up the supply side of the labour market) are not unemployed, though the size of this group has been somewhat reduced by the slow-down. Unemployed persons who are actively seeking work constitute approx. 50% of all jobseekers (figure 4.9.1), while in 2011 this was 44%. Another 15% are those who do not register at labour offices but seek employment and are available to take it up. This share has not changed much as in 2011 16% were unregistered unemployed (figure 4.9.2). Around 7% were those who, for various reasons, could not take up work immediately and so are not treated as unemployed but as inactive.

In 2013, the share of persons already working and seeking employment among all the employed decreased from 33% to 29%. These people at the same time made up over 5% of all employed.

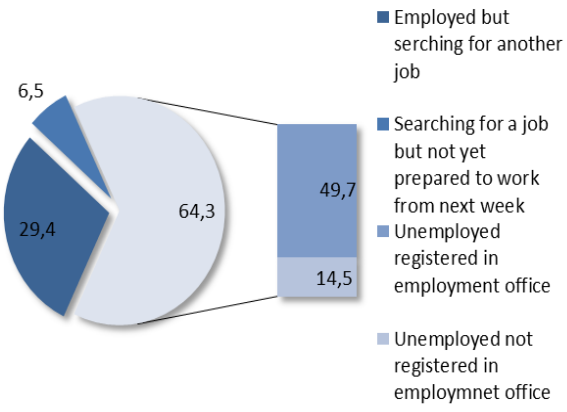


Figure 4.9.1. Structure of jobseekers in 2013

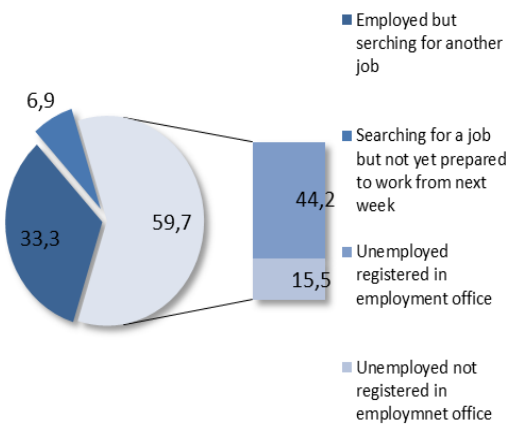


Figure 4.9.2. Structure of jobseekers in 2011.

Newest data indicates that the lower intensity of job-seeking by the already employed (figure 4.9.3) concerns mainly those with civil-law and short-term work agreements or those who do not have a formal work agreement and work illegally. This may be due to that in times of slow-down it is relatively hard for people with the least stable contracts to find work on better conditions. At the same time the intensity of seeking additional work increased among helping family members and entrepreneurs, which may be linked to the desire to diversify income sources in hard times on the labour market . A comparison of 2011 with 2013 also indicates that, despite a lower demand for work. more young people up to 24 years of age in employment are seeking work, while to a marked degree people with basic professional education and lower do so less often.

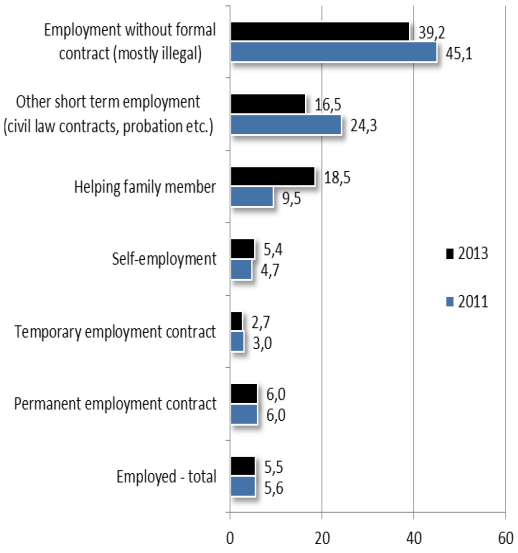


Figure 4.9.3. Percentage of searching for another job among employed persons by type of current work agreement

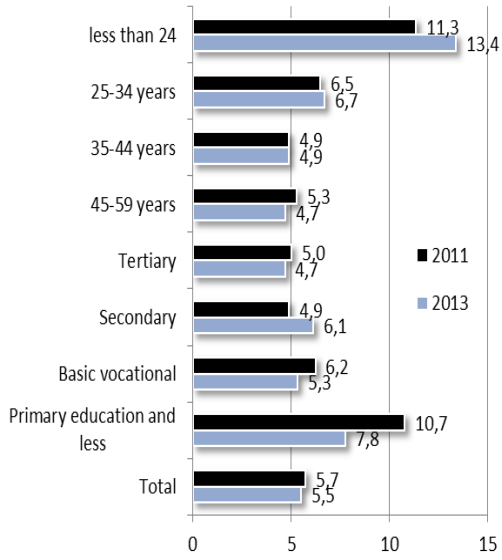


Figure 4.9.4 Percentage of employed persons searching for another job by sex, age and education

4.9.2 The structure of work agreements

Poland is an exception in the EU in terms of its large share of temporary work contracts. Apart from that. discussions on the functioning of the Polish labour market often concern other types of work agreement such as civil-law agreements and self-employment. Work in the shadow economy seems to be important matter as well but there are not many data sources that measure the share of employment without any form of formal agreement.

Social Diagnosis allows for a detailed classification of people in work according to type of work agreement. This data also allows a valuation of the popularity of short-term work agreements by age and what the chances are of finding stable forms of employment in different forms of work.

Social Diagnosis 2013 results indicate that permanent work agreements are the dominant form of employment in the Polish economy (figure 4.9.5). though the share of persons working on this basis lessened compared to 2011 from around 56% to 54%. Employers' main way of making employment more elastic is to use limited-period work agreements at around 19% in 2013, with self-employment also popular with 7%. The remaining forms are not very significant as far as work other than individual farming is concerned. Specifically, only 2% work with nothing more than a civil law agreement and a further 3% with other short-term forms. It is worth noting that 2-3% of *Social Diagnosis* respondents work without any kind of formal agreement.

Results of analysis based on *Social Diagnosis 2013* data indicate that both the intensity of job-seeking and the scope of use of less stable employment forms correlate to age (figure 4.9.6). The younger the employee, the more frequent the temporary employment with at the same time the higher the share

of working people actively seeking other work. Among those under 25 years old, permanent work agreements are the absolute minority at around 20%, while limited-period forms make up around 45% of the employed total. It is however worth noting that with age there is on average a stabilization of employment conditions with permanent forms at 55% among 25-34 year olds for men and 52% for women. There is a further stabilisation for both men and women with age as temporary forms become ever rarer, and also there is also a rise in self-employment for men working without employing anyone else outside individual farming. This may indicate that employment stability rises together with work experience on the labour market though verification of this thesis requires further analysis of the fate of employees with different kinds of agreements and the unemployed.

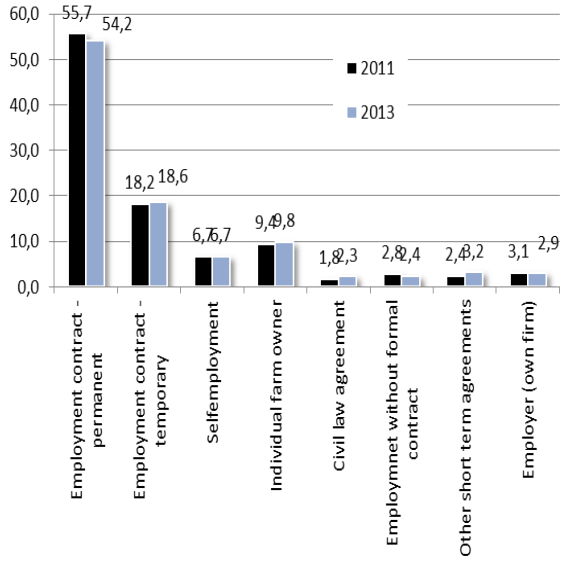


Figure 4.9.5. Percentage employed by type of work agreement

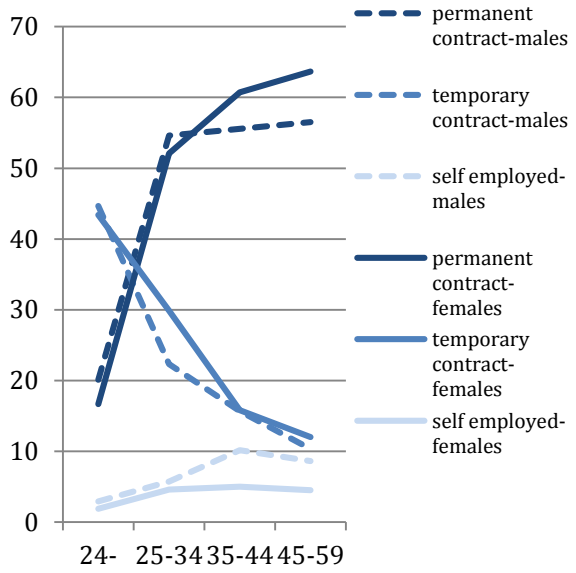


Figure 4.9.6. Share of fixed-term. non-fixed-term and self-employment work agreement according to age and gender in 2013

Table 4.9.6. Initial labour-market status and the chances for permanent employment contracts after two years in 2009-2011 and 2011-2013

Initial labour-market status	Chances of non-fixed-term employment after two years (*SD* 2011)*	Chances of non-fixed-term employment after two years (*SD* 2013)*
Non-fixed-term (permanent) employment	79.9	78.7
Fixed-term (temporary) employment	42.7	36.1
Self-employment (non-agricultural)	6.9	4.8
Helping family member	2.2	3.4
Short-term. civil law or probation agreements	23.1	27.6
No formal agreement	10.7	4.3
Unemployed	11.6	10.8
Inactive	2.6	1.9

* % of persons of a given status on the job market two years previously

Analysis of the further fate of employees of various labour market status in 2011 (table 4.9.6) indicates that like two years previously, every form of temporary employment was linked to higher probabilities of permanent employment two years later at around 36% than for those who started out as unemployed with 11% probability or inactive (2%). Also. the chances of finding permanent work improved with work on a temporary agreement other than a work agreement. such as a civil law agreement. two years earlier. The alternative to short-term work is to remain unemployed, which reduces

the chances of better and more stable work in the future. However, a negative trend observed in 2011-2013 is the fall in the probability of moving from a temporary to a permanent work agreement. In 2011. nearly 43% of permanent employees had temporary employment two years previously, while in 2013 this figure had fallen to only 36%. It was however slightly easier to gain permanent work having previously been employed on the basis of other types of short-term agreement.

Table 4.9.7. Initial labour-market status and the risk of unemployment after two years in the periods 2009-2011 and 2011-2013

Initial labour-market status	Chances of non-fixed-term employment (*SD* 2011)	Chances of non-fixed-term employment (*SD* 2013)
Non-fixed-term employment	2.8	2.8
Fixed-term employment	6.9	9.2
Entrepreneurs (non-agricultural)	3.5	5.5
Voluntary help in the family	2.2	3.4
Short-term, civil law or probation agreements	11.1	10.6
No formal agreement	14.6	15.7
Unemployed	30.7	36.9
Inactive	3.7	4.4

As the results of *Social Diagnosis 2011* show, temporary work agreements give young people a chance to improve their future work conditions though these are characterised by a great deal more instability compared to permanent agreements. Data from 2011-2013 indicate that uncertainty linked to the economic situation persuaded employers to recruit fewer new employees while those already employed were somewhat less affected (table 4.9.7). The risk of becoming unemployed within two years did not change in the case of those on permanent work agreements though this definitely grew in the case of those in temporary employment from 7.4% to 9.2%. Furthermore, the risk of unemployment for all other types of contract also increased. It should however be noted that smaller job-creation clearly worsened the chances of the unemployed finding work and increased the risk of labour market entry ending in unemployment from 3.7% to 4.4%.

4.9.3 The reasons for growth of labour force participation rate

Since 2008, there has been a growth, unprecedented in the last 25 years, in the professional activity coefficient or the share of economically active persons on the labour market in the total population. In 2011-2013, the supply of labour continued to grow (figure 4.9.7), though this was by then mainly a result of the still increasing professional activity of people of pre-retirement age (45-64) and the growth was no longer as strong as that in previous years.

An increase in professional activity is one way of tackling the challenges that future years and decades will present in terms the shrinking population of productive age. It is therefore important to analyse the reasons for the changes in professional activity in Poland. In the following section, like in the previous report, we present the decisive legal, demographic and economic factors. However, beforehand it is worth noting the differences in activity among men and women and the changes therein (figure 4.9.8). Women's labour force participation is lower than that of men in all age groups and the greatest occur in child-bearing age (25-34 years of age) and for 60-64 year olds in which women already retire and men do not. In 2011-2013, labour force participation rate of 25-34 year olds fell while rising the most among those who are just about to retire. It is also worth noting that as opposed to men, women's economic activity after retirement fell significantly.

The basis for the analysis of the sources of the rise in 45-59 year-olds' professional activity is data showing their sources of income (table 4.9.8). Data from 2013 indicates that the more difficult situation on the labour market influenced the curbing of further growth in the share of persons in work (68.3% in 2011 and 68.6% in 2013), while the number of unemployed clearly rose from 5.6% to 7.0%. Like in 2009-2011, the fall in labour force participation in 2011-2013 arose from the shrinking share of people whose main source of income was state pensions and disability benefits. However, limiting early retirement opportunities meant that the economically inactive subsisted on this kind of transfer to an

ever lesser degree. There was also a similar trend as far as forms of family and disability benefits support were concerned. In 2011, these were a source of subsistence for 9.3% while in 2013 the figure was 8.5%. The share of persons on other transfers such as disability benefits increased, as did those supporting other household members.

The increasingly small share of those of pre-retirement age receiving disability benefits was a result of the slow fall in the registered handicapped (table 4.9.9) from 13.4% in 2011 to 13.2% in 2013. It is however worth noting that there was a slight rise in those receiving disability benefits in this group from 54.0% to 54.6%. The more difficult labour market situation was born out by the first fall in employed handicapped persons and rise in those unemployed since 2007. It would seem that for the handicapped, retirement pensions are not an alternative to other forms of transfer – the share of handicapped subsisting on pensions is smaller than that in the general group of 45-59 year olds. On the other hand, there is a rise in handicapped persons subsisting on transfers other than pensions or disability benefits.

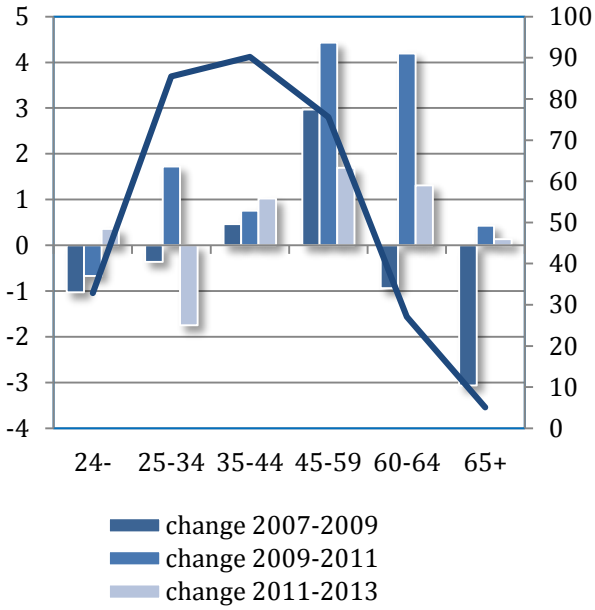


Figure 4.9.7. Labour force participation rates by age in 2013 and its changes in the period 2009-2013

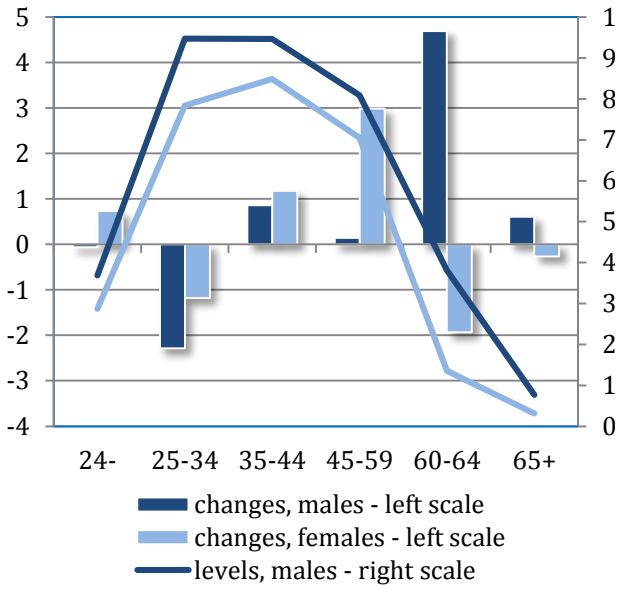


Figure 4.9.8. Labour force participation rates by sex and age in 2013 and its changes in 2011-2013

Table 4.9.8. Structure of 45-59 year-olds by labour market status and source of income in 2007-2013 (%)

Labour market status and income source	2007	2009	2011	2013
Employees	61.0	64.4	68.3	68.6
Unemployed	5.5	5.0	5.6	7.0
Economically inactive (by income source)				
Income from work	0.4	0.5	0.3	0.2
Pensions	10.2	9.9	6.9	4.7
Disability and family benefits	12.6	10.3	9.3	8.5
Other benefits (state transfers)	4.4	3.5	3.1	4.4
Other income (other than state transfers)	0.4	0.7	0.6	0.5
Support from other household members	5.4	5.7	5.9	6.1
Total	100.0	100.0	100.0	100.0

Table 4.9.9. The share of disabled persons (in %) in the population aged 45-59 by labour market activity and source of income

	2007	2009	2011	2013
Percentage of disabled persons in the population of 45-49 year-olds	13.4	14.5	13.4	13.2
Share of disabled persons among 45-59 year-olds:				
Employed	18.6	24.6	28.7	26.7
Unemployed	5.4	3.3	4.5	5.9
Economically inactive and retired	3.9	3.8	3.7	2.2
Economically inactive and receiving disability benefits	68.8	61.0	54.0	54.6
Economically inactive receiving other state benefits	2.6	5.2	6.3	7.7
Economically inactive and labour receiving other benefits	0.6	2.1	2.7	2.8

Since the *Social Diagnosis* is a panel study, it is possible to track the process of retiring and obtaining pensions or the disability benefit within the period under examination with reference to individual professional activity biographies. Data of this kind allow us to assess the process of leaving the labour market by those of pre-retirement age depending on whether they work or are unemployed. In 2007, 2009, 2011 and 2013, the following categories were identified in the 45-59 age group determined by the labour market status and the source of income of those outside the labour force: employees, unemployed, and economically inactive. Among persons in the economically inactive population the following sources of income were: retirement pension, pension or disability benefit, other type of benefit and other type of income or maintained by the family. The analysis focused on the transitions between the defined categories in the periods of 2007-2009, 2009-2011 and 2011-2013. The estimated probabilities of dropping out the labour market, that is transition from the "employed" and "unemployed" categories to the category of inactivity due to the availability of various kinds of benefits are presented in table 4.9.10, while the probabilities for activation, that is change from inactivity to activity are presented in table 4.9.11.

The results of the analysis show that in 2011 both in the case of the employed and the unemployed, there is a falling probability that after two years retirees will be subsisting on their pensions. In the case of 45-49 year olds in work in 2011, 1.5% retired 2 years later compared to 1.7% two years previously (probability 0.017) and 5% 4 years earlier (probability 0.05). For the unemployed there was a very marked decline in the probability of deactivation even more abrupt (from 0.083 to 0.004), probably as a result of the required work-period to gain benefits and the relatively smaller potential benefits.

Table 4.9.10. Estimated probabilities of labour market status and source of income for recently deactivated persons (aged 45-59) who were either in work or unemployed two years

Initial labour-market status		Source of income/labour market status 2 years later						
		Pension	Disability benefit	Other state transfer	Other income type	Family support	Unemployment	Work
Employed	2007-2009	0.050	0.014	0.008	0.010	0.014	0.025	0.878
	2009-2011	0.017	0.018	0.011	0.003	0.007	0.032	0.912
	2011-2013	0.015	0.016	0.016	0.001	0.011	0.038	0.900
Unemployed	2007-2009	0.083	0.050	0.083	0.033	0.157	0.347	0.248
	2009-2010	0.037	0.041	0.046	0.041	0.146	0.388	0.301
	2011-2013	0.004	0.071	0.105	0.042	0.100	0.410	0.268

* The lines sum up to 100.

Differences between the experiences of those in work and the unemployed are however noticeable in the tendency to move into disability benefits. In so far as the employed were slightly less likely to receive disability benefits in 2011-2013, so the probability of taking disability benefits by those out of work clearly rose from 0.041 to 0.071. Among unemployed 45 to 49 year olds, the probability of

becoming inactive on the labour market and subsisting on other type of pension or benefit rose from 0.046 to 0.105. It is worth noting that the more difficult situation the labour market was reflected in the rise in unemployment risk for those in work and the very stark fall in probability of finding a job by the unemployed aged 45-49.

Table 4.9.11. Estimated probabilities of return to the labour market (either to work or unemployment) for 45-59 year-olds previously economically inactive or receiving transfers from the state in 2007-2009 and 2009-2011

Initial period source of income	Labour market status 2 years later					
	Employment			Unemployment		
	2007-2009	2009-2011	2011-2013	2007-2009	2009-2011	2011-2013
Pension	0.078	0.063	0.056	0.000	0.014	0.022
Disability benefits	0.142	0.056	0.065	0.014	0.016	0.035
Other transfer from the state	0.071	0.097	0.101	0.024	0.062	0.085
Other income type	0.250	0.320	0.148	0.000	0.280	0.296
Support from the family	0.114	0.120	0.105	0.076	0.060	0.123

The rising professional activity of those about to reach the age of retirement is also due to ever more frequent returns onto the market of persons who had been economically inactive for some time (table 4.9.11) and had subsisted on various forms of benefits, though this is not as large in scale as the effect described above. *Social Diagnosis 2013* results however show the ever-rising number of people who were outside the labour force two years previously and subsisted on various kinds of benefits or were supported by their family and are currently seeking work unsuccessfully and are unemployed. However, the probability of return to work of those who had been pensioners and economically inactive two years previously is falling. Interestingly, the opposite effect of a rise in probability of work after two years for those receiving disability benefits or other transfers from the state was also noticeable.

4.9.4. Reconciliation of family and work – opinions on certain social policy measures

Social Diagnosis 2013 features a changed approach to surveying households' approaches tomeasures that would aid combining work and family responsibilities, especially that of parenting, which would that makes direct comparison of current results of the current to previous editions of research impossible. It is however possible to assess preferences by reference to the households' ratings of their parenting arrangements.

The rating of the most popular parenting measures was similar to that yielded in previous research rounds. The most frequently indicated as the most preferred both by women and men were (table 4.9.12):

- elasticity of work time - indicated by over 55% of men and nearly 57% women;
- improved institutional childcare for children below 7 years of age – 33% men and 37% women;
- higher child benefits – 24% men and 22% women;
- the opportunity to work from home as indicated by nearly one fourth of woman and one fifth of men.

The main change in relation to previous research editions was the fall in the number of respondents selecting longer maternity leave as the most important measure which was the ranking leader in 2009 and 2011. This was probably due to the introduction of longer maternity and parental leave in 2013. Respondents assessed that further lengthening of the leave would ease the reconciling of professional and family duties less than would other measures, though still for many it would be an important convenience (the fifth most popular among men and the fourth among women).

Though the questions for men and women were identical, there were more replies from women. This may be due to the traditional division of gender roles as in many households the reconciliation of work and parental duties is more often seen as a matter for women.

Despite the changes in questioning, like in previous editions of Social Diagnosis, family preferences reconciling work and parental duties depend on the household type (figure 4.9.9). These differences however did not change the ranking order of the three most popular measures. The main lines of division

ran between households with and without children according to gender and, in the case of certain measures, also according to the number of children in the household.

Table 4.9.12. Preferred ways of reconciling employment with parental duties

Ways of reconciling employment with bringing up children.	2009 Percentage indicating as most important		2011 Percentage indicating as most important		2013 Percentage indicating as most important	
	Men	Women	Men	Women	Men	Women
Part-time work	7.9	8	11.4	11.5	15.7	19.0
Shift work	6.2	5	7.7	6.4	14.0	13.9
Elastic time work	**15.8**	**14.4**	**25.6**	**22.9**	**55.1**	**56.9**
Possibility of working from home	6.8	6.7	9.1	7.4	19.6	**24.1**
More free days in the week	5.6	4.6	6.9	5.9	10.8	11.1
Longer maternal leave	**18.7**	**21.5**	**20.3**	**26.3**	18.8	24.0
Longer paid paternity leave	9.1	10.4	9.8	11.0	17.2	18.4
Higher child benefits	11.1	10.9	12.1	13.1	**24.2**	22.4
Better institutional child care (under 7 years of age)	**11.7**	**11.8**	**16.2**	**16.8**	**32.9**	**37.1**
Better institutional child care (over 7 years of age)	7.2	6.8	7.4	7.4	14.1	15.5

In the case of certain measures, differences in women's and men's assessments are clearly visible independent of the household type. They generally result from the perception of men's and women's roles in the context of the division of duties such as supporting the family, childcare and work within the household. For example, the possibility of providing childcare outside the household, especially for children at pre-school age, is assessed higher by women in almost all household types with children. This is probably because in most families it is women, whatever the household type, which are responsible for childcare irrespective of their employment. Similarly, women rate the chance to work from home higher than men, as do they rate part-time work and more days off, which allows them to better organise and combine work and family duties. On the other hand, men treat higher child benefits as more important, which probably is a result the fact that the responsibility of breadwinning is usually associated with men. This is why a smaller work-time or more free days are less important for them than for women because of the associated lowering of income.

As indicated above, the introduction of longer maternity leave and parental leave has resulted in a fall in preference for a further lengthening of the leave though this is still a desirable measure, especially among women. It is however worth noting that its popularity falls as the number of children in the household rises. This may be due to how this measure is seen in terms of its possible effect on mothers' labour market situation. With a single child, a single even lengthier labour market absence may not have much of an effect on women's position, while a repeated absences in case of more children may be seen as a threat. It would seem that for similar reasons, the lengthening of care leave is relatively less popular compared to other solutions.

It is important to note in terms of the interpretation of results that questions about the three most important measures for reconciling work and parenting duties were directed only to the currently employed, that is to those who are able to combine the two kinds of activity. If the opinions of the unemployed and the economically inactive were included, the pattern of most advantageous measures could significantly change. In *Social Diagnosis 2013*, every second woman of 25-44 years of age indicated childcare as the main reason for her non-activity. At the same time, over a half the respondents irrespective of gender considered difficulties in reconciling work and parenting as an important or very important reason for not having children in Poland. Among those who decided not to have a first or further child, almost 10% of the surveyed population and 15% of men and 23% of women, indicated difficulty in reconciling work and parenting as one of the main three reasons for deciding against having children.

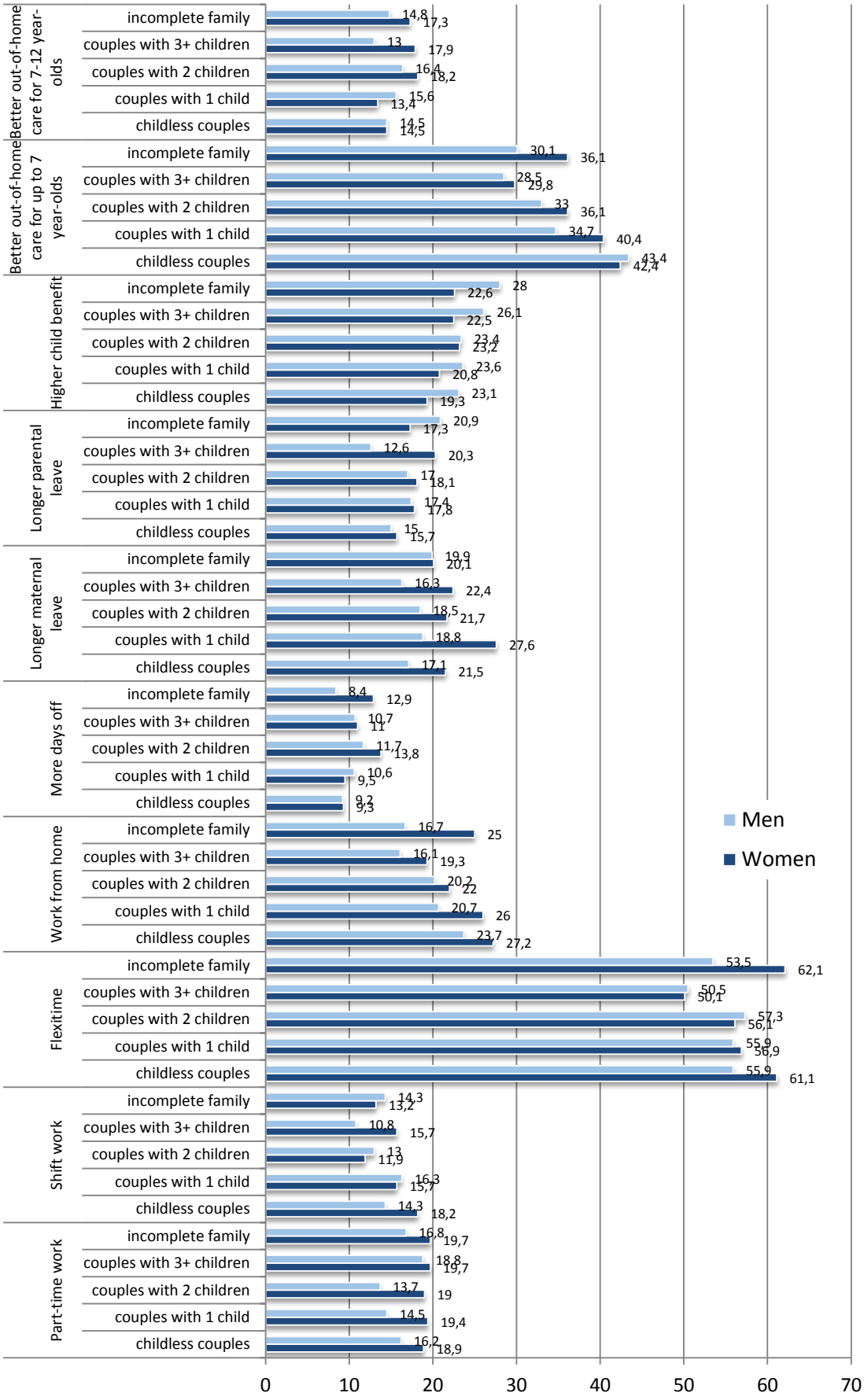


Figure 4.9.9. Percentage of indications for a specific solution by gender and selected household types

4.9.5. Labour migration – the situation of returning migrants

According to CSO data the years 2009-2011 did not bring a significant increase in the number of labour migrants. In the main countries of destination of Polish labour migration the labour market situation either stabilised (United Kingdom, Germany) or continued to deteriorate (Ireland, Spain). Though data from 2012 are not yet available, on the basis of LFS emigration data, it is possible to talk about a certain stabilization in the number of people remaining abroad for over 12 months. *Social Diagnosis* provides information about those who were in Poland at the time of the survey, which makes it difficult to draw conclusions on the extent of migration at present. It is however possible on this basis to assess the character of return migration and its results on the Polish labour market and also to some extent Poles migration intentions.

Social Diagnosis 2013 features a changed approach to questions on labour migration experience – the current edition covers the two years before the study, while the 2009 and 2011 studies covered four year period. Therefore it is not possible to directly compare the results of the last and previous studies, while we can, bearing in mind the change introduced, attempt to identify certain patterns in Poles' migrationary bechaviour.

Table 4.9.13. Reasons for the return from labour migration (%)

Reasons for return from migration	2009	2011	2013
Economic reasons			
Completion/loss of employment	31.9	23.3	31.3
Decrease in income level abroad relative to that at home	4.8	2.5	1.8
Could not find work abroad	1.6	1.3	3.0
Other reasons			
Previous plans	28.5	33.5	23.3
Family matters	17.3	14.6	13.9
Health concerns	3.2	3.6	1.2
Temporarily return to deal with specific matters at home	3.8	9	13.6
Other reasons/Hard to say/Completed education	7.9	11.5	11.8

Information from returnees indicates that after the fall in the importance of economic factors for the return of emigrants in 2011, their role increased again and the structure of returns more resembles that from the 2009 study. Then, similarly as now, nearly 40% of returnees from migration between 2011 and 2013 indicated economic reasons, of which for over 30% the reason was the ending or loss of work (table 4.9.13).

Much more rarely than in 2011, the returns were planned, so it is can be supposed that the share of forced rather than voluntary returns had risen, which is likely to be linked to the worsening economic situation and difficulty in finding work abroad. However, the share of only temporary returns to sort out various small matters has been rising systematically since 2009.

Compared to 2009, the share of people with migration experience fell by almost a half, which is largely likely to have been caused by changes in questioning approach. Also, the share with this experience has shrunk in all studied parameters – by age, gender, education and place of residence class, though the retention of certain patterns is noticeable.

Among those who were in Poland during the study, the largest share with migration experience was among those with middle and basic vocational education (table 4.9.14). Analyses of the panel sample indicate that in these groups, nearly 30% of those who declared having migration experience between 2007 and 2011 engaged in labour migration again in 2011-2013. Slightly more repetitive was the migration of individuals with basic education, despite the relatively low share of migration experience for this education level. The disproportionate fall in the share with migration experience among people with higher education and the clearly lower recurrence of their migration may result from that labour migration often associated with work well below qualification level, may have ceased to be seen as an attractive alternative to employment possibilities at home as shown by a lot of research.

There was also a disproportionate fall in the share of migration experience noted among the youngest respondents. It is likely that a part of the young people who emigrated for work on the wave of post-accession euphoria subsequently returned home having revised their expectations concerning employment abroad and decided to seek work in Poland, especially in the face of the worsening situation on the labour markets in the destination countries. The relatively stable share with migration experience

in the older groups can be associated with the more established work patterns abroad, which could also be indicated the high share of repeated migration in these age groups.

The higher than proportional fall in the share with migration experience also concerns residents of the largest cities. This may be due to demand for work in these areas not falling as strongly as in other local markets and the alternative of travel for relatively higher pay may not have been so attractive.

Table 4.9.14. Share in 2011 population of persons with experience of migration in periods 2005-2007, 2007-2011 and 2011-2013

Migrant features	2005-2007	2007-2011	2011-2013	Reputed migration 2007-2011*
Men	5.8	5.5	3.1	29.2
Women	2.8	2.3	1.1	23.4
Education				
Primary	2.6	2.8	0.9	33.2
Basic vocational	5.3	5.4	2.4	29.9
Secondary	4.1	4.9	2.7	32.1
Higher	4.2	3.9	1.4	14.0
Age				
Under 24	0.9	4.8	1.9	34.8
25-34	9.9	6.7	3.3	19.4
35-44	6.5	6.1	3.5	29.5
45-59	4.1	3.3	2.0	33.2
60-65	1	0.4	0.6	41.7
Place of residence				
Towns of over 500k	3.9	3.2	0.8	8.5
Towns of 200k-500k	5.7	4.9	3.1	42.4
Towns of 100k-200k	4.5	3.7	1.6	22.4
Towns of 20k-100k	4.8	4	1.9	25.9
Towns of 20k and less	5.6	5.6	2.4	24.2
Rural areas	5.8	5.2	2.2	30.1

*****- percentages on the basis of panel samples in 2011-2013. The results ought to be treated with caution due to small sample size and lack of persons due to migration during the study and other reasons in certain sections and selections.

Previous migration experience correlates with labour market status. First and foremost, those with experience of migration are more active in the labour market (table 4.9.15). However, it is difficult to establish cause-and-effect relationships here without a more in-depth analysis as higher activity may follow both from the impact of migration on the behaviour of those persons in the labour market, as well as from the selection to migration and the returns of the individuals predisposed to be more active in the labour market. Also, if they had not migrated, they would have enhanced the activity of those who had stayed in Poland.

A comparison of data concerning those who had experience of migration in the four years prior to the study of 2009 - 2011 and during the 2 years before the 2013 study underlines clear differences in terms of gender. Apart from that, results from 2013 are similar to those in previous research editions, with minor changes in the case of women. Among men, previous migration experiences was connected not only with higher unemployment, but also with greater employability and a greater than average percentage of the entrepreneurs. However, the percentage of employed women with migration experience was still smaller than average as before, though this rose compared to 2011. There was a decline of involvement in own economic activity, which was anyway small in previous editions. Also, the economic activity of women with migration experience fell, though it is still higher than the average. This results from the fall in the share of women seeking work, which in 2011 was nearly three times higher than for the entire female population and in 2013 it is not even twice as large.

Table 4.9.15. Migration experience of persons of working age and their labour market status in 2009 2011 and 2013

Labour market status in 2011	Percentage with migration experience over the last years			Percentage of all persons of working age in 2013
	4 years		2 years	
	2009	2011	2013	
		Men		
Employed	75.5	79.5	78.7	70.7
Entrepreneurs	14.5	14.9	14.9	14.0
Unemployed	16.5	15.3	15.7	8.8
Inactive labour	8.1	5.2	5.6	20.5
		Women		
Employed	55.7	54.1	59.1	60.3
Entrepreneurs	7.6	5.2	3.8	7.6
Unemployed	16.6	23.3	14.5	8.3
Inactive labour	27.8	22.7	26.4	31.3

Table 4.9.16. Percentage planning labour migration by labour market status and education in 2007, 2009, 2011 and 2013

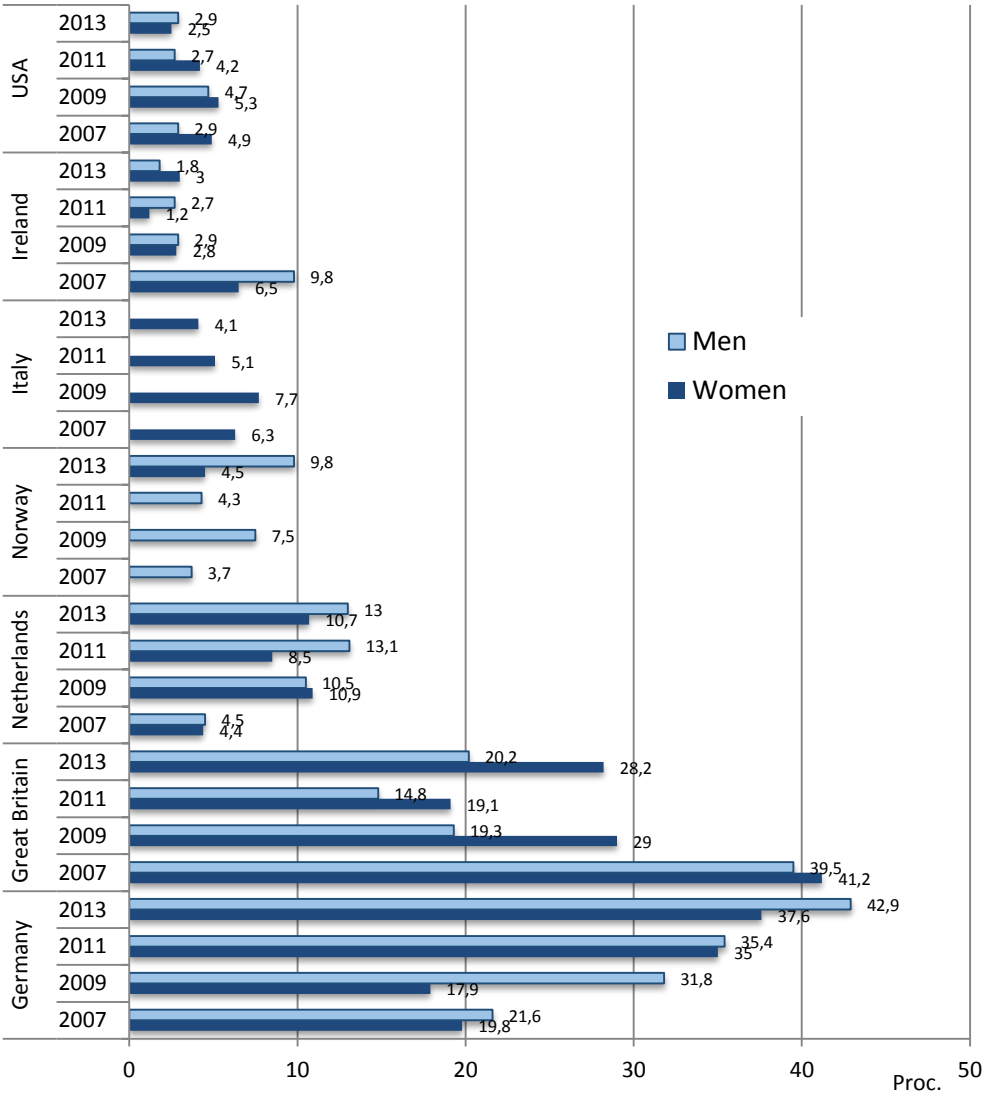
Educational attainment	Employed	Unemployed	Inactive
Declared migration in 2013			
Higher and post-secondary	7.1	24.2	5.4
Secondary	9.3	27.3	7.1
Basic vocational/lower secondary	8.7	21.2	7.2
Primary and lower education	7.1	15.4	0.7
Total	8.3	22.9	5.3
Declared migration in 2011			
Higher and post-secondary	5.1	16.3	6.7
Secondary	7.4	23.5	10.0
Basic vocational/lower secondary	8.1	22.1	9.0
Primary and lower education	5.9	14.4	3.1
Total	6.8	20.5	8.3
Declared migration in 2009			
Higher and post-secondary	4.2	17.4	7.0
Secondary	6.5	24.2	9.2
Basic vocational/lower secondary	7.7	17.8	8.8
Primary and lower education	6.8	15.5	3.0
Total	6.2	19.5	7.9
Declared migration in 2007			
Higher and post-secondary	8.3	19.3	14.0
Secondary	13.0	31.9	18.2
Basic vocational/lower secondary	14.3	23.0	15.5
Primary and lower education	8.1	21.5	3.8
Total	11.7	25.4	14.5

The labour market situation in most EU countries has worsened, with a fall in demand for labour and rising or relatively high sustained rates of unemployment. Despite the abolishment of the last labour market barriers to Polish workers, these difficult markets are not as attractive as they were during the post-accession boom. Apart from that, some have verified their not always realistic expectations of work abroad and assess potential pluses and minuses of travel more soberly. In *Social Diagnosis 2013*, the share of those declaring the desire to emigrate for work at the time of study within the next two years rose slightly to 8.1% compared to 6.9% noted two years earlier and 6.4% in 2009. This is a fall compared to 2007 when 11.4% of respondents declared the intention to emigrate. It seems that this insignificant rise may be attributed more to the steady worsening of the situation on the Polish labour market than to respondents expectations of glittering work perspectives abroad.

The structure of those planning labour migration in terms of labour market status and education changed more than in previous editions, especially as far as the unemployed were concerned (table 4.9.16). In 2013, nearly a quarter of the unemployed declared intentions to seek work abroad in the following two years compared to not quite a fifth in the previous edition. This may support the thesis that the main causes of migration intentions were problems with finding work at home. Like in 2009,

around 8% of those in work and 5% of the economically inactive declared plans to go abroad. The raise in the desire to migrate compared to 2011 was noted in all educational categories and labour market statuses. It was the greatest among the unemployed with higher and secondary education.

As in previous editions of the study, the economic condition of the particular destination countries was important for migration intentions. In 2013, the most popular potential destination was Germany (figure 4.9.10). The opening of labour markets in Germany and Austria may have made these destinations additionally attractive, yet econometric analyses (Strzelecki & Wyszyński. 2011) indicate that the main factor that has affected migration from Poland to EU countries over a time span of several years concerns the differences in unemployment rates between the countries, while increased migration related to the effects of „novelty" of the newly opened labour markets of subsequent western European countries after 2005 was usually limited.



NOTE: there are no data concerning Norway for women for 2007-2011 and Italy for men in all years as those destinations were not attractive for the respective gender for each year

Figure 4.9.10. Destinations of planned labour migration most popular with men and women in 2007. 2009. 2011 and 2013

Despite the uncertain labour market situation, the share declaring the desire to migrate to the United Kingdom increased especially in the case of women. The very bad economic conditions however caused that, as in *Social Diagnosis 2011*, migration to Ireland was declared by less and less people, though the share of women increased slightly. At the same time, men are increasingly interested in migrating to countries like Norway or Holland regarded as safe alternatives to the crisis-stricken typical migration destinations, probably due to the sustained relatively low rates of unemployment in those countries. For women declaring migration intentions, Italy was such country, though there was a slight fall noted in its

popularity in 2013. The percentage of those willing to migrate to the USA remained at a stable several per cent with a higher value for men.

4.9.6. Raising professional qualifications and labour market status

4.9.6.1. Range of professional training

On the basis of data from previous editions of *Social Diagnosis*, it is possible to analyse activity associated with respondents raising their professional qualifications and other skills in 2005-2007, 2007-2009, 2009-2011 and 2011-2013[45]

Only close to 10% of 25 year-olds and over took part in whatever activity associated with raising their professional qualifications or other skills, which was somewhat less often than in previous years. An analysis of the structure of people who in *Social Diagnosis* 2007, 2009, 2011 and 2013 declared activity indicates a high and sustained selectivity in terms of age, education level and place of dwelling (table 4.9.17).

Table 4.9.17.Structure of over 25 year-olds taking part in any activity involving professional qualification or skills raising in the last 2 years in 2005-2007, 2007-2009, 2009-2011 and 2011-2013 by gender, education, place of residence and age (%)

Socio-demographic features	Percentage of over 25 year-olds taking part in any qualification or skills training			
	2005-2007	2007-2009	2009-2011	2011-2013
Total	11.7	11.9	10.7	9.6
Women	56.8	51.9	54.0	56.1
Men	43.2	48.1	46.0	43.9
Higher	57.5	57.4	62.2	63.4
Secondary	28.5	29.0	24.7	25.2
Basic vocational	11.8	11.9	10.6	9.5
Primaryand lower	2.2	1.7	2.5	1.9
Towns of over 500k	23.6	24.1	25.2	27.3
Towns of 200k-500k	17.0	17.2	17.2	16.9
Towns of 100k-200k	8.4	8.0	8.0	8.4
Towns of 20k-100k	19.6	19.2	20.0	18.4
Towns of 20k and less	11.8	10.4	10.6	10.6
Rural areas	19.6	21.0	19.0	18.4
25-29 years	25.8	27.3	25.7	22.8
30-34 years	20.9	18.7	19.9	19.8
35-39 years	14.3	16.4	16.2	16.6
40-44 years	12.8	12.0	12.6	12.7
45-49 years	10.4	10.6	9.2	9.2
50-54 years	9.3	8.4	8.0	8.5
55+	6.4	6.6	8.5	10.3

The majority of those raising their skills in 2011-2013 were women at 56%, and their share rose slightly compared to the earlier study round. Around 63% of all trainees in the last two years had higher education or post high-school education, which is more than in 2005-2007 and 2007-2009. The share with middle education did not change in relation to the previous round (25%), but was lower than in 2009 and 2007 (29%), with only 10% improving their pre high-school or basic professional qualifications at around 11% and 12% in the three previous rounds. The fewest at the same level of 2% declared at most basic education in 2011-2013. Therefore, the selectivity of qualification raising in terms of educational attainment remained unchanged.

The structure of trainees according to place of residence class also did not change much in 2011-2013. Only around 18% resided in rural areas in 2011-2013 compared to around 19-20% in the three previous rounds. In the towns, still just over half reside in towns of over 100 thousand inhabitants as in all four study rounds, though in the current round the share grow by around 2.2 p.p., around 18% in

[45] *Social Diagnosis* 2007, 2009, 2011 and 2013 cannot be directly compared to results of BAEL studies on adult educational activity. *Social Diagnosis* surveyed educational activity over the last two years while the BAEL measurment covered the last four weeks previous to study. Apart from that, in *Social Diagnosis*, professional qualification raising activity merges school and non-school systems, while in the case of BAEL the categories are separate. Also analysis of professional qualification raising in the following part of the study includes 25 year olds and older.

towns of between 20 to 100 thousand (19-20% in the three previous rounds) and around 11-15% in towns of over 20 thousand inhabitants.

In the studied periods, there were no large changes noted in the structure of trainees in terms of age. The majority of 43% were between 25-34 years of age compared to around 46-47% in previous study rounds, 28-30% were between 35-44 in all four study rounds and around 17-18% were 45-54 in 2011-2013 and 2009-2011 and 19-21% in 2005-2007 and 2007-2009. Merely one in ten 55 year-olds or over raise their qualifications compared to 7-9% in previous rounds. It should be emphasised that in 2011-2013, the share of the youngest analysed group (25-29 years of age) fell and the oldest (55 years and over) grew, which is a continuation of the changes noted in 2011-2013. Without doubt the structure of the over-25 age-group had a bearing on this change.

In summary, the typical participant in whatever higher education qualification-raising activity remains 25-34 years old, lives in a large city and is more often a woman than a man.

The data above reflect the structure of trainees in 2005-2007, 2007-2009, 2009-2011 and 2011-2013 that depends not only on the educational activity of specific population groups, but also on the structure of respondents by studied features[46]. Relating these to the appropriate subpopulations allows for an assessment of process intensity.

Table 4.9.18. Structure of over 25 year-olds taking part in any activity involving professional qualification or skills raising in 2005-2007, 2007-2009, 2009-2011 and 2011-2013 by gender and place of residence (%)

	Towns >500.000	Towns of 200-500.000	Towns of 100 - 200.000	Towns of 20 - 100.000	Towns of < 20k	Rural areas	Total
			2005-2007				
Total	24.4	17.0	11.8	11.0	10.6	6.2	11.7
Women	24.7	18.0	11.3	11.5	11.0	6.6	11.9
Men	24.1	15.9	12.6	10.4	10.1	5.8	11.2
			2007-2009				
Total	22.8	18.2	13.5	11.9	9.3	6.8	11.9
Women	23.5	18.6	12.1	11.3	8.7	6.0	11.6
Men	22.0	17.8	15.2	12.5	9.9	7.7	12.2
			2009-2011				
Total	20.9	18.3	11.2	11.0	8.8	5.5	10.7
Women	20.7	18.0	10.4	11.3	8.6	5.2	10.8
Men	21.2	17.5	12.0	10.6	9.1	5.8	10.6
			2011-2013				
Total	20.7	16.6	10.2	9.1	8.4	4.6	9.6
Women	21.1	16.8	9.8	9.8	9.6	5.0	10.2
Men	20.4	16.4	10.5	8.3	7.0	4.2	8.9

The data presented in table 4.9.18 confirm the selectivity of the process of improving professional skills as regards place of residence, which is especially unfavourable to those living in rural areas. As the size of town increases, so does the frequency professional training activity with the share rising from 10-15% for towns up to 200 thousand residents to 20-25% for those over 500 thousand in the four analysed periods. Only around 5-7% of rural residents took part in qualification raising activity.

In 2011-2013, we noted a fall in professional qualification or skills level raising for all group types with the exception of women from the largest and smallest towns, where a small increase was recorded. In the previous round in 2009-2011, there was a small fall in all place of residence categories, both for women and men as the rise in men's educational activity noted especially in rural areas did not continue. As in 2009-2011, in this round generally women more often than men took up educational activity though at a lower level than in the previous round. For men the fall was more drastic, deepening the gender gap in this respect.

Participation in professional improvement by age did not change significantly in 2011-2013 compared to 2005-2007, 2007-2009 and 2009-2011. The greatest activity is among the youngest analysed group and the smallest in the most elderly. Activity fell steadily with age from 20-24% for 25-29 year olds to around 2-3% for the over 55s.

[46] E.g., in 2007, residents of the largest towns made up 11% of over 25 year-old respondents, 13% were from the smallest towns and 38% were from rural areas. In 2009 the percentages were 12,5 %, 13,3 % and 37 % respectively, in 2011 12,8%, 12,9% and 37% respectively and in 2013 12,6%, 12,1% and 38,2 % respectively.

The basic determinants associated with professional training activity according to education level did not significantly change (table 4.9.19). The better educated more readily took part in various forms of professional skills improvement, with the most frequent being those with higher or post high-school education at around 24% in 2011-2013 and 27% in 2009-2011. Women studied more often and the fall in this group's activity was smaller, causing a gender gap to appear that in previous rounds did not actually exist. It ought to be underlined that the falling trend among the highest educated noted in the three previous rounds maintained itself in this study as well. As in previous rounds, the middle educated clearly less frequently raised their qualifications at 8% in 2011-2013, 9% in 2009-2011 and 11%-12% in 2005-2007 and 2007-2009, with men still somewhat more active in this case. The gap between genders in the favour of men in this educational category remained despite the smaller fall noted for women. However, those with basic professional education continue to undertake this kind of activity over two and a half times more rarely than those with middle education at 3% in 2011-2013 compared to 4-5% in 2009-2011, 2007-2009 and 2005-2007. While women are less active in raising their professional skills and qualifications, this difference was somewhat reduced as trends from the previous round continued. Those with no more than the most basic education as ever did not participate in this process.

These results confirm the highly selective character of the training process, as did those of the „Kształcenie Dorosłych" (Adult Education) study (Central Statistical Office, Warsaw 2009)[47]. Despite the somewhat differing definition of participation in various educational services in the studies preventing direct comparison of quantitative results, the conclusions formulated are analogous. Mainly young people who are well-educated and resident in large towns participate in professional training. Around 41% of trainees in 2011-2013 were active in education as in 2009-2011 and 2007-2009 compared to 44% in 2005-2007. This means that only a very small fraction, no more than 4% of over 25 year olds are in regular training, which should be treated as a worrying result.

Table 4.9.19. Structure of over 25 year-olds taking part in any activity involving professional qualification or skills raising in 2005-2007. 2007-2009. 2009-2011 and 2011-2013 by gender and education (%)

	Basic	Basic vocational	Middle	Higher	Total
		2005-2007			
Total	1.3	4.7	11.4	30.7	11.7
Women	0.8	3.0	10.8	31.3	11.9
Men	1.9	5.8	12.2	29.7	11.2
		2007-2009			
Total	1.1	4.8	12.0	30.6	11.9
Women	0.7	2.9	10.3	30.3	11.6
Men	1.5	6.0	14.2	31.1	12.2
		2009-2011			
Total	1.5	4.0	8.9	27.5	10.7
Women	1.1	3.3	7.4	27.6	10.8
Men	2.1	4.5	10.7	27.2	10.6
		2011-2013			
Total	1.1	3.2	8.1	23.8	9.6
Women	0.9	2.5	7.0	24.9	10.2
Men	1.6	3.6	9.4	22.2	8.9

4.9.6.2. Forms of professional training

An analysis of the forms of professional training together with an analysis of participants allows demonstration of the forms that ought to be developed. However, it should be emphasised that *Social Diagnosis* does not contain information as to whether training was taken up as a personal initiative or not, apart from which the respondent could have taken part in a number of forms of education. Furthermore, information on sources of financing is also not precise[48].

[47] The definition of adult education in the *Kształcenie Dorosłych* study also includes self-education/training.

[48] A significant part of adults' educational activity is co-financed from two or more sources, while the appropriate *Social Diagnosis* cafeteria of questions may suggest separation of financing sources. It is therefore difficult to show whether the respondent indicates a real state when claiming to fund educational activity or that the respondents' contribution was mere more notable than others, which were therefore not mentioned.

Data in table 4.9.20 demonstrate that professional qualification raising training for those over 25 years of age most often takes the form of courses financed by employers at around 36% of indications in 2005-2007 and nearly 40-42% in 2007-2013. Trainings provided by employers are usually the most effective in terms of employment perspectives. Around 15-16% of respondents in 2009-2011 and 2011-2013 indicated schools or higher education colleges (apart from post-graduate and doctorate studies) compared to 20% in 2005-2007 and 2007-2009. This fall may be linked to young people's educational aspirations to continue study directly after completing middle school as ever more students of this age declare already having completed higher education. In 2011-2013, slightly less often than in previous study rounds, trainings were financed by the participants themselves at 11% compared to 13%, though this is anyway a better result than the 10% noted in 2007-2009. The share taking advantage of European Social Fund (EFS) co-financing was 8% in 2011-2013 compared to around 6-7% in the previous three study rounds. Unchanged at around 7-8% of respondents indicated participation in trainings to improve other skills such as driving while only around 4% took advantage of courses funded by the Work Fund („Fundusz Pracy") in 2011-2013 compared to 5-7% in previous rounds.

The scope of participation in the various forms of training also demonstrates the selectivity of this process. The majority of respondents reported activity financed by employers, indicating that mainly those in work raise their qualifications (more on this in chapter 4.9.6.5)

Attention should also be brought to activities financed by the European Social Fund (EFS). The EFS has been implemented in Poland for a number of years and the share of those taking part has exceeded that participating in trainings funded by the Work Fund, with the greatest difference noted in this study round. However, it should be noted that the target groups of ESF are wider than that of the Work Fund and include those already in work, which with the small size of the relevant groups prevents detailed comparison. Despite a period of the most intensive implementation of EFS from the financial perspective of 2007-2013[49], of which Poland gained a significant part, in the last four years the scope of co-financing from this source has only slightly increased not exceeding 10%, which in comparison with the scope of courses co-financed by employers is a relatively small share.

Table 4.9.20. Over 25 year-olds taking part in any activity involving professional qualification or skills raising in 2005-2013 by training type[50] *(%)*

Training type	Percentage of indications			
	2005-2007	2007-2009	2009-2011	2011-2013
High schools without post-graduate and doctorate studies	19.9	19.1	15.3	16.0
Post-graduate and doctorate	7.9	10.1	8.9	7.9
Self-funded training	15.1	10.0	13.3	11.1
ESF funded training	7.1	6.1	7.3	8.4
Work fund (Ministry of Labour) funded training	5.7	5.2	6.5	3.9
Employer funded training	36.5	39.6	40.8	41.8
Other forms of skills training (eg. driver's licence)	7.8	7.0	7.9	8.2

It should however be noted that a lot of educational activity is co-financed from various sources such as that of employers and personal funds. In the *Social Diagnosis* question from 2007, 2009, 2011and 2013, no answers on co-financing were expected so the data in table 4.9.27 should be treated as a certain approximation of the importance of each particular source of financing.

Due to the small sample size for each particular form of training, it is impossible to conduct an analysis of the forms by respondent labour market status, especially for those out of work.

4.9.6.3. Professional qualifications and labour market status in 2000-2013

An analysis of the out of work due to a lack of qualifications required by employers and the employed allows for at least a partial assessment of the scale of structural lack of fit on the labour market in relation to the professional qualifications of those of productive age. It should however be born in mind that this is a subjective assessment of respondents that surely differs from the assessment of employers.

[49] www.efs.gov.pl.

[50] Respondents could mention three activities they undertook in the last 2 years in order to raise their professional qualifications and other skills. The form used for analysis was: first = most important.

Due to the framing of questions on the reasons for not carrying out professional work in the questionnaire, it is possible to compare four periods – 2000-2007, 2005-2009, 2007-2011 and 2011-2013. Despite a lack of their separation, it is possible to accept that the first period covered mainly years of slowdown in the Polish economy between 2002 and 2004, the second a relatively good economic period, though of course the effects of the economic crisis could have influenced respondents' replies, and the third and fourth periods falling in the years of economic slowdown caused by the crisis.

Among those out of work in 2000-2007, that is the unemployed and the inactive, merely 4.5% indicated a lack of qualifications required by the employer[51], the majority of whom were women (around 54.4%) (table 4.9.21). The situation in 2000-2007 and 2005-2009 was analogical as around 4-5% of respondents of whom 57% and 54% respectively were women. However, between 2007 and 2011 around 3% considered a lack of qualifications as the reason for remaining out of work, of which as many as around 62% were women. Nevertheless, independent of the observed changes, employers' qualification requirements were not, in the assessment of respondents the main reason for unemployment in the analysed periods. As ought to be noted, this is the respondent's subjective assessment, so the preponderance of women may result from their greater self-criticism. The result may also be influenced by the importance of education being greater for women as a determinant of employment (e.g. Sztanderska. Grotkowska. 2007).

Among those without professional work due to a lack of qualifications in 2011-2013, 24% had only the basic education, which is similar to the result for 2000-2007 and 2005-2009, but greater than for 2007-2011 (18%). However, the share of basic professional education or middle school respondents who were out of work due to a lack of qualifications fell significantly to 32% compared to as much as 48% in 2007-2011 and 40-42% in 2000-2007 and 2005-2009. Together, those with only basic professional education made up the majority of unemployed due to a lack of qualifications. Around one third out of work had middle education in 2011-2013 compared to 27-28% in all analysed periods, while the fewest were those with highest education at 6% in 2000-2007, 9% in 2005-2009, 7% in 2007-2011 and 11% in 2011-2013.

The structure of respondents with insufficient qualifications to engage in professional work in terms of place of residence is similar in the outlined periods. The largest group resided in rural areas at around 44% in 2011-2013 compared to 36% in 2000-2007 and towns of up to 100 thousand residents (around 30% in 2011-2013 compared to 37% in 2000-2007). Around one in five of those with insufficient qualifications resided in middle-sized towns in all the periods analysed, while the share from large and middle-sized towns did not exceed 9%.

Table 4.9.21. Structure of unemployed in 2000-2013 who remained out of work due to a lack of required qualifications by gender, education place of residence and age (%)

Socio-demographic features	Percentage of unemployed due to a lack of required qualifications (respondents' subjective assessment)			
	2000-2007	2005-2009	2007-2011	2011-2013
Total	4.2	4.9	2.9	4.5
Women	57.4	54.1	61.8	54.4
Men	42.6	45.7	38.2	45.6
Higher	6.0	9.2	6.7	10.6
Secondary	28.6	27.0	27.1	32.5
Basic vocational	42.0	39.8	48.2	32.4
Primary and lower	23.4	23.8	18.0	24.4
Towns of over 500k	7.2	8.3	8.4	7.9
Towns of 200k-500k	14.5	9.7	8.8	10.5
Towns of 100k-200k	5.6	7.6	7.7	7.6
Towns of 20k-100k	22.9	20.2	20.7	17.4
Towns of 20k and less	13.6	11.5	11.2	12.5
Rural areas	36.2	42.7	43.2	44.2
up to 24 years	41.8	25.8	37.7	27.0
25-29 years	9.3	16.3	11.3	15.2
30-34 years	7.8	9.4	9.2	11.3
35-39 years	7.5	7.3	5.6	7.4
40-44 years	10.0	9.5	7.4	6.8
45-49 years	7.4	9.4	6.0	8.2
50-54 years	9.1	11.7	7.7	8.3
55+	7.1	10.6	15.1	15.7

[51] The surveyed could indicate more than one reason for becoming unemployed so the share of indications informs of the rank of a given reason.

The age structure of the insufficiently qualified unemployed differed mainly because of the share of those in the under-29 group. In 2005-2009, there was a marked reduction in the share of this age group compared to 2000-2007 from 50% to 42%, only to return to around 50% in 2007-2011. Then in 2011-2013, there was once more a fall as the share of under-29 year-olds among the unemployed with a lack of required qualifications to 42.2%. The share of each five-year group from 30 to 54 was comparatively stable and oscillated between 7% and 12%, not exceeding a difference of 4 p.p. in the four compared periods. However, the share of 55 and older was relatively stable in 2011-2013 compared to 2001-2011 at 15-16%, though much higher than shares noted in 2000-2007 and 2005-2009 at 7% and 11% respectively. The age structure of the population also has a bearing on that of the out of work due to a lack of required qualifications, though it is possible to outline two groups in more difficult straits linked to their lack of required qualifications – that is young people up to 29 and those over 55 years of age.

Additionally, among the unemployed due to a lack of required qualifications in 2000-2007, only around 26% participated in whatever activity connected to qualification raising over the two years previous to a given study round (women nearly 24%, men 29%). This information is incomplete as the data on taking up educational activity do not cover the whole period over which the respondents' qualifications were insufficient. For 2005-2009 and 2007-2011, we already have full information on educational activation of the underqualified for employment. Only 27% of this type of unemployed in 2005-2009 and 2007-2011 were educationally active over that time. However, the lowest share of activity of this kind was recorded in 2011-2013 when it fell to 18%.

Summarizing, among the underqualified unemployed the clear majority in all the periods outlined were people with at most basic professional education residing in rural areas and small and middle-sized towns. A sizable part was under 30 years of age and the majority had not been in any way active to reduce their human capital deficit and raise their qualifications and professional skills.

4.9.6.4. Other reasons for ever being out of work between 2000 and 2013

The results of our analysis show that in the respondents' assessment, a lack of qualifications required by the employer is generally of little importance as a cause of remaining out of work. This begs the question what importance the remaining causes have, and reference to the same socio-demographic features ought to provide some answers. As previously, the analysis was over the periods 2000-2007, 2005-2009, 2007-2011 and 2011-2013.

As expected, the ranking of the various causes differs for women and men and varies with age (table 4.9.22).

Among the basic causes of remaining unemployed were those linked to age, such as study among the youngest at 24-27% of indications in all analysed periods and retirement in the group of the most elderly at 34-43%, with this share falling in the recent period. Health was indicated comparatively often at 13-16% as well as difficulties in finding a job, which was recently noted more often (18%). The remaining causes were indicated by a few percent of respondents.

The structure of unemployed respondents by defied cause is strongly determined by stage of life in the compared periods and the group of underqualified unemployed is dominated by the under 24s, while the out of work due to retirement are clearly mostly over 60 years of age.

Childcare, housework or caring for elderly or handicapped family members are reported as reasons for remaining out of work actually only by women, which indicates the still strong cultural conditioning of the link between professional work and household duties, especially that of care. The structure of the unemployed due to being unable to find a job is relatively uniform with a slight slant towards the youngest groups up to 24 years of age. Among those with health issues, the over 54s dominate. Additionally, the destimulating influence of welfare benefits was confirmed, especially in the case of the 50-59 year-olds. Identifying which benefits respondents received and linking this to remaining unemployed is however impossible as benefits were not dis-aggregated in the cafeteria of answers. The situation among those out of work as a result of a lack of desire to work is analogical – women are also in the majority in this group.

Respondents without professional work in 2005-2009, 2007-2011 and 2011-2013 were also asked about the conditions that would persuade them to engage in work in the country (table 4.9.23). Analysis of these conditions is especially important given the relatively low employment indicators in Poland, particularly for those in a less advantageous labour market situation such as, among others, women and the elderly.

Around half of those never working in 2005-2009 and 2011-2013 did not want to work, which is a slightly lower result than that noted in 2007-2011. Almost 19% indicated reasons other than those included in the questionnaire. From the remaining conditions for taking up work, the possibility of part-time employment or flexible time were given relatively frequently at 11-13%, with work from home indicated more rarely (7%).

Table 4.9.22. Structure of unemployed by gender and age and selected factors in 2000-2013

Age/gender	Education	Taking care of the household	Childcare	Health	Inappropriate age	Retirement	Difficulty in finding work	Receiving social benefits	Lack of desire to work	Care for elderly or disabled household members
					2000-2007					
Total	24.3	7.1	6.5	15.7	11.6	33.9	13.9	4.3	2.4	1.85
Women	53.1	96.1	96.1	57.2	66.6	37.9	58.4	57.2	63.1	
Men	46.9	3.9	3.9	42.8	33.4	62.1	41.6	42.8	36.9	
15- 24	90.6	4.2*	11.7*		29.8		20.3*		36.7*	
25-29	7.6	10.5	20.7	9.8*			12.2			
30-34		16.8	24.0			0.6*	10.2	30.7*		**
35-39		16.1	18.6		3.6*		9.9			
40-44	1.8*	12.0	11.0	3.9			10.2		63.3*	
45-49		11.2	5.4	9.6			9.5			
50-54		14.2	5.0	17.3	6.0	2.1	14.2	17.8		
55+		14.9	3.7	59.4	60.6	97.3	13.4	52.0		
					2005-2009					
Total	25.6	8.4	9.0	15.7	12	40.4	15.5	4.4	3.8	2.5
Women	50.5	92.4	95.6	51.7	66.7	62.0	54.4	55.2	57.6	77.3
Men	49.5	7.6	4.4	48.2	33.2	38.0	45.6	44.6	42.4	22.7
Up to 24	89.1	7.6	13.3	5.1*	26.1		16.1	11.6*	28.6	
25-29	9.0	11.3	23.2				15.1		16.2	
30-34		15.9	26.2	5.5*			10.8			31.7*
35-39		14.5	18.5		3.6*	1.3*	9.2	11.5*		
40-44	1.9*	11.1	7.8	4.8			8.9		20.7*	
45-49		10.2	5.3	7.6			10.7	20.0*		
50-54		12.6	5.7*	17.6	5.5	2.3	15.5			33.2*
55+		16.8		59.3	64.8	96.4	13.7	57.0	34.6	35.1
					2007-2011					
Total	26.6	6.5	6.3	13.7	8.9	43.5	9.8	3.1	2.7	1.5
Women	53.5	96.1	98.1	50.0	72.1	63.7	59.2	62.9	64.2	75.5
Men	46.5	3.9	2.9	50.0	27.9	36.3	40.8	37.1	35.9	24.5
15- 24	92.5	4.7	9.4	5.6*	27.4		19.2		21.3	
25-29	6.5	8.5	18.1				17.9		13.6*	
30-34		15.5	32.1	5.0*		0*	6.9	15.9*		28.6*
35-39		10.6	15.2		1.9*		6.3			
40-44	0.9*	11.5	9.4	4.8			5.1		14.0*	
45-49		12.6	6.3	6.6		1.1*	9.9			36.7*
50-54		13.8	9.6*	17.2	4.2		14.0	14.9	50.6*	
55+		22.8		60.8	66.5	98.7	20.8	69.2		34.7
					2011-2013					
Total	19.9	6.9	7.0	12.9	8.2	40.9	17.6	2.7	2.3	2.0
Women	52.3	93.8	97.0	46.3	67.5	63.0	52.6	70.4	54.2	75.6
Men	47.7	6.2	3.0	53.7	32.5	37.0	47.4	29.6	45.8	24.4
15- 24	91.3	6.3	8.8	6.2*	19.3		18.3	8.1*	24.9	7.0*
25-29	6.7	10.6	23.2				16.0		9.0	
30-34		19.3	32.3	6.9*		1.2*	12.2			8.5
35-39		12.8	17.1		3.1*		9.0	11.2*	9.9*	9.6
40-44	2.0*	10.2	9.3	4.1			9.1			8.6
45-49		9.4	3.2	7.7			7.7	7.2	11.1*	14.0
50-54		11.0	6.1*	13.1	5.5	1.7	10.1	8.3		13.4
55+		20.4		62.1	72.4	97.1	17.7	65.1	45.6	38.8

Note: The respondent could indicate no more than 3 conditions.
* grouping of age groups due to low numbers
** too small numbers for structure analysis by socio-economic features

Table 4.9.23. Structure of unemployed by gender. age and conditions of taking on work in 2007-2013 (%)

Age/gender	Lack of full-time work	Possibility of work from home	Elastic work time	More help needed in the care of household members	Possibility of childcare or care for the infirm	Possibility of keeping welfare benefits	Good conditions for travel to work for the disabled	Other	Lack of desire to work
2005-2009									
Total	13.4	8.8	14.0	3.3	3.7	5.9	3.2	22.1	48.2
Women	35.8	32.9	41.7	20.0	12.0	50.3	58.1	52.2	36.5
Men	64.2	67.1	58.3	80.0	88.0	49.7	41.9	47.8	63.5
15- 24	27.8	27.6	44.8	21.0	18.0	17.0*	11.7	41.0	13
25-29	8.5	9.8	14.0	21.4	21.9		6.2	10.0	1.0
30-34	6.8	9.1	9.5	17.0	20.3	6.8*	11.4*	5.1	1.2*
35-39	6.3	8.5	6.7	10.0	15.3			5.1	
40-44	4.2	7.4	5.0	16.2*	12.0*	12.3*	7.6	6.0	0.9
45-49	5.2	7.2	4.6				8.6	6.8	1.5
50-54	9.2	8.9	5.6	14.3*	12.6*	14.9	23.1	8.1	3.9
55+	32.0	21.4	10.2			48.9	31.4	17.9	78.4
2007-2011									
Total	11.7	7.0	10.1	0.3	2.6	4.3	2.6	16.0	56.6
Women	34.9	31.0	40.8	14.1	9.6	44.0	44.0	45.4	35.9
Men	65.1	69.0	59.2	85.9	90.4	56.0	56.0	54.6	64.1
15- 24	34.5	34.8	60.4	16.0	22.3	17.0*	17.0	50.5	13.3
25-29	5.9	9.1	10.2	15.6	17.1		4.2	7.3	1.3*
30-34	6.5	8.3	4.7	19.1	29.5	6.6*	4.9*	3.1	
35-39	4.5	5.2	4.3	15.1	8.8			2.4	1.1*
40-44	3.0	4.3	3.1	15.0*	10.4*	14.3*	4.9	4.3	
45-49	4.3	5.4	5.4*				5.7	4.3	1.2
50-54	7.9	7.6		19.1*	12.0*	8.6	8.6	7.4	3.0
55+	33.5	25.2	11.9			54.8	54.8	20.6	80.0
2011-2013									
Total	13.2	7.4	10.7	2.5	3.0	4.4	2.9	19.1	49.7
Women	38.2	33.8	37.7	16.1	14.4	49.4	59.0	50.6	36.9
Men	61.8	66.2	62.3	83.9	85.6	50.6	41.0	49.4	63.1
15- 24	28.6	27.6	41.7	15.0	13.6	8.7	18.9	36.4	11.5
25-29	7.4	9.9	13.8	21.4	18.9	6.7	8.2	11.5	1.5*
30-34	7.7	9.7	10.9	25.6	25.7	8.5	12.4*	7.2	
35-39	4.2	5.3	7.5	14.7	14.3	6.7*		5.7	1.4*
40-44	4.0	5.4	5.4	8.3	9.5		13.0*	5.5	
45-49	5.1	6.6	4.4	10.1*	9.3*	7.6		6.1	1.2
50-54	8.1	8.5	4.3			9.1	17.6	7.7	2.5
55+	35.0	27.1	12.1	14.8	8.9	52.7	29.9	19.9	81.8

Note: The respondent could indicate no more than 2 conditions.
* grouping of age groups due to low numbers

The breakdown of respondents by age who indicated conditions that would persuade them to take up work is to a large extent determined by the individual's stage of life and division of roles in the family. Women dominate among those indicating part-time work, work from home, flexible work time, more support for family members in their domestic duties or the possibility of receiving childcare of care for the infirm. Younger women take care of and bring up children, while the older care of the elderly and grandchildren. Among those who indicated that the possibility of keeping welfare benefits would persuade them to work around a half were over 55, and this indicator rose in 2007-2011, only to fall to a marked extent in the next study. For these people the chance to combine work with receiving a pension would be an activating factor, which takes on some significance in terms of the aging of the population. The exceptionally large and rising share of a lack of willingness to work is concerning, which showed a marked rise in 2007-2011 (around 48% in 2005-2009 and 56% in 2007-2011) to fall back to around 50% in 2011-2013. This group of respondents is clearly dominated by the over 55s at 78-82% in all the analysed periods.

4.9.6.5. Activity of adults and labour market dynamics

The importance of further education for labour market status was confirmed by analysis of the labour market flows between the states of employment, unemployment and the profession inactive conducted on the basis of the panel sample. *Social Diagnosis 2005* conducted analysis of the flows between 2003 and 2005 for those who took advantage of educational services in 2003, whether full-time, part-time or by correspondence, as well as in the form of training courses, compared to the rest of the population that did not participate.

Table 4.9.24. Labour market inflows of 25-39 year-olds by share of qualification raising in 2005-2013 (%)

a) 2005-2007

Condition in March 2005	Condition in March 2007			
	Employed	Unemployed	Inactive	Total
Participants in qualification raising in the last 2 years (N=282)				
Employed	67.9	2.9	3.3	74.1
Unemployed	4.4	1.8	1.8	8.0
Inactive	12.8	1.8	3.3	17.9
Total	85.1	6.5	8.4	100.0
Other respondents (N=1141)				
Employed	63.3	1.6	4.0	68.9
Unemployed	8.8	3.1	2.3	14.2
Inactive	6.6	1.8	8.5	16.9
Total	78.7	6.5	14.8	100.0

b) 2007-2009

Condition in March 2007	Condition in March 2009			
	Employed	Unemployed	Inactive	Total
Participants in qualification raising in the last 2 years (N=445)				
Employed	75.7	2.9*	2.2*	80.9
Unemployed	3.4*	1.3*	0.4*	5.2
Inactive	7.2	0.4*	6.3*	13.9
Total	86.3	4.7	9.0	100
Other respondents (N=1620)				
Employed	67.3	3.3	3.7	74.3
Unemployed	4.3	2.5	1.4	8.1
Inactive	6.5	1.6	9.5	17.6
Total	78.0	7.4	14.6	100.0

c) 2009-2011

Condition in March 2009	Condition in March 2011			
	Employed	Unemployed	Inactive	Total
Participants in qualification raising in the last 2 years (N=806)				
Employed	67.3	4.3	1.9*	73.6
Unemployed	4.7	1.4*	0.4*	6.5
Inactive	8.4	3.8	7.7	20.0
Total	80.5	9.6	9.8	100.0
Other respondents (N=3670)				
Employed	67.6	3.1	3.2	73.9
Unemployed	4.3	2.6	1.6	8.4
Inactive	5.9	1.9	9.9	17.7
Total	77.7	7.6	14.7	100.0

d) 2011-2013

Condition in March 2011	Condition in March 2013			
	Employed	Unemployed	Inactive	Total
Participants in qualification raising in the last 2 years (N=729)				
Employed	73.4	2.1*	1.8*	77.3
Unemployed	2.9	2.6	0.3*	5.8
Inactive	6.8	1.5*	8.6	16.9
Total	83.1	6.2	10.7	100.0
Other respondents (N=3830)				
Employed	66.7	3.9	3.2	74.7
Unemployed	4.7	3.1	1.6	9.4
Inactive	4.2	1.9	9.7	15.9
Total	76.5	8.9	14.6	100.0

* too small number

Another gauge of educational activity was used in analysis of flows based on data from *Social Diagnosis* 2007, 2009, 2011 and 2013 that was introduced in the 2007 questionnaire and asked about participation in whatever activity associated with raising professional qualifications or other skills within the last 2 years. Only 25-39 year olds were surveyed as educational activity after 39 falls significantly and refers to a marginal part of the population. Tables 4.9.24 – 4.9.26 present data for four periods: 2005-2007, 2007-2009 and 2011-2013, though the detailed discussion refers mainly to the last period and it is found in previous texts for earlier editions of *Social Diagnosis*.

Among 25-39 year olds who raised their qualifications in 2011-2013 and were studied according to their labour market status in 2011, around 77.3% were employed, 17% inactive professional and around 9.4% were unemployed (table 4.9.30). Two years later there were more in work at around 83.1% and fewer inactive professional (around 10.7%), though the share of unemployed increased to around 6.2% in this group. The structure of those who did not decide to raise their qualifications at this time observed according to employment status in 2011 is close to those who did – those in employment made up around 74.7%, unemployed around 9.4% and the inactive professional around 15.9%. In 2013, the share of those in work increased to 76.5% in this group as well though not as strongly as that in the educationally active group, while the share of inactive professional fell insignificantly to 14.6% with a stable share of the unemployed.

The improvement in the structure of compared groups according to labour market status is a result of a rise in the share of those in work that was stronger for those raising their qualifications with an also much more marked fall in the inactive professional educationally active at the same time. However, the changes in the share of unemployed in both groups were not so distinct, with the rise in the unemployed educationally active influenced by an inflow of the inactive professional into that state.

These changes are similar to the results of the previous study round, though they differ somewhat from those observed in earlier periods. The improvement in the labour market situation of the educationally active in 2005-2007 and 2007-2009 is a result of a rise in the share of the employed with a fall in the share of inactive professional and the relatively stable share of the out of work. However, for those who did not participate in training in 2005-2007, the change is a result of the increase in the employed with a marked fall in the out of work and a relatively stable share of the inactive professional, while in 2007-2009 the share was similar to the last period – there was more in work and fewer inactive with a stable share of the unemployed.

The results from the three compared periods reveal the influence of qualification raising on the rise of professional activity as a result of the increase in the share of the employed and a fall in that of the inactive professional.

As in previous years, the educationally active in work in 2011-2013, like those who were not active, were characterised by a high level of employment stability at 90% and higher both for those in and not in training, though in 2011-2013 the stability of employment for the educationally active was significantly higher than for those who were not.

Summarising, results of analysis for 2011-2013. 2009-2011, 2007-2009 and 2005-2007 indicated an improvement in qualification has a bearing on the activation of the inactive professional. Participation increased the chances of the out of work finding employment in 2007-2009, though it did not in 2005-2007, 2009-2011 and 2011-2013. However, the chances of remaining in employment were very high and relatively similar for both compared educationally active and inactive groups.

Labour market dynamics assessed on the basis of flows between the outlined labour market states varies according to gender (tables 4.9.25 and 4.9.26). Among women of 25-39 years of age who raised their qualifications in the last two years, the share of the employed rose from 71.5% to 81%, which was stronger than in 2009-2011 (from 71% to 75%), and that of the inactive professional fell significantly from around 21.3% to 11.6%, which is a result comparable to 2009-2011 from 23% to 13%. However, for educationally active men over the last 2 years, the share of the employed rose insignificantly from 85.4% to 86.3%, with a slightly larger rise noted in the earlier period (from 82% to 85%). The share of inactive professional men in 2011- 2013 fell from 11.1% to 9.5% compared to a fall from around 16% to around 6% in 2009-2011. Among the educationally active men and women in 2011-2013, the share of unemployed remained stable with a rise in unemployed women from 6% to around 12% in 2009-2011. In the current round, the clear fall in professional passivity in this group is linked to employment, while in 2009-2011 of importance was also an inflow of professional inactive women to the unemployed.

Table 4.9.25. Labour market inflows of 25-29 year-old women by share in qualification raising in 2005-2013 (%)

a) 2005-2007

Condition in March 2005	Condition in March 2007			
	Employed	Unemployed	Inactive	Total
Participants in qualification raising in the last 2 years (N=160)				
Employed	62.1	1.9	4.5	68.5
Unemployed	4.5	2.6	2.6	9.7
Inactive	13.5	3.2	5.1	21.8
Total	80.1	7.7	12.2	100.0
Other respondents (N=593)				
Employed	56.6	1.4	6	64
Unemployed	6.8	2.2	3.4	12.4
Inactive	8.2	2.7	12.7	23.6
Total	71.6	6.3	22.1	100.0

b) 2007-2009

Condition in March 2007	Condition in March 2009			
	Employed	Unemployed	Inactive	Total
Participants in qualification raising in the last 2 years (N=219)				
Employed	70.3	2.7	3.2*	76.3
Unemployed	6.4*	1.4*	-	7.8*
Inactive	8.7*	0.5*	6.8*	16.0
Total	85.4	4.6*	10.0	100.0
Other respondents (N=840)				
Employed	57.5	2.5*	5.1	65.1
Unemployed	3.1	3.2	1.9	8.2
Inactive	9.2	2.4*	15.1	26.7
Total	69.8	8.1	22.1	100.0

c) 2009-2011

Condition in March 2009	Condition in March 2011			
	Employed	Unemployed	Inactive	Total
Participants in qualification raising in the last 2 years (N=431)				
Employed	63.1	5.6	2.3*	71.0
Unemployed	3.7	1.4*	0.7*	5.8
Inactive	7.9	5.3	10.3	23.2
Total	74.7	12.3	13.0	100.0
Other respondents (N=1787)				
Employed	57.4	2.7	5.3	65.4
Unemployed	3.5	2.8	2.2	8.5
Inactive	8.7	2.3	15.1	26.1
Total	69.6	7.8	22.7	100.0

d) 2011-2013

Condition in March 2011	Condition in March 2013			
	Employed	Unemployed	Inactive	Total
Participants in qualification raising in the last 2 years (N=414)				
Employed	68.1	2.2*	1.2*	71.5
Unemployed	3.6*	3.4*	0.2*	7.2
Inactive	9.2	1.9*	10.1	21.3
Total	80.9	7.5	11.6	100.0
Other respondents (N=1911)				
Employed	58.7	2.7	5.0	65.5
Unemployed	4.8	2.7	2.5	9.9
Inactive	6.4	3.0	15.1	24.5
Total	69.0	8.5	22.5	100.0

* numbers too low

The structure of men and women who did not raise their qualifications is characterised by a generally lower share of employed and a higher one of unemployed, whose change over time are clearly less favourable. With the exception of 2009-2011, changes in labour market status among those raising their qualifications and the rest are greater for women, indicating the greater importance of professional training for their status on the labour market .

Therefore, professional qualification raising had an influence on improving the labour market status of the inactive professional. Women gained greater advantage from their educational activity than men in comparison to the educationally inactive, which was clear especially in the last study round.

Table 4.9.26. Labour market inflows of 25-29 year-old men by share in qualification raising in 2005-2013 (%)

- 2005-2007

Condition in March 2005	Condition in March 2007			
	Employed	Unemployed	Inactive	Total
Participants in qualification raising in the last 2 years (N=122)				
Employed	76.7	4.3	0.9*	81.9
Unemployed	3.5	-	1.7*	5.2
Inactive	12.1	-	0.8*	12.9
Total	92.3	5.2	2.5	100.0
Other respondents (N=593)				
Employed	70.8	1.8	1.8	74.4
Unemployed	10.9	4.1	1.0	16.0
Inactive	4.8	1.0	3.8	9.6
Total	86.5	6.9	6.6	100.0

- 2007-2009

Condition in March 2007	Condition in March 2009			
	Employed	Unemployed	Inactive	Total
Participants in qualification raising in the last 2 years (N=225)				
Employed	81.3	3.1	1.3	85.8
Unemployed	0.4	0.9*	0.9*	2.2
Inactive	5.8	0.4*	5.8*	12.0
Total	87.6	4.4*	8.0*	100.0
Other respondents (N= 779)				
Employed	77.9	4.1	2.2*	84.2
Unemployed	5.5	1.8*	0.6*	8.0
Inactive	3.6*	0.8*	3.5*	7.8
Total	87.0	6.7	6.3	100.0

- 2009-2011

Condition in March 2009	Condition in March 2011			
	Employed	Unemployed	Inactive	Total
Participants in qualification raising in the last 2 years (N=376)				
Employed	72.1	2.9*	1.3*	76.3
Unemployed	5.9	1.6*	-	7.2
Inactive	9.0	2.4*	5.1*	16.5
Total	87.0	6.6	6.4	100.0
Other respondents (N= 1882)				
Employed	77.3	3.5	1.2	82.0
Unemployed	5.0	2.4	0.9*	8.2
Inactive	3.3	1.5	4.9	9.8
Total	85.6	7.4	7.0	100.0

- 2011-2013

Condition in March 2011	Condition in March 2013			
	Employed	Unemployed	Inactive	Total
Participants in qualification raising in the last 2 years (N=315)				
Employed	80.6	1.9*	2.9*	85.4
Unemployed	1.9*	1.3*	0.3*	3.5*
Inactive	3.8*	1.0*	6.3	11.1
Total	86.3	4.1*	9.5	100.0
Other respondents (N=1911)				
Employed	77.3	5.0	1.5	83.8
Unemployed	4.6	3.6	0.8*	9.0
Inactive	2.0	0.8*	4.4	7.2
Total	83.9	9.4	6.7	100.0

* Numbers too low

4.9.6.6. Educational activity and change in household income in 2009-2013

Up to now, analysis has focused on researching change of labour market status of the educationally active and inactive. An important supplement to this analysis is checking whether qualification improvement is linked to changes in the income situation of those in employment who were engaged in training and whose labour market status in the last two years remained the same. In the current round of *Social Diagnosis*, it is possible to analyse the change dynamic of a working respondents personal income according to whether they were engaged in educational activity over the last four years. In the

studies of 2007, 2009, 2011 and 2013, the individual questionnaire contains a question about the respondent's net personal income over the last three months. In the analysis from previous *Social Diagnosis* rounds, it was necessary to make use of income per household member with a control of the number of household members. However, household income also depends on changes of income gained by other household members, which could not be included in the analysis of the change dynamic of the income situation of respondents who took part or did not take part in training in 2006-2007.

However, the following analysis of respondents' income situation on the basis of personal income constitutes merely a description of the correlation between changes in personal income and training and does not allow for a cause and effect interpretation. All the more so as this income is strongly correlated to other features such as educational attainment.

Tables 4.9.27 and 4.9.28 present a breakdown of net personal income[52] of the employed in 2007, 2009, 2011 and 2013 for two groups of respondents: those actively raising their qualifications in the last two years and those who did not. as well as the dynamic of income in 2007-2009, 2009-2011 and 2011-2013. Because of the differing variables defining income used in previous study round analysis, it is not possible to compare income dynamic changes directly between 2005-2007 (contained in previous *Diagnosis* reports) and 2007-2009, 2009-2011 and 2011-2013.

The dynamic of income change for both of the selected groups differs to the disadvantage of the educationally active for whom there a fall by 14% in 2011-2013 was compared to a rise of around 7% for the educationally inactive. However, despite these negative changes the income of the educationally active is higher than that of the inactive. Compared to the previous period, the rising trend in net personal incomes of the educationally active was reversed, as in 2009-2011 a rise of 22% was noted. This is also a clear change in comparison to 2007-2009 when the income rise dynamic was considerable but identical for both the compared groups with incomes of the educationally active and inactive rising by on average 37%. In 2005 and 2007, incomes per educationally active household members rose more quickly than that of who were not. This beneficial change for both groups in 2007-2009 was linked to a general rise in pay observed at the time, especially in 2008. The fall in income growth dynamic in 2009-2011, especially for the educationally inactive is linked with the economic slowdown in recent years as is the worsening of the situation of the educationally active in 2011-2013. However, identifying the reasons for the different personal net income change dynamic over the last two years between the educationally active and inactive demands more detailed analysis.

Women who over the last 2 years raised their qualifications had a lower average income than educationally active men. In 2007-2009, the average income dynamic of men and women who were engaged in training was the same with a rise of 37%, which meant the 16% income gap between the genders from the previous period remained. However, in 2009-2011, men's personal income rose faster at 24% compared to 21%, so the income gap increased to 18%. In 2011-2013, average income of the educationally active fell for both genders, though more strongly for women by around 19% than for men at around 8%, which resulted in an increase of the gender income gap to nearly 28%. The situation is different in the case of the educationally inactive, with women's average personal income rising more strongly by 40% compared to 34% in 2007-2009, reducing the gender income gap from around 24% in 2007 to 21% in 2009. In 2009-2011, incomes of the educationally inactive rose much more slowly than those of the active, though more strongly for women than for men (8% compared to 5%), which resulted in a further narrowing of the gender income gap to 19%, which also continued in 2011-2013. Average personal income of educationally inactive women rose more strongly by 12% in 2011-2013 (men around 4%), resulting in a reduction of the income gap to 13.1%.

A comparison of the income situation of the educationally active and inactive separately for men and women certain interesting changes are noticeable. The income gap between educationally active and inactive women narrowed from 40% in 2007 to 37% in 2009, only to increase again to as much as 54% in 2011. For men it rose from 27% in 2007, to 30% in 2009 up to 52.4% in 2011. However, in 2013 the income gap between women was only around 10% and around 25% for men. This marked narrowing of the income gap for the educationally active and inactive was, especially for women, above all a result of the fall in average personal incomes of the active.

The dynamic of income quartile breakdowns in both respondent groups indicates the beneficial influence of educational activity for women and men's income breakdowns, which was stronger for men in the second and third quarters. The income median for educationally active man in 2013 fell with a stabilization of the first and third quarter compared to 2011. For educationally active women, the third

[52] Calculations took into account respondents' average monthly net income for the last three months.

quarter fell in this period, and the first rose significantly with a stabilization in the median value breakdown of average personal incomes, which led to a fall in the diversity of this group of women's income.

Table 4.9.27. Breakdown of net personal income of 25-39 year-old working respondents in 2009. 2011 and 2013

Selected respondent groups	Average personal income and its differentiation (PLN)			Personal income breakdown quartiles (PLN)								
				First quartile			Second quartile			Third quartile		
	2009	2011	2013	2009	2011	2013	2009	2011	2013	2009	2011	2013
Persons who raised their qualifications in the last 2 years	2593* 2219**	3178* 2870**	2748* 1571**	1500	1700	1800	2000	2300	2300	3000	3500	3000
Other respondents	1959 1461	2110 1450	2268 1528	1131	1300	1500	1600	1800	1999	2200	2500	2600
Women who raised their qualifications in the last 2 years	2361 2280	2859 2700	2308 1024	1400	1500	1700	2000	2000	2000	3000	3000	2900
Other women	1717 1277	1856 1248	2080 1494	1000	1200	1300	1400	1500	1700	2000	2100	2500
Men who raised their qualifications in the last 2 years	2815 2145	3494 3002	3201 1881	1800	2000	2000	2000	2800	2700	3051	3972	4000
Other men	2172 1555	2293 1514	2393 1539	1300	1411	1500	1900	2000	2000	2500	2500	3000

* average income in the last three months

** standard deviation of personal income in the last three months. In 2009-2011, the median showed the greatest dynamic of educationally active men's income change. followed by the third quartile. as opposed to 2007-2009, when the first quartile showed the greatest rise (table 4.9.28). On the other hand for women, only the lowest income groups saw benefits from qualification raising (an insignificant rise in the first quartile).

It came as a surprise that there was a rise in income both for women and men who were educationally inactive compared to a small fall for the active, which seems to bear witness to a relative fall in the yields of improving human capital at a certain level of its saturation. The current situation is a continuation of the trends observed in 2009-2011 for women. when a stronger rise in educationally inactive women's incomes than that of the active was noted, which was a totally different result to that from 2007-2009.

Table 4.9.28. Dynamic of change in net income breakdown parameters of working respondents aged 25-39 in 2007, 2009, 2011 and 2013 (previous period = 100)

Respondents by gender and educational activity	Average personal income	First quartile	Second quartile	Third Quartile
		Total		
Educationally active	1.37*	1.50	1.33	1.50
	1.22**	1.13	1.15	1.16
	0.86***	1.06	1.00	0.86
Educationally inactive	1.37	1.40	1.33	1.22
	1.07	1.15	1.12	1.14
	1.07	1.15	1.11	1.04
		Women		
Educationally active	1.37	1.40	1.54	1.50
	1.21	1.07	1.00	1.00
	0.81	1.13	1.00	0.97
Educationally inactive	1.40	1.25	1.40	1.33
	1.08	1.20	1.07	1.05
	1.12	1.08	1.13	1.19
		Men		
Educationally active	1.37	1.50	1.25	1.33
	1.24	1.11	1.40	1.30
	0.92	1.00	0.96	1.01
Educationally inactive	1.34	1.30	1.46	1.25
	1.05	1.08	1.05	1.00
	1.04	1.06	1.00	1.20

* income change dynamic 2007-2009

** income change dynamic 2009-2011

*** income change dynamic 2011-2013

Summarizing, in 2011-2013, incomes of both selected respondent groups still clearly differ in favour of the educationally active despite negative trends in the personal incomes of the active and the gap between the active person's average income and the inactive narrowing in comparison with the previous period. There are differences in the income breakdown and their dynamics for both selected groups among men and women, with the influence of training on income improvement smaller for employed women than men

4.9.6.7. Individual determinants of adults' educational activity

It is possible to synthetically illustrate respondent labour market status with the help of the appropriate model of the previously discussed differentiation by socio-demographic feature in adult educational activity associated with professional qualification. To do so we have taken advantage of the following logistical model (Gruszczyński, 2002)

$$P(Y = y_i) = F^{-1}(x^T\beta) = \frac{e^{x^T\beta}}{1+e^{x^T\beta}}$$

where:

Y is a binary random variable with the value: 1 being the case when the respondent raised their professional qualifications in the last 2 years, and 0 in the case when he did not.

F is the logistical breakdown distributor

x is the explanatory variable column vector

β is the parameter column vector

In this model of standard socio-demographic features such as age, gender, educational attainment and place of residence class, respondents' labour market situation was also considered as was state of health measured by legal or biological handicap. Models for men and women were estimated separately (table 4.9.29).

Table 4.9.29. Results of logistical regression model estimation describing educational activity of the over 25 in 2011 and 2013

Independent variable type	Independent variable	Probability estimate Men			Probability estimate Women		
		2009	2011	2013	2009	2011	2013
Age	25-29	7.077***	4.655***	4.701***	8.810***	5.841***	4.446***
	30-34	4.204***	3.145***	3.209***	5.913***	4.764***	3.255***
	35-39	4.437***	3.562***	3.991***	7.311***	5.174***	2.955***
	40-44	3.872***	3.453***	3.886***	5.487***	4.929***	3.668***
	45-49	2.642***	2.315***	2.954***	5.488***	3.962***	3.144***
	50-54	2.001***	1.523***	2.310***	3.216***	2.370***	1.950***
	55+	ref.	ref.	ref.	ref.	ref.	ref.
Education	Primary and lower	0.106***	0.222***	0.218***	0.070***	0.153***	0.102***
	Basic and vocational	0.228***	0.246***	0.289***	0.118***	0.188***	0.135***
	Secondary	0.462***	0.449***	0.553***	0.380***	0.368***	0.331***
	Higher	ref.	ref.	ref.	ref.	ref.	ref.
Household per capita income	I quartile	0.787*	0.458***	0.646***	0.887	0.379***	0.961
	II quartile	0.917	0.523***	0.556***	0.840*	0.764***	0.682***
	III quartile	0.914	0.616***	0.677***	0.901	0.629***	0.816**
	IV quartile	ref.	ref.	ref.	ref.	ref.	ref.
Labour market status	Employed	1.989***	2.627***	1.958***	2.155***	2.542***	2.601***
	Unemployed	1.939***	5.046***	1.931***	2.799***	4.266***	3.026***
	Inactive	ref.	ref.	ref.	ref.	ref.	ref.
Health	Able	1.782***	0.976	0.961	1.197	1.057	0.766*
	Disabled	ref.	ref.	ref.	ref.	ref.	ref.
Place of residence class	Towns of over 500k	1.826***	1.880***	2.952***	2.903***	2.803***	2.922***
	Towns of 200k-500k	1.681***	2.034***	2.687***	2.282***	2.885***	2.485***
	Towns of 100k-200k	1.449***	1.529***	1.828***	1.438***	1.586***	1.407**
	Towns of 20k-100k	1.319***	1.349***	1.526***	1.565***	1.857***	1.589***
	Towns of 20k and less	1.043	1.331**	1.261*	1.190	1.552***	1.732***
	Rural areas	ref.	ref.	ref.	ref.	ref.	ref.
N		10776	11049	10381	12532	12732	12128
pseudo R^2 (Nagelkerke)		0.206	0.252	0.221	0.356	0.323	0.306

Variables significant at ***-0.01. **-0.05.*-0.1

The results of model estimations confirm descriptive analysis findings. Both for women and men, age is a significant determinant of engaging in educational activity in 2007-2009, 2009-2011 and 2011-2013, though it would seem to have had the greatest influence in 2007-2009, thus the younger the person, the larger the probability of engagement in training. It should however be noted that women of 30-34 years of age relatively more seldom than those of 25-29 or 35-39 decide to be educationally active, which may be associated with an increase in family duties[53].

Incomes per household equivalent unit were not a variable that strongly determined educational activity in 2007-2009 as opposed to 2009-2011 and 2011-2013 (with the exception of the result gained in the first quarter for women. which turned out to be statistically insignificant), when higher income increased the probability of engaging in training. In the first period this may be associated with the large availability of largely educational activity European Social Fund co-financing or of financing from employers' funds. In 2009-2011 and 2011-2013, many employers could have forgone co-financing their employees training. which resulted in the weight of financing educational activities shifting to households.

Labour-market status is a variable with a significant influence on the probability of engagement in training. Those present on the labour market, whether in work or unemployed, engage in educational activity more often than the inactive professional. In 2011, compared to the latter, the out of work of both genders had a decidedly higher probability of training than even the employed, and though in 2009 this only applied to women, the difference was small. However, in influence of unemployment on the probability of engagement in training was reduced compared to 2011, especially in the case of men.

State of health is a significant determinant of engagement in educational activity by men, though only in 2009, with those not handicapped having around 78% higher probability of taking up training in the last two years compared to those with a disability. In 2011, the influence of health on taking educational initiatives was not noted, while in 2013, the effect of women's state of health became apparent in an unintuitive way as women without a disability have a 23% smaller probability of taking up educational activity than disabled women. This could be linked to the greater availability of various types of programme and project directed to the disabled to increase their employability.

Place of residence class has a significant effect on the probability of taking up training, which was more strong in women in three of the analysed periods. Together with an increase in the size of place of residence, there is a rise in the likelihood of taking up educational activity, especially for the middle-sized and large towns compared to rural areas.

In summary, results in model analysis confirm the high selectivity of the training process for the over 25s. Young people who are well-educated, professionally active with higher incomes and dwelling in large agglomerations engage in educational activity.

[53] In 2008, average childbirth age was 28.5, while in 2012 it exceeded 29.

4.10. The Procreation reserve

Janusz Czapiński

The term procreation reserve has a double meaning; at the individual level it means the decision to forego having a first or another child, while at the social level it is the supply of potential parents.

In the individual questionnaire, we asked all respondents to rate the importance of 21 reasons (20 described as „other") that Poles currently do not decide to have children (Annex 1, question 105). Next we asked whether any of these reasons currently concern the respondent personally (Annex 1, question 106). People who answered the question with a „yes" (procreation reserve) were invited to indicate a maximum of three personally relevant reasons in order of importance (Annex 1, question 107).

The assessment of the weight of the many defined reasons motivating the procreation reserve group differs from that of the remaining respondent sample (figure 4.10.1). Also, reasons like an uncertain future, a lack of partner, poor living conditions, educational costs, difficulties in reconciling work and parenting, too low maternity/paternity benefits, a lack of space and high crèche and playschool fees are all, largely material, causes disregarded by those outside the procreation reserve. In comparison with the procreation reserve, Poles in general consider the risk of genetic illness, too short parental leave, ease of contraception and that children are no longer needed in old age as important reasons.

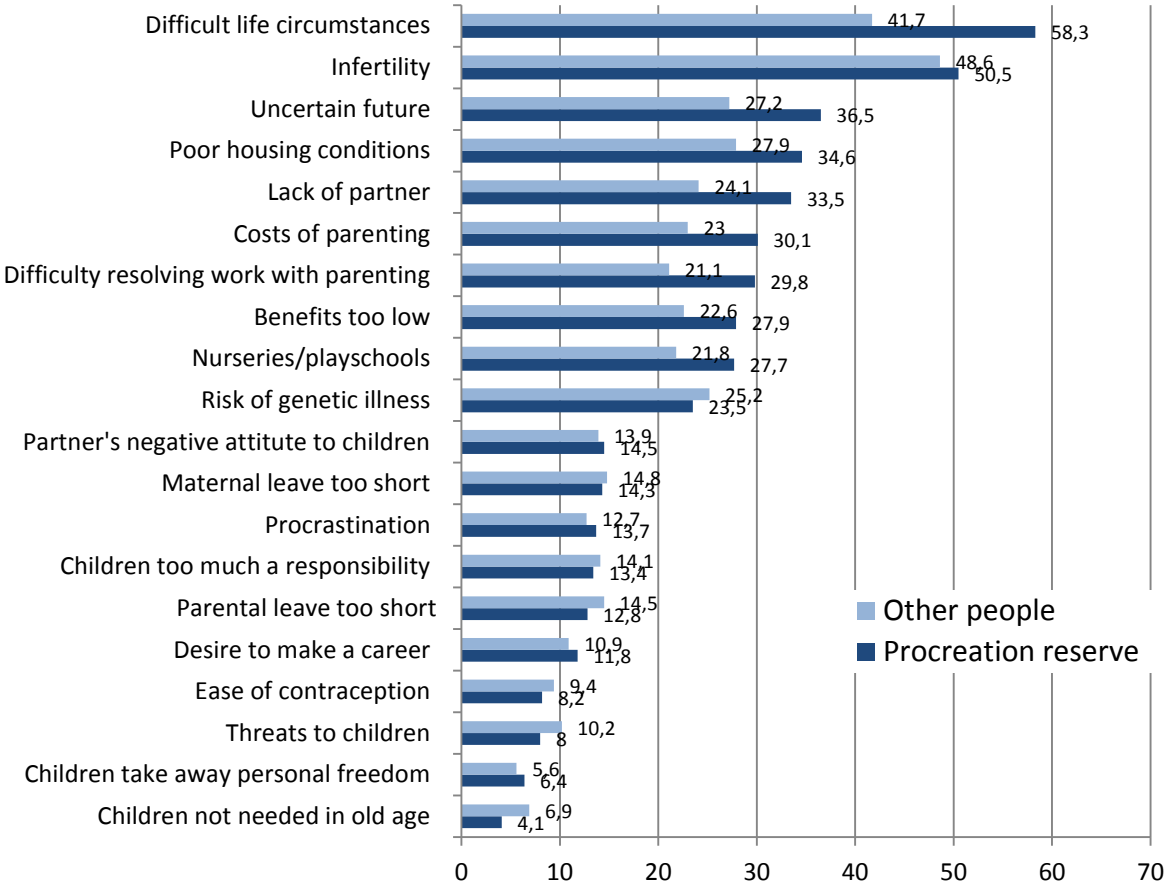


Figure 4.10.1. Percentage of "very important" ratings of reasons of procreation reserve among those who belong to the procreation reserve group (N=2460) and other respondents (N=23380)

It is possible, on the basis of respondents' declarations, to estimate that the procreation reserve makes up 9.5% of the population of over-16s with more women (10.1%) than men (8.8%), with the most in the 25-34 age group (23%), followed by 35-44 (16.3%) and the youngest at 16-24 (7.1%). The share of the procreation reserve increases together with the size of place of residence (rural areas 6.6% and largest cities 15%). Over 40% of the procreation reserve structure are those with higher or post high-school education and merely 26% is made up of those with basic and basic professional education (figure 4.10.2); in the whole population by procreation reserve member the proportions differ at 29 and 39 respectively. There is a marked over-representation from the wealthiest household quartile (figure 4.10.3). The greatest share of the reserve is made up of couples with children, and next multifamily

households, then childless couples and incomplete families (figure 4.10.4). Over 9% of the reserve are people living as informal couples. Over half the reserve is made up of one-child families, and the second largest share is childless (figure 4.10.5). In the population of women under 40 (one of the qualification criteria for the government *in vitro* refund programme) over 1/3 of those without children included themselves in the reserve, and in the group with three or more children this was one person in ten (figure 4.10.6).

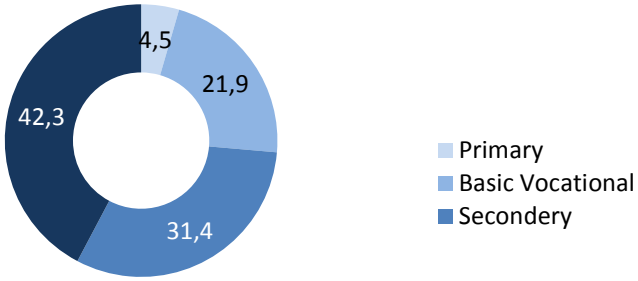


Figure 4.10.2. Percentage procreative reserve structure by educational attainment

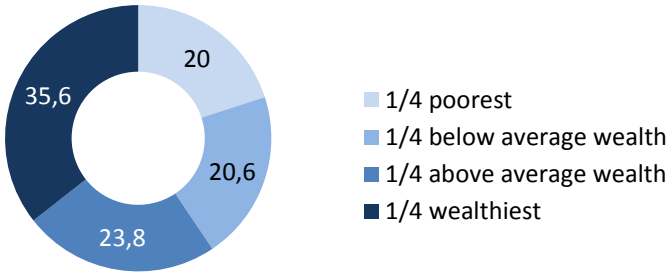


Figure 4.10.3. Percentage procreative reserve structure by quartile level of wealth

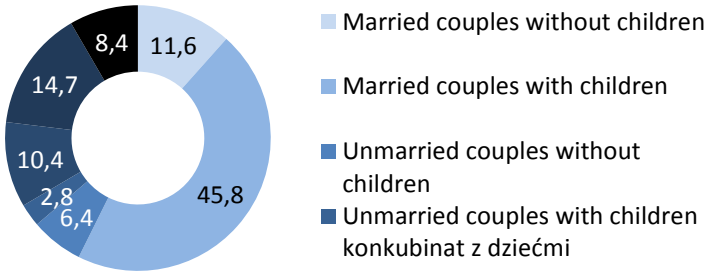


Figure 4.10.4. Percentage procreative reserve structure by type of household

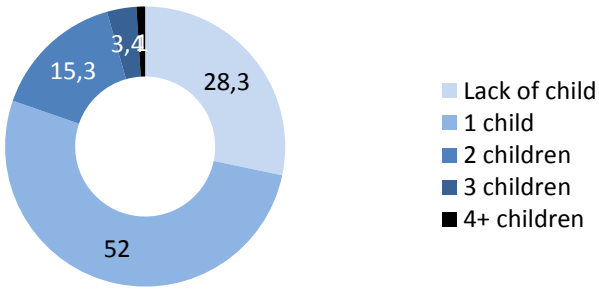


Figure 4.10.5. Percentage procreative reserve structure by number of children supported

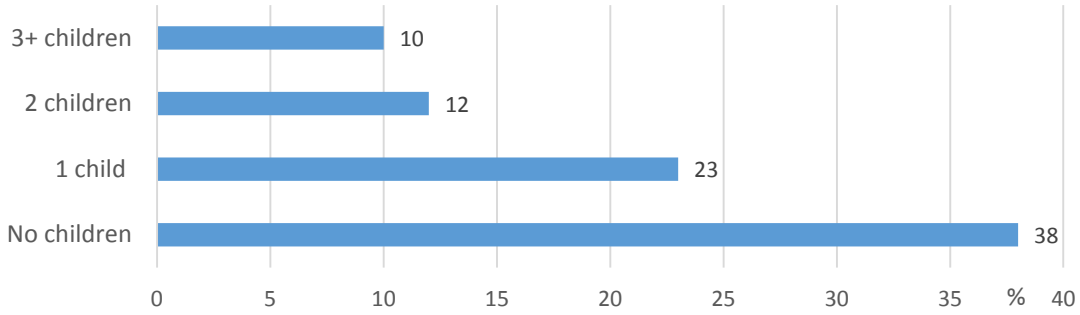


Figure 4.10.6. Percentage of women under 40 in the procreation reserve with different numbers of supported children

People who included themselves in the procreation reserve could choose at most three personal reasons for not having a first or next child. 6.8% used up the limit and 9.5% of individual respondents gave one reason. Among all the reasons given, the most generally mentioned were difficult living conditions (44% of the reserve), with an uncertain future in second place (33%) and next high costs of upbringing and poor living conditions (figure 4.10.7). This means that currently in Poland, it is material concerns that have a decisive influence on the decision to have children, though, as we will discuss below, not in the objective sense, eg. amount of income or living space, but in the subjective in terms of conflict with life aspirations (with current income, another child limits the realisation of aspired aims and with the current living space would cause density above the level we consider acceptable).

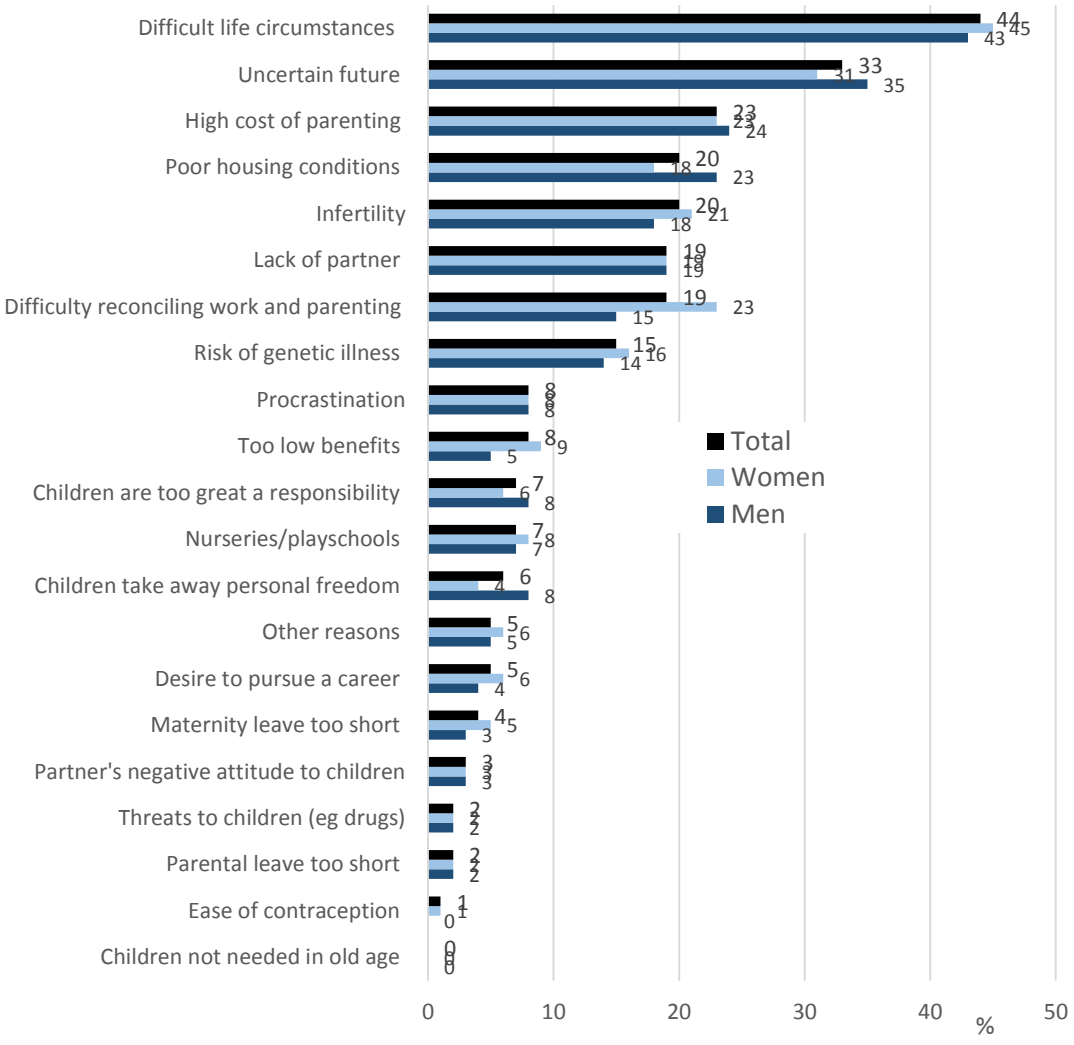


Figure 4.10.7. Personal reasons of the procreation reserve among women, men and in total

If we consider only the reasons given as most important (as the first of the optional three), the frequency ranking is very similar, with only infertility advancing from 5th to 2nd place and lack of partner from 6th to 3rd place (figure 4.10.8). This is understandable, albeit both those reasons being objective and totally sufficient causes of childlessness, and more precisely the inability to have a first or next child. It is therefore not odd that these reasons have the highest average rank (on the scale of 1= most important reason for me to 3= third most important amongst all personal reasons).

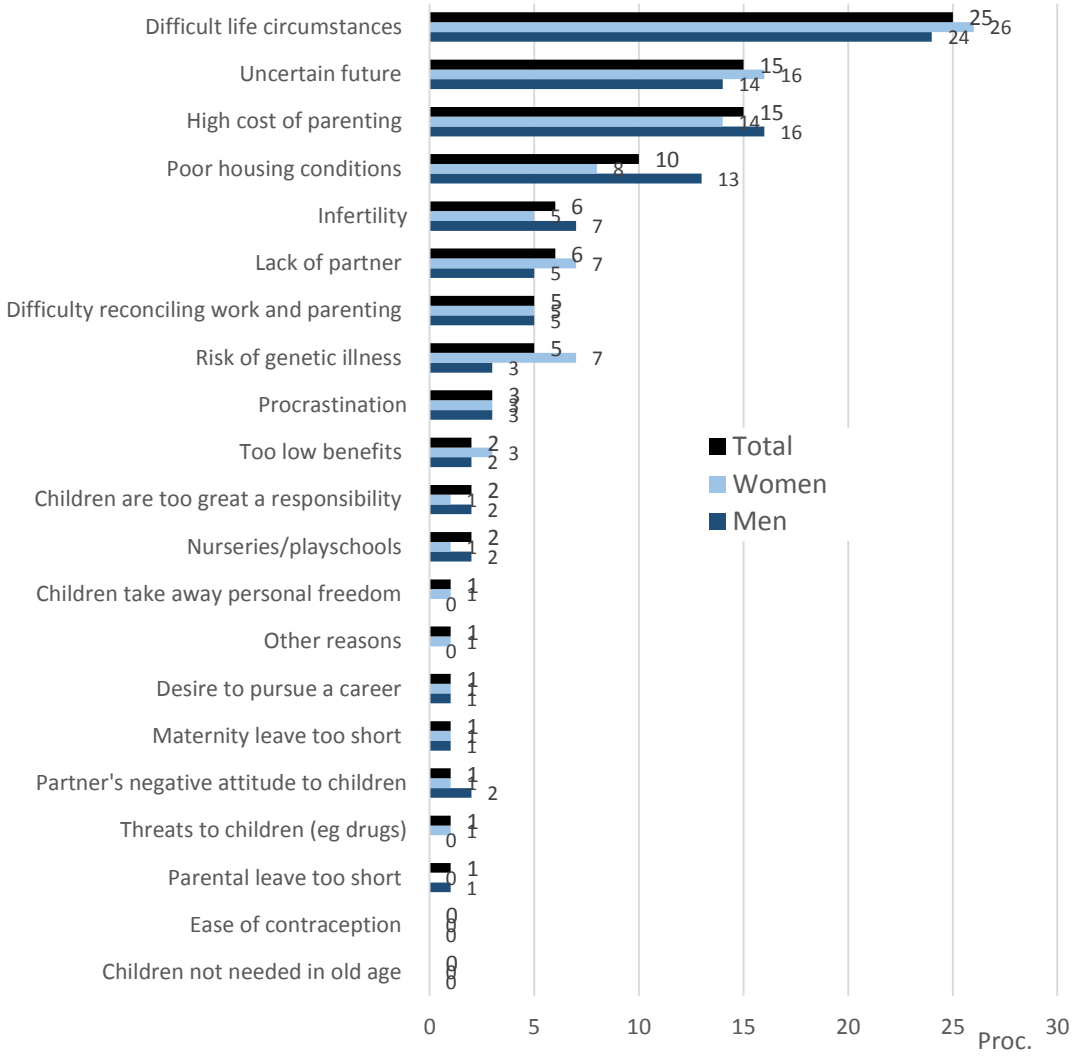


Figure 4.10.8. Personal most important reasons of the procreation reserve among women, men and in total

Also, because people from the procreation reserve assessed the weight of each reason that Poles generally consider in their decision not to have children, we can verify how their personal reasons compare to those ascribed to their fellow citizens. Because the scales for these two data are completely different (in the case of personal reasons „yes" or „no", and the assessment of weight in relation to all Poles was conducted on a five-step scale from 1= very important to 5= absolutely unimportant reason), it is only possible to compare the order according to frequency of personal reasons and that of „very important reason" assessments. Table 4.10.1 shows those two orders and the differences in ranking between them. The reasons associated with comfort and a carefree life (children take life freedom away, children are too great a responsibility and putting off the decision to procreate) are more often ascribed to other Poles than given as personal reasons. Perhaps decisive here is the social approbation factor, a sort of political correctness that it is not done to excuse oneself on the grounds of personal comfort. There are however such reasons of a higher rank as personal reasons than in the assessment for all Poles, such as a partner's unwillingness to have children, infertility, problems with institutional childcare (crèches and playschools) as well as short parental leave.

Table 4.10.1. Comparison of the frequency ranking of personal and ascribed reasons as very important of all Poles and members of the procreation reserve group

Reason	Personally important	"Very important"	Difference in ranking
Children take away personal freedom	13	19	-6
Children are too great a responsibility	11	14	-3
Procrastination	9	12	-3
High cost of parenting	3	6	-3
Maternal leave too short	15	13	-2
Desire to pursue a career	14	16	-2
Risk of genetic illness	8	10	-2
Poor housing conditions	4	5	-1
Uncertain future	2	3	-1
Children not needed in old age	20	20	0
Threats to children (eg. drugs)	17	17	0
Difficulty reconciling work and parenting	7	7	0
Difficult life circumstances	1	1	0
Ease of contraception	19	18	1
Benefits too low	10	8	2
Lack of partner	6	4	2
Parenting leave too short	18	15	3
Nurseries/playschools	12	9	3
Infertility	5	2	3
Partner's negative attitude to children	16	11	5

Certain reasons refer to life conditions that are measured in *Social Diagnosis*. Therefore, we shall compare the frequency of reported causes in terms of the values of these conditions. With a division of equivalent household income into quartiles, it might be expected that the reason „difficult material conditions, lack of work or employment" would occur more often in the income group below the first quartile than in that of the most prosperous. However, it turns out that the same reason is given by the almost same percentage of the poorest and richest (figure 4.10.9). Similarly uniform is the breakdown by income quartile of the frequency of another, strictly financial cause – the too low maternity and/or paternity leave benefit, with the unemployed being a clear minority of those mentioning this cause (15% compared to 39% of private sector workers and 19% public sector as well as high costs of bringing up children).

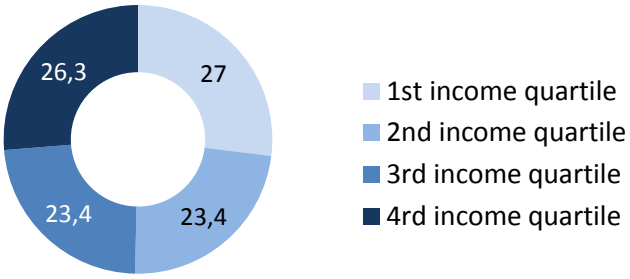


Figure 4.10.9. Percentage breakdown of difficult life circumstance frequency as reason for procreation reserve by household wealth quartile

The frequency of „poor housing conditions" as a reason is linked somewhat more strongly with living space per dweller (figure 4.10.10). But also in this case over 8% reporting this reason have a home with 33 square metres per person (fourth quartile), and the next nearly 12% live with 22 square metres per person (third quartile). This means that it is not simple poverty that causes an important part of the procreation reserve to forego having children, but rather the fear of a fall in the standard of living defined

by life aspirations. Therefore, it is in this sense that we can talk about cultural barriers to having children in Poland.

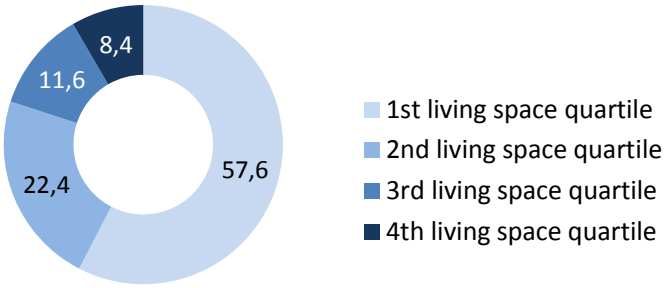


Figure 4.10.10. Percentage share of poor living conditions in the causes of the procreation reserve by per capita living space quartile

The frequency of each procreation reserve cause depends on the number of children supported and gender (table 4.10.2). People with no children indicate infertility twice as often as those with one child. In the case of two or more children, men much more often than women state infertility. The risk of genetic illness is most often reported by women with three or more children (22%).

Table 4.10.2. Percentage indications of procreation reserve reasons by number of children supported and gender

Reason	Number of children supported							
	No children		1 child		2 children		3+ children	
	M	K	M	K	M	K	M	K
Infertility	30	34	16	15	8	20	0	5
Risk of genetic illness	14	15	14	16	16	17	6	22
Difficult life circumstances	35	33	44	47	49	57	75	63
Difficulty in reconciling work with parenting	21	22	12	24	17	23	7	9
Uncertain future	30	23	35	31	40	41	49	46
Partner's negative attitude to children	5	4	3	4	3	1	3	3
Maternal leave too short	3	2	3	6	4	7	0	1
Parental leave too short	0	0	4	3	0	4	2	0
Welfare benefit too short	3	9	5	9	10	11	18	5
Poor housing conditions	17	15	24	17	27	22	47	33
Nursery/playschool	5	7	8	9	9	9	0	0
Threats to children (e.g drugs)	1	2	2	2	2	2	9	6
Children take away personal freedom	15	7	5	3	5	2	3	3
Desire to pursue a career	6	6	3	6	2	5	0	5
Ease of contraception	1	1	0	1	1	1	0	0
Procrastination	10	14	8	7	5	3	4	2
Children not needed in old age	0	0	0	0	0	0	0	0
High cost of parenting	15	15	27	25	28	26	30	25
Lack of partner	13	20	23	21	16	12	21	17
Children are too much of a responsibility	12	8	7	4	7	4	6	12
Other reasons	7	6	4	6	7	2	5	13

The frequency of poor housing conditions rises with number of children as does high cost bringing up children. The most common reason among men without children is threat to free living (twice as high as that for women without children). Difficulty reconciling work with parenting in groups with children is more often reported by women. Among the childless where the latter reason is also quite frequent, there is no difference between women and men. Most often, this reason is mentioned by men and women with three or more children to support.

The frequency of procreation reserve reasons is also differentiated by respondent age and gender (table 4.10.3). Older people (over 29) more frequently indicate infertility, the risk of genetic illness concerns mainly women over forty, difficult living conditions are an issue especially common among the youngest women and difficulty in reconciling work and parenting is more important for women than for men independent of age, an uncertain future concerns younger potential parents as do poor housing conditions. Threats to free living from having children are felt more by young people than by older, as is limitation of professional career opportunities. Putting off the decision to procreate is mainly a problem of older people, while a lack of a partner is felt more often by the younger.

Table 4.10.3. Percentage indications of procreation reserve reasons by age and gender

Reason	Age					
	16-29		30-39		40+	
	M	W	M	W	M	W
Infertility	11	11	20	28	23	22
Risk of genetic illness	16	11	13	17	13	23
Difficult life circumstances	47	57	39	41	48	35
Difficulty in reconciling work with parenting	11	19	18	25	15	23
Uncertain future	36	34	37	35	29	18
Partner's negative attitude to children	4	3	4	3	2	4
Maternal leave too short	1	4	4	5	2	4
Parental leave too short	1	2	3	4	1	2
Welfare benefit too short	8	10	5	11	3	5
Poor housing conditions	22	24	24	14	24	18
Nursery/playschool	6	9	9	9	4	5
Threats to children (e.g drugs)	1	1	2	2	2	5
Children take away personal freedom	10	6	9	3	4	2
Desire to pursue a career	8	9	3	5	0	3
Ease of contraception	1	1	0	0	0	0
Procrastination	5	5	9	10	9	10
Children not needed in old age	1	0	0	0	0	0
High cost of parenting	27	26	25	21	19	22
Lack of partner	27	22	14	17	21	18
Children are too much of a responsibility	7	6	8	5	8	7
Other reasons	5	6	5	3	7	10

The basic question related to the low birth-rate in Poland is what instruments has the state at its disposible that would make use of the procreation reserve potential and thus increase the number of childbirths. Programmes adopted by parliament and government such as lump payments at birth („becikowe"), longer parental leave, housing for young people, refunded *in vitro* treatment and measures to ease access to institutional crèche and playschool childcare have not as yet yielded any positive change in the birth statistics. Some have only recently been introduced and may increase birth rates in the future though it would seem that some of these programmes are addressed to problems that in parents' opinion address the reasons for not having children to a relatively minor degree (eg. length of parental leave or easing access to crèches and playschools), while others, though addressed to significant procreation reserve reasons (eg. „becikowe" to material problems and housing for young people), are too modest in scale to significantly encourage procreation. Only the *in vitro* refund programme has any chance of a positive effect that actually counts. Firstly, infertility is in fourth place (next to poor housing conditions) in the hierarchy of procreation reserve reasons, and second it is a very concrete reason that is well-defined and has a clear solution. Let us therefore have a closer look at the scale and social differentiation of infertility according to *Social Diagnosis*.

20.4% of women who fulfil the age criteria to qualify for *in vitro* refunding (under 40) indicated infertility as a procreation reserve reason, which means 82 thousand in the whole population of women between 16 and 39, of whom 58% are married. 18.1% of men in the procreation reserve have a problem with conception, which means 220 thousand in the population aged 16-64, of which the vast majority are married (80%). Therefore, counting only couples in long-term relationships, it is possible to estimate

that the number of children conceived thanks to *in vitro* or insemination could amount to from 50 thousand (only couples with infertile women) to 226 thousand (all couples with an infertile partner), that is 1/8 up to ½ of annual living births in Poland.

In the population of infertile women between 16-39, residents of large towns are in the majority (figure 4.10.11), as are those with higher education (figure 4.10.12) and members of households from the upper-income quartile (figure 4.10.13).

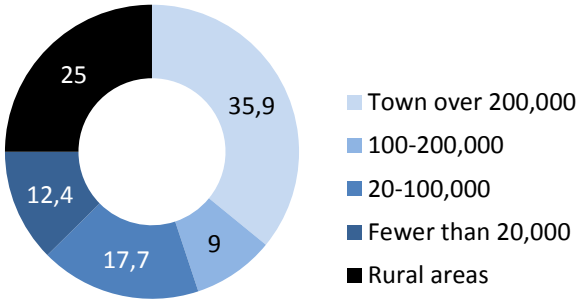


Figure 4.10.11. Percentage breakdown of infertility by class of place of residence

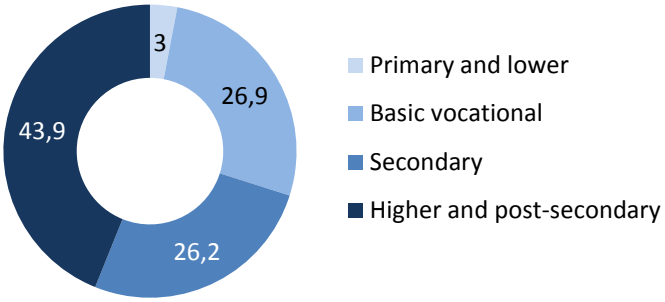


Figure 4.10.12. Percentage breakdown of infertility by educational attainment

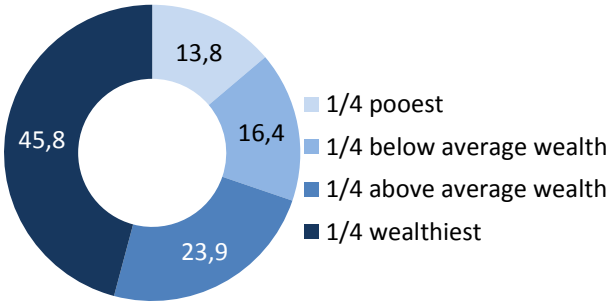


Figure 4.10.13. Percentage breakdown of infertility by quartile level of wealth

5. Individual quality of life and lifestyle

Janusz Czapiński

5.1. General psychological well-being

The choice of type of research measures to assess psychological well-being depends to a considerable extent on the model of the quality of life one employs and whether it is hedonistic or eudemonistic (Czapiński, 2004a). Generally, within the hedonistic model adopted in the *Social Diagnosis* one can differentiate two basic dimensions of psychological well-being: the emotional (the balance of emotional experiences, at present or over a longer period of time or separately, the positive and negative affect) and the cognitive (evaluation of one's own life at present, in the past and in the future) (cf. Diener, 1984; Veenhoven, 1994). The model is sometimes extended to include satisfaction with particular domains of life (domain satisfactions, Diener, Suh, Lucas, Smith, 1999). The purely emotional aspect was disregarded within this project. An indicator that comes closest to that dimension is the four-degree scale of happiness (Annex 1, Individual questionnaire, question 34). The scale of depression symptoms (question 52) also includes items related to emotions, more precisely to moods and motivations. The cognitive dimension of general psychological well-being was measured on two scales: assessment of life-as-a-whole (question 3), and of the past year (question 57). In addition, in line with the onion theory of happiness (Czapiński, 1992, 2001a, 2004b, 2011a), two indicators of yet another dimension of psychological well-being were taken into account; i.e. of the will-to-live (suicidal tendencies and the desire to live, questions 36 and 40), which runs deeper than the two preceding factors and conditions the person's long-term resistance to stress in life[54].

Most indicators of general psychological well-being were in the form of simple one-question scales. The scale of depression is an exception, as it comprises 7 items-symptoms, taken from the well-known 21-item Beck's Depression Inventory (Beck et al., 1961), often applied in psychological and epidemiological research. The choice of those particular items was motivated by psychometric considerations; in previous studies they had shown the greatest correlation with the objective determinants of living conditions (especially with age – cf. Czapiński, 1996, 1998, 2001b). The sum of responses to all seven questions was an indicator of depression. It could be treated as a measure of the degree of psychological inadaptability, which reflects the inefficiency of coping with problems or stress in life. Under no circumstances should the indicators based on this scale be interpreted as a diagnostic of the level of clinical depression disorders in the population[55].

5.1.1. Data for entire samples

The assessment of life-as-a-whole was found to have continued to improve (table 5.1.1)[56]. The percentage of those who evaluated their entire life as at least good increased considerably (by 1.1 percentage points as compared to 2011, and by more than 21 percentage points as compared to 1991)[57]. This result is the highest in the entire period covered by research and more than twice as high as in 1993, which was the worst in this respect. It is also worth stressing that starting from 1994 a strong feature has been an improvement in the assessment of life-as-a-whole. Also the percentage of very happy people rose compared to 2011, though the change was not statistically significant.

The value of two indicators of the will-to-live – the most important aspect of psychological well-being – do not change to a statistically significant degree and, like in 2011, is higher in the entire period since 1991 (tables 5.1.2 and 5.1.3).

The symptoms of depression were like two years before the least frequent in the entire period under examination (table 5.1.4).

[54] These indicators are analysed in detail in Czapiński (2000).

[55] In Poland, the correlation between our depression indicator and age is very high and ranges from 0.65 to 0.70.

[56] All the analyses of the quality of life presented below in this section concern persons aged 18 years and above, i.e. a population similar to the earlier studies of the '90s in terms of that criterion.

[57] Comparison of mean values of this scale between 2013 and 2011 proves that the rise in life assessment rating is statistically significant in the panel sample (t=3,546, p <0,000)

Table 5.1.1. Percentage distribution and average median for answers to "How do you perceive your entire life?" and the size of samples for 18+ year-olds between 1991 and 2013

Answers	1991	1992	1993	1994	1995	1996	1997	2000	2003	2005	2007	2009	2011	2013
1. Delighted	1.1	1.2	0.9	1.2	1.4	1.8	1.5	2.7	3.0	2.7	3.5	4.0	3.9	4.2
2. Pleased	22.4	19.5	18.9	22.9	24.1	24.5	24.3	30.0	31.3	33.5	36.9	38.7	40.0	40.8
3. Mostly satisfying	34.6	34.7	33.3	34.7	35.5	31.9	35.8	35.9	34.7	35.9	35.8	33.9	34.3	33.9
4. Mixed	30.9	32.0	33.5	30.2	29.8	31.1	27.6	24.6	22.2	19.9	17.2	16.4	16.0	15.5
5. Mostly dissatisfying	9.6	10.3	10.9	8.3	7.4	8.6	9.0	7.1	6.7	6.3	5.3	5.4	4.8	4.6
6. Unhappy	1.8	1.7	1.6	2.3	1.5	1.5	1.5	0.9	1.3	1.2	0.8	1.1	0.7	0.7
7. Terrible	0.7	0.6	0.9	0.5	0.3	0.6	0.3	0.7	0.7	0.5	0.5	0.5	0.3	0.3
N	4187	3402	2306	2302	3020	2333	2094	6403	9254	8376	12378	25609	25801	25725
Average	3.35	3.38	3.43	3.30	3.23	3.27	3.24	3.09	3.05	2.99	2.88	2.86	2.81	2.79

Data source: 1991-1997 — Czapiński, 1998: 2000-2013 — *Social Diagnosis*

Table 5.1.2. Percentage answers to „Taking everything into account, how would you assess your life - would you say it is ... " among 18+ year olds between 1991 and 2013

Answers*	1991	1992	1993	1994	1995	1996	1997	2000	2003	2005	2007	2009	2011	2013
Very happy	3.7	3.6	4.5	4.4	5.1	6.4	6.3	5.2	5.2	5.8	7.7	9.1	9.5	10.0
Quite happy	61.0	54.2	53.7	64.0	59.6	61.3	66.5	59.4	59.8	63.0	68.0	66.5	70.5	70.3
Not very happy	35.3	42.1	36.4	31.6	35.3	32.3	27.2	35.4	30.5	27.9	22.1	21.9	18.4	18.0
Unhappy			5.4						4.5	3.3	2.2	2.4	1.6	1.6

Data source: 1991-1997 — Czapiński, 1998: 2000-2013 — *Social Diagnosis*
* In 1991-1992 and 1994-2000, the scale of answers ended at "not very happy"

Table 5.1.3. Percentage breakdown and average scale answer to "How strong is your will to live these days? among 18+ year-olds in 1991-2013

Answers*	1991	1992	1993	1994	1995	1996	1997	2000	2003	2005	2007	2009	2011	2013
I have no will to live at all	0.5	0.9	0.9	0.6	0.2	0.1	0.1	1.0	1.0	1.0	0.5	0.6	0.5	0.4
2	0.8	1.1	0.7	0.7	0.5	0.6	0.7	0.8	0.7	0.6	0.6	0.6	0.3	0.4
3	1.7	2.7	2.0	1.6	1.4	1.1	1.0	1.4	1.6	2.1	1.3	1.3	1.0	0.8
4	4.7	4.7	4.5	4.1	2.7	2.1	2.3	2.5	2.2	2.5	2.1	2.0	1.6	1.7
5	7.6	8.2	7.3	7.5	4.6	3.8	4.5	5.1	6.9	6.7	6.7	6.1	5.2	5.1
6	14.1	12.3	12.4	13.2	10.9	9.0	11.2	9.2	6.4	7.0	6.8	6.7	5.6	6.0
7	14.9	11.7	10.7	11.1	10.3	9.6	10.3	8.8	9.1	9.5	9.7	9.5	9.9	9.7
8	17.4	15.5	13.9	16.7	16.2	16.4	17.0	11.7	14.4	15.8	15.9	16.4	16.6	17.1
9	12.5	13.1	14.1	13.6	17.2	17.0	16.0	15.1	13.3	14.4	14.7	15.0	17.2	17.4
I want to live very much indeed	25.7	30.1	33.6	30.9	36.0	40.3	37.0	44.4	44.5	40.3	41.7	41.6	42.1	41.4
Average	7.62	7.68	7.86	7.82	8.21	8.41	8.25	8.34	8.32	8.20	8.33	8.34	8.48	8.47

Data source: 1991-1997 — Czapiński, 1998: 2000-2013 — *Social Diagnosis*

* In 1991 – 2000 there was a 0-9 scale, which was changed for ease of comparison to 1-10 as in all later studies.

Table 5.1.4. Percentage breakdown of answers to "How often in the last months have you felt so low as to think about suicide?" among 18+ year-olds in 2001-2013 in 1991-2013

Answers	1991	1992	1993	1994	1995	1996	1997	2000	2003	2005	2007	2009	2011	2013
1. Very often	1.0	1.0	0.8	1.1	0.7	0.7	1.1	1.2	1.1	0.7	0.6	1.0	0.6	0.7
2. Quite often	3.6	4.4	3.1	3.0	2.9	2.8	2.5	3.0	3.2	2.6	2.5	2.2	2.1	2.3
3. Rarely	13.1	13.0	11.0	11.0	10.8	7.7	10.8	9.6	9.9	9.8	9.2	8.8	8.7	8.3
4. Never	82.2	81.6	85.1	84.9	85.6	88.8	85.5	86.3	85.8	86.9	87.6	88.1	88.6	88.7

Data source: 1991-1997 — Czapiński, 1998: 2000-2013 — *Social Diagnosis*

Table 5.1.5. Average intensity of symptoms of psychiatric depression (for 7 symptoms) among 18+ year-olds in 1992-2013

1992	1993	1994	1995	1996	1997	2000	2003	2005	2007	2009	2011	2013
5.2	5.2	5.0	4.7	4.7	4.5	4.7	4.6	4.5	4.3	4.2	4.1	4.1

Data source: 1991-1997 — Czapiński, 1998: 2000-2013 — *Social Diagnosis*

Although the changes in the assessment of life-as-a-whole and in the sense of happiness are significant and have shown an extremely consistent growth trend since 1994, two other indicators of psychological well-being – suicidal tendencies and the desire to live – were subject to considerably smaller and non-systematic fluctuations over that period. This is consistent with the fundamental assumption of the "onion theory of happiness" (Czapiński, 1992, 2001a, 2004b, 2011a). At the deepest level of well-being – the will-to-live, reflected in suicidal tendencies and the desire to live - there is an internal stabilisation mechanism (called the attractor of happiness), which makes that level much more resistant to the changes in the objective aspects of life as compared to the more surface level of general subjective well-being, measured by the assessment of life-as-a-whole and of the past year, and by the sense of happiness (in some analyses also the indicator of depression). The empirical test for this assumption is discussed in further detail in section 5.4.2.

5.1.2. Data for 2009-2011 and 2011-2013 panel samples

In order to show how indicators of general psychological well-being change in time; i.e. with the age of respondents and with all the changes in their lives, we need to consider panel samples (the same respondents) from two waves or more. The results of comparisons for selected well-being indicators from different waves are shown in Table 5.1.6. The statistically significant increase of the depression indicator in the panel sample in comparison with the data from previous editions of the *Diagnosis* is easily explained by the extremely strong relationship between depression and age[58]. In 2013, respondents were two or four years older, and this is the only reason why they showed more symptoms of depression than in 2009 and especially in 2007.

Table 5.1.6. Comparison of values of general psychological well-being indicators for 2007 and 2013 in panel samples (the same respondents)

Variable	Year of measurement	Average	Standard deviation	Average difference	t	Degrees of freedom	Level of significance	Correlation
Depression	2011	4.27	4.038	-0.213	-8.909	17532	0.000	0.708*
	2013	4.49	4.263					
	2009	4.37	3.962	-0.402	-12.958	11778	0.000	0.674*
	2013	4.78	4.344					
Will to live	2011	8.49	1.791	0.026	1.858	17963	ns	0.471*
	2013	8.47	1.796					
	2009	8.40	1.894	-0.033	-1.764	12026	ns	0.404*
	2013	8.43	1.815					
Suicidal thoughts	2011	3.86	0.442	0.004	0.909	17977	ns	0.299*
	2013	3.85	0.459					
	2009	3.84	0.477	-0.010	-1.857	12045	ns	0.253*
	2013	3.85	0.458					
Assessment of life	2011	2.82	0.995	0.026	3.543	18019	0.000	0.519*
	2013	2.80	0.975					
	2009	2.86	1.012	0.021	2.305	12074	0.05	0.472*
	2013	2.84	0.969					
Feeling of happiness	2011	2.12	0.566	-0.004	-0.809	18014	ns	0.402*
	2013	2.13	0.570					
	2009	2.18	0.598	0.030	4.967	12060	0.000	0.364*
	2013	2.15	0.571					

* $p < 0.000$

The assessment of life-as-a-whole improved as compared both up to 2009 like in 2011, and the sense of happiness was greater in comparison with 2009.[59]

As mentioned before, the onion theory of happiness (Czapiński, 1992, 2001a, 2004b, 2011a) stipulates that at the deepest level of the will to live, psychological well-being should be the most stable over time independent of age, and should return to a constant level after deviations caused by negative

[58] In five studies from different parts of the world, which covered a total of 39,000 individuals, it was established that young people are much more at risk of experiencing at least one episode of depression than older generations (Nesse and Williams, 1994). This is explained, *inter alia*, by civilisation processes (the risk of depression grows with the level of economic development of the country) that affect the psyche of the younger generations much more strongly than that of the older people who grew up in the "age of fear" after the Second World War.

[59] The changes in the evaluation of the past year are described in section 5.10.2.

events in life. And indeed, two measures of the will to live – the desire to live and suicidal tendencies – were subject to the least statistically insignificant changes in time.

We may therefore say that Poles' psychological well-being has increased considerably over recent years, and that it is not (just) a generational change, because it occurred also in the same individuals despite their growing old and the increase in the depression indicator strongly correlated with age.

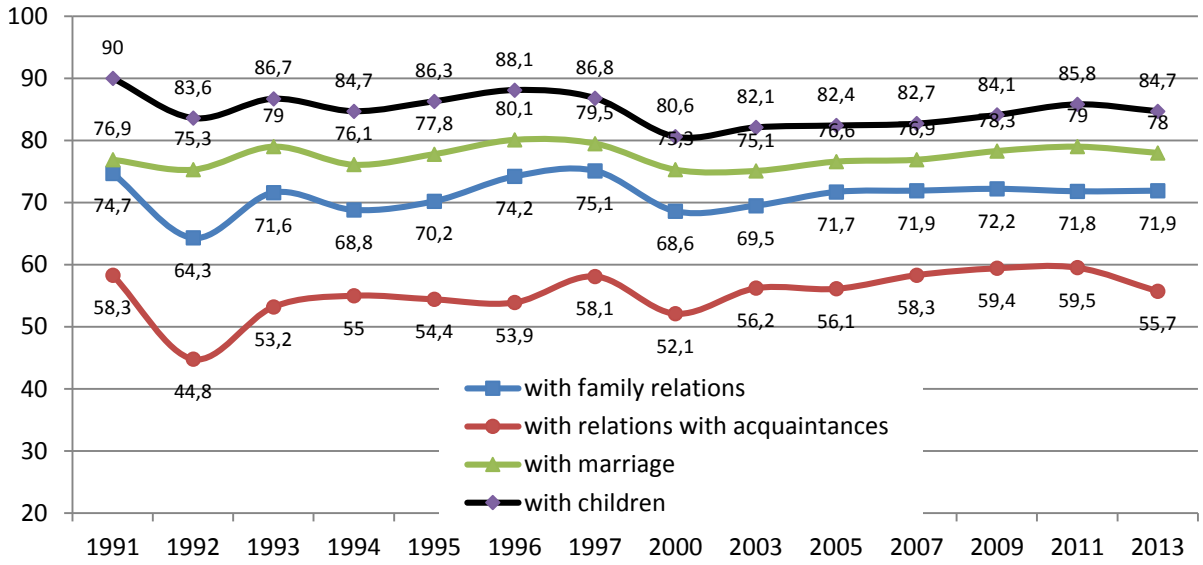
5.2. Satisfaction with particular areas and aspects of life

According to the onion theory of happiness (Czapiński, 1992, 2001a, 2004b, 2011a), the most peripheral (and the most realistic in its evaluations) level of well-being is the dimension of domain satisfactions; i.e. satisfaction with particular areas and aspects of life. This year, the scale of domain satisfactions covered 16 different areas and aspects of life, exhausting nearly the entire scope of interests and activities of an average person (Annex 1, individual questionnaire, Question 62). These may be divided into:

- social aspects (satisfaction with relationships with the loved ones in the family, with relationships with friends, with marriage, children),
- material aspects (satisfaction with the financial situation of the family and with housing conditions),
- environmental aspects (satisfaction with the situation in the country, the place of residence, the level of safety in the place of residence),
- health-related aspects (satisfaction with one's health condition, with their sex-life and way of spending free time), and
- aspects related to self-assessment (satisfaction with one's own achievements, prospects for the future, educational level).

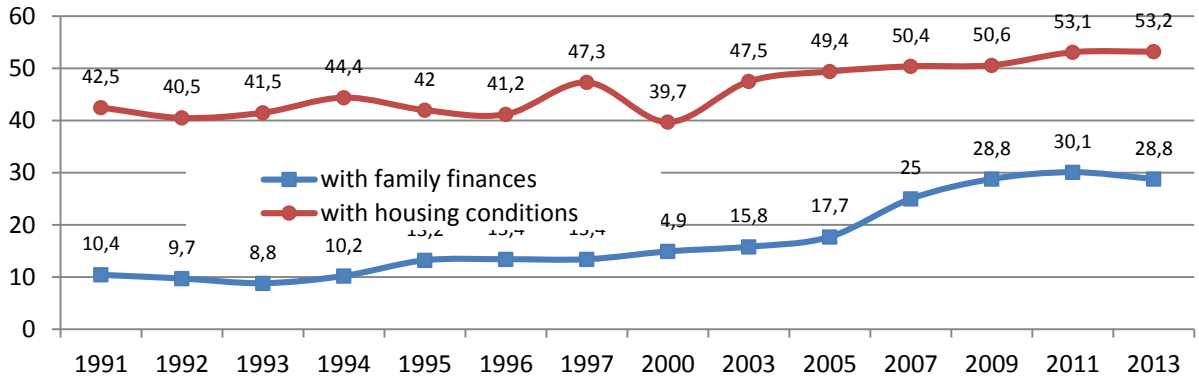
5.2.1. Data for entire samples

People's satisfaction has fallen since 2011 in most aspects of life (figures 5.2.1-5.2.5.). However, compared with the whole period from 1991, the average level of satisfaction with each aspect has, with a few exceptions (eg. with the situation in the country), remained at a high level.



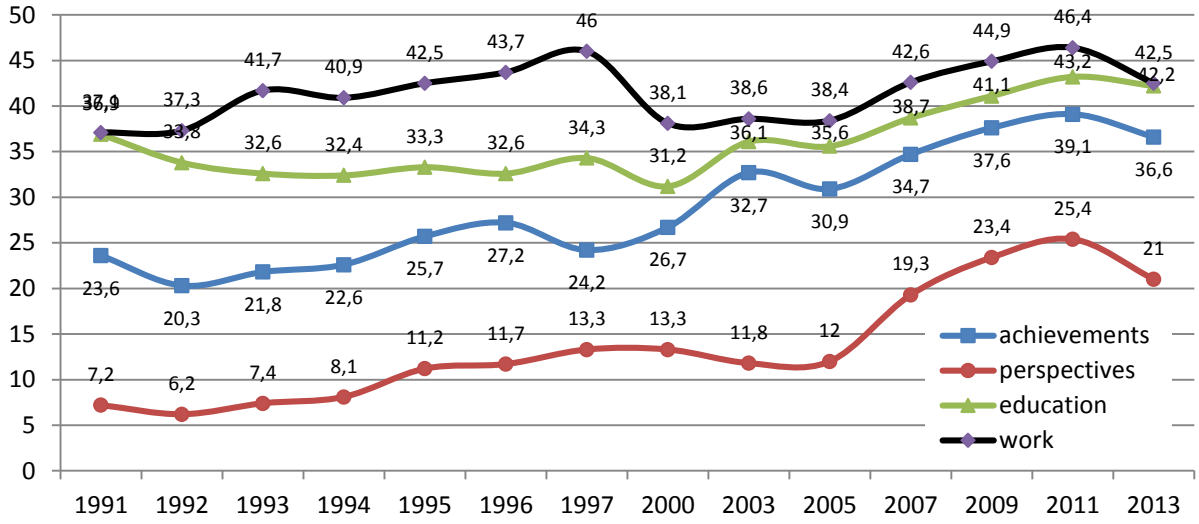
Data source: 1991-1997 — Czapiński, 1998: 2000-2013 — *Social Diagnosis*

Figure 5.2.1. Percentage of over 18s "very satisfied" or 'satisfied" with relations with the closest family members, acquaintances (group of friends) their marriages and children between 1991 and 2013



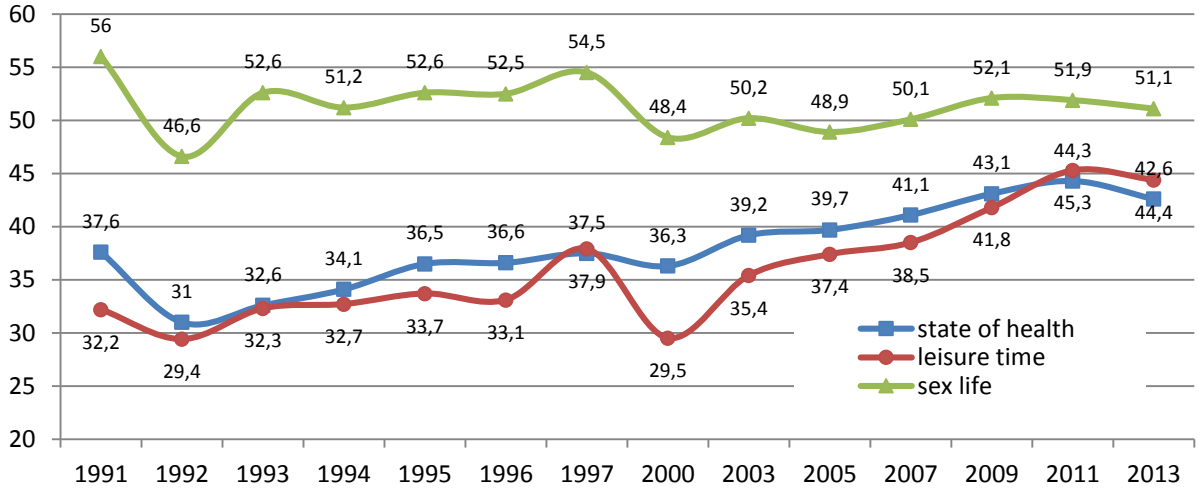
Data source: 1991-1997 — Czapiński, 1998: 2000-2013 — *Social Diagnosis*

Figure 5.2.2. Percent of over 18s "very happy or "happy" with their family's financial situation and housing conditions in 1991-2013



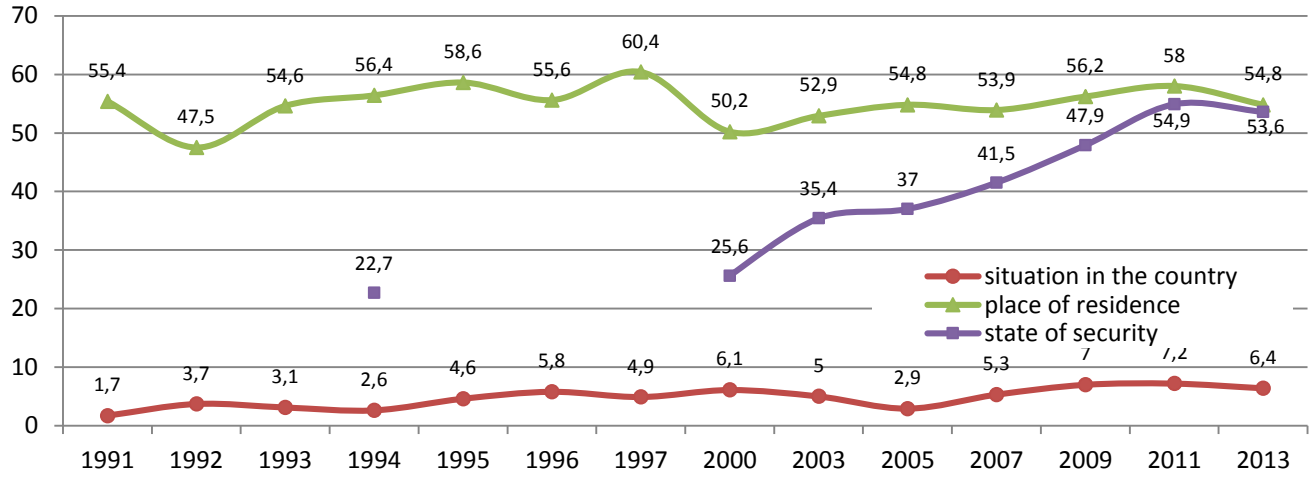
Data source: 1991-1997 — Czapiński, 1998: 2000-2013 — *Social Diagnosis*

Figure 5.2.3. Percent of over 18s "very satisfied" or "satisfied" with their own achievements, future perspectives, education and work in 1991-2013



Data source: 1991-1997 — Czapiński, 1998: 2000-2013 — *Social Diagnosis*

Figure 5.2.4. Percentage of over 18s "very satisfied" or "satisfied" with their state of health, leisure time and sex life in 1991-2013



Data source: 1991-1997 — Czapiński, 1998: 2000-2013 — *Social Diagnosis*

Figure 5.2.5. Percentage of over 18s "very satisfied" or "satisfied" with the situation of the country, place of residence and its state of security in 1991-2013

5.2.2. Panel sample data

The comparison of domain satisfactions in panel samples in the years 2009-2013 and 2011-2013 shows that in the longer horizon of four years, statistically significant increases occurred in 3 domains, decreases occurred in eleven of them and no changes were observed in two (Table 5.2.1). Over the past two years, there were no positive changes, 12 negative changes and no change in respect of four types of satisfaction. The satisfaction with future perspectives, situation in the country, affected satisfaction with sexual life, work, place of residence and relationships with (friends) fell the most. In the last two years, satisfaction with relations with close family members (though satisfaction with children and marriage dropped), personal education, housing conditions and own family's financial situation did not change even though real household income fell at this time by 5%.

Table 5.2.1. Differences in particular panel samples domain satisfactions in 2009 and 2013 as well as 2011 and 2013 by the degree of change between 2011 and 2013 (from the most positive to the most negative)

Satisfaction	2009 – 2013		2011 -2013	
	Degree of change	Level of significance	Degree of change	Level of significance
Relations with closest family	-0.030	0.002	0.012	ns
Own education	0.011	ns	0.005	ns
Own family's financial situation	-0.017	ns	-0.003	ns
Own housing conditions	0.036	0.001	-0.007	ns
Way of spending free time	0.035	0.003	-0.021	0.018
e of security of place of residence	0.104	0.000	-0.027	0.001
Own state of health	-0.039	0.001	-0.046	0.000
Marriage	-0.060	0.000	-0.047	0.000
Own life achievements	-0.039	0.000	-0.050	0.000
Children	-0.024	0.018	-0.052	0.000
Relations with one's group of friends	-0.088	0.000	-0.060	0.000
Area of residence	-0.048	0.000	-0.065	0.000
Work	-0.085	0.000	-0.073	0.000
Sex life	-0.164	0.000	-0.080	0.000
Situation in the country	-0.174	0.000	-0.133	0.000
Future perspectives	-0.186	0.000	-0.189	0.000

NOTE: a positive number indicates a rise in satisfaction, and a negative a fall; ns. – the change is statistically insignificant.

5.2.3. Local patriotism

The answer to the question about place of residence satisfaction may be treated as an indicator of attachment to the place where one lives, to one's "little homeland". This is all the more so as most Poles live where they were born or somewhere in the vicinity.

The results presented in Figure 5.2.6 and Tables 5.2.3 and 5.2.3 show a fall of satisfaction with place of residence. The percentage of those very satisfied and satisfied has been increasing since the beginning of the century with the exception of 2007 up to 2011 after which it fell to below the level of 2009.

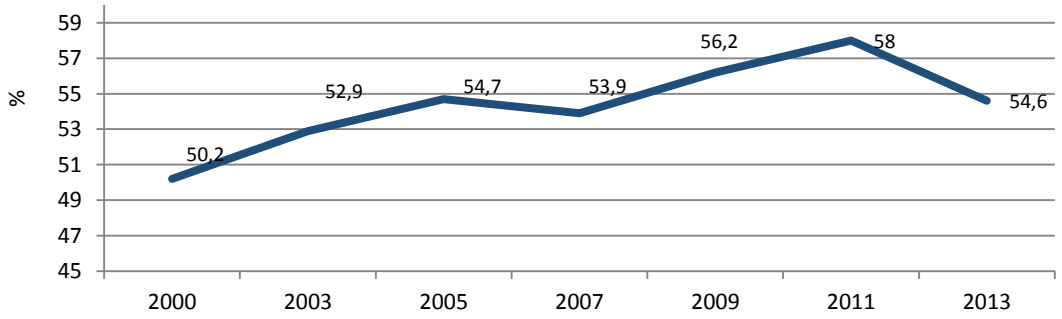


Figure 5.2.6. Percentage of residents who were very satisfied and satisfied with their place of residence between 2000 and 2013

Let us see how the best opinions ("very satisfied" with the place of residence) are distributed in terms of towns, residence class, Voivodeships and subregions (Tables 5.2.2-5.2.5) in 2011 and 2013. The greatest variation concerns towns, which is understandable, since we asked about towns. The greatest number of those very satisfied with where they live may be found in Gdynia (38.3%), which by far outpaces Poznań (18.9%), Gdańsk (18.4%), Ruda Śląska (18.4%), Toruń (17.3%) and Kraków (17.2%). The smallest proportions of those very satisfied with where they live are in Częstochowa (3%), Kielce (4.5%) and Jaworzno (4.6%).

Table 5.2.2. Percentage of urban residents very satisfied with where they live in 2011 and 2013

Rank	Town	2011		2013	
		%	N	%	N
1.	Gdynia	41.3	138	38.3	128
2.	Poznań	13.8	326	18.9	323
3.	Gdańsk	19.8	348	18.4	358
4.	Ruda Śląska	11.1	117	18.4	98
5.	Toruń	14.9	141	17.3	156
6.	Kraków	20.9	570	17.2	635
7.	Katowice	9.9	223	16.3	258
8.	Wrocław	21.5	484	15.5	458
9.	Warszawa	15.6	1235	14.7	1181
10.	Olsztyn	9.6	125	11.4	158
11.	Rzeszów	23.3	86	10.8	93
12.	Gliwice	6.8	132	9.6	104
13.	Wałbrzych	4.5	177	9.1	164
14.	Zabrze	8.9	101	8.9	90
15.	Opole	5.1	78	8.8	91
16.	Włocławek	0.0	73	7.2	83
17.	Szczecin	7.7	285	7.1	296
18.	Sosnowiec	3.5	173	6.4	157
19.	Gorzów Wlk.	8.3	121	6.3	112
20.	Białystok	13.9	201	6.3	206
21.	Łódź	4.5	616	6.2	580
22.	Lublin	6.8	250	6.0	251
23.	Bielsko-Biała	13.5	185	5.8	191
24.	Radom	1.1	181	5.7	194
25.	Jaworzno	3.5	142	5.3	171
26.	Bydgoszcz	13.9	267	4.6	241
27.	Kielce	3.8	159	4.5	132
28.	Częstochowa	8.5	189	3.0	134

Table 5.2.3. Percentage of residents of towns of various sizes very satisfied with their place of residence in 2011 and 2013

Place of residence class	2011		2013	
	%	N	%	N
Towns over 500k residents	15.1	3230	14.2	3179
Towns 200k – 500k	11.9	2556	11.0	2481
Towns 100 k– 200k	10.1	1978	8.8	2016
Towns 20kk – 100k	10.0	5199	9.2	5082
Towns up to 20k	8.6	3408	9.4	3108
Rural areas	9.9	9899	8.6	10304

Table 5.2.4. Percentage of residents very satisfied with where they live by Voivodeship in 2011 and 2013

Rank	Voivodeship	2011		2013	
		%	N	%	N
1.	Pomorskie	20.8	1530	19.2	1510
2.	Małopolskie	12.5	2222	11.6	2311
3.	Dolnośląskie	11.1	2006	10.5	2004
4.	Zachodniopomorskie	10.9	1172	10.3	1161
5.	Wielkopolskie	9.3	2335	9.8	2291
6.	Świętokrzyskie	9.5	882	9.6	878
7.	Mazowieckie	9.6	3599	9.5	3574
8.	Śląskie	9.9	3302	9.5	3173
9.	Łódzkie	9.2	1768	9.4	1717
10.	Kujawsko-Pomorskie	10.1	1387	8.9	1467
11.	Lubuskie	11.0	670	8.8	697
12.	Opolskie	8.0	709	8.4	691
13.	Warmińsko-Mazurskie	9.1	963	7.4	970
14.	Podlaskie	12.5	818	7.3	818
15.	Lubelskie	9.4	1464	6.2	1466
16.	Podkarpackie	7.0	1443	5.4	1446

Table 5.2.5. Percentage of residents very satisfied with where they live by subregion in 2011 and 2013

Rank	Subregion	2011		2013	
		%	N	%	N
1	2	3	4	5	6
1.	Słupski	31.3	329	24.9	338
2.	Gdański	22.3	857	20.6	845
3.	Bytomski	13.1	268	15.5	238
4.	Wrocławski	15.7	795	14.6	782
5.	Katowicki	10.0	541	14.4	542
6.	Krakowski	14.7	1027	13.5	1125
7.	Tyski	10.4	249	13.3	241
8.	Nowosądecki	15.8	500	13.2	468
9.	Sieradzki	14.4	271	13.1	282
10.	Rybnicki	11.8	323	12.9	334
11.	Poznański	10.3	706	11.9	687
12.	Grudziądzki	11.0	299	11.7	341
13.	Warszawski	12.1	2059	11.5	1920
14.	Koszaliński	12.9	449	11.2	420
15.	Piotrkowski	8.5	414	10.9	421
16.	Stargardzki	10.1	276	10.9	275
17.	Kielecki	12.4	556	10.8	518
18.	Pilski	12.5	263	10.5	247
19.	Kaliski	7.7	521	10.0	529
20.	Gorzowski	8.4	298	9.8	307
21.	Starogardzki	6.7	342	9.8	326

Table 5.2.5.

1	2	3	4	5	6
22.	Białostocki	13.6	359	9.6	353
23.	Bydgosko-Toruński	12.5	528	9.2	511
24.	Nyski	6.6	286	9.1	264
25.	Oświęcimski	9.6	376	9.0	324
26.	Szczeciński	9.4	449	9.0	466
27.	Jeleniogórski	10.4	423	8.9	474
28.	Legnicko-Głogowski	6.8	307	8.9	271
29.	Gliwicki	10.7	318	8.9	246
30.	Puławski	11.5	348	8.8	351
31.	Olsztyński	8.5	426	8.5	461
32.	Koniński	5.8	434	8.4	455
33.	Skierniewicki	11.9	244	8.1	258
34.	Opolski	9.0	424	8.0	427
35.	Zielonogórski	13.2	372	7.9	391
36.	Ostrołęcko-Siedlecki	4.9	588	7.7	671
37.	Sandomiersko-Jędrzejowski	4.3	325	7.7	364
38.	Łódzki	7.3	840	7.6	753
39.	Rzeszowski	10.7	365	7.6	356
40.	Bielski	11.2	535	7.5	560
41.	Lubelski	7.1	462	7.4	448
42.	Włocławski	7.2	558	7.1	617
43.	Ciechanowsko-Płocki	7.9	443	7.0	457
44.	Radomski	5.9	508	6.9	524
45.	Łomżyński	10.9	267	6.7	270
46.	Leszczyński	11.2	411	6.7	372
47.	Tarnowski	4.0	321	6.6	394
48.	Elbląski	10.2	384	6.6	364
49.	Wałbrzyski	6.5	479	6.5	478
50.	Ełcki	8.7	150	6.2	145
51.	Krośnieński	8.1	442	5.5	453
52.	Chełmsko-Zamojski	10.8	427	5.2	439
53.	Częstochowski	8.4	465	5.0	363
54.	Przemyski	4.3	303	4.9	284
55.	Sosnowiecki	6.6	605	4.6	652
56.	Suwalski	12.5	192	4.1	197
57.	Tarnobrzeski	4.0	328	3.2	345
58.	Bialski	8.4	227	2.2	229

In terms of size of place of residence, the largest towns (500.000 and more inhabitants) come out best and middle-sized towns (8.8% very satisfied) and rural areas (8.6%) the worst.

In terms of Voivodeship, the differences are smaller than between urban areas. Relatively the most satisfied of place of residence are inhabitants of Pomorskie (largely due to the residents of Gdynia) and the least in Podkarpackie.

By subregion, Słupskie comes out on top at 24.9% very satisfied, followed by Gdańsk with 20.6%. At the other extreme are Bialski, Tarnobrzeski, Suwalski, Sosnowiecki and Przemski with less then 5% very satisfied residents.

The most local patriots are to be found in the large cities with the exception of Łódź and in the Pomorze region. Between 2011 and 2013, there have been marked changes in certain parts of Poland. In a small number of towns, the level of residents' satisfaction has risen significantly (Poznań, Ruda Śląska, Katowice, Wałbrzych, Gliwice, Opole, Włocławek, Sosnowiec and Radom), while in the majority of the rest, satisfaction with palce of residence fell and – by the most in Białystock, Wrocław and Bielsk Biała. In terms of place of residence class, the satisfaction of those living in the smallest towns grew slightly.Podlaskie and Lubuskie lost the most satisfied with place of residence and none showed any gains. As far as the subregions are concerned, the number of very satisfied residents most increased in percentage terms in Katowice, Sandomiersko-Jędrzejowski, Ostrołędzko-Siedleckie,

Koninskie, Kaliskie and Starogardzkie, and most decreased in Słupskie, Białostockie, Łomżyńskie, Bielskie, Lsezczyńskie, Chełmsko-Zamojskie, Suwalskie, Bialskie, Krośnieńskie and Rzeszowskie.

Table 5.2.6. Percentage of large town residents who in the last months were often dissatisfied with the decisions and actions of local authorities in 2011 to 2013

Rank	Town	2011		2013	
		%	N	%	N
1.	Gdynia	4.3	138	6.2	129
2.	Bielsko-Biała	3.7	187	6.7	194
3.	Jaworzno	0.7	142	8.3	169
4.	Rzeszów	11.8	85	10.2	98
5.	Poznań	7.7	326	11.1	323
6.	Białystok	10.3	204	11.2	205
7.	Kraków	13.5	571	11.3	638
8.	Sosnowiec	8.6	175	12.2	156
9.	Lublin	15.4	253	12.4	249
10.	Zabrze	15.8	101	12.4	89
11.	Wrocław	9.7	475	12.4	458
12.	Warsaw	11.3	1243	13.2	1177
13.	Włocławek	9.6	73	13.6	81
14.	Olsztyn	8.0	125	13.9	158
15.	Szczecin	14.1	290	13.9	296
16.	Katowice	14.5	214	14.8	244
17.	Gorzów Wlk.	9.8	122	15.2	112
18.	Opole	19.0	79	15.4	91
19.	Gliwice	15.9	132	15.4	104
20.	Kielce	13.8	159	16.4	134
21.	Gdańsk	14.4	355	16.9	362
22.	Łódź	13.0	616	17.4	574
23.	Ruda Śląska	8.5	117	18.4	98
24.	Radom	22.5	182	19.1	194
25.	Bydgoszcz	9.9	273	20.7	241
26.	Częstochowa	17.9	190	20.7	135
27.	Toruń	13.2	144	22.2	158
28.	Wałbrzych	23.3	146	37.0	127

Only to a certain degree does dissatisfaction with place of residence go in hand with disapproval with the activity of local council authorities (for the whole sample r=0,195, for 69 large towns r=0.271). An indicator of disapproval was an answer to the question „How often over the last months have you been annoyed at the activity of your local council?" on the scale of „often", „it happens" and „never". So the percentage of selected large town residents who were often annoyed is this year slightly higher than in 2011 (14.4% and 13.4% respectively). In this respect, Gdynia comes out best and Wałbrzych worst (table 5.2.6).

Dissatisfaction with place of residence and disapproval with the activity of local authorities reflect, to a certain extent, dissatisfaction with the situation in the country or vice versa. This is borne out by the significant correlations between these indicators (satisfaction with place of residence and the situation in the country r=0.195, for approval of local council activity and satisfaction with the situation in the country r=0.239, and in terms of 69 large towns r=0,297 and 0.45 respectively for the whole respondent sample).

5.3. Importance of selected living condition indicators for the subjective quality of life

In order to understand which of the so called objective predictors (factors determining respondents life situation) have a real link to psychological well-being (in whatever direction that link may be), and which only have an apparent (superficial) link resulting from a link to a real predictor, and so to identify the actual correlations of differences, we conducted a multiple regression analysis covering a wide range of objective life quality indicators. Below please see the results of the multiple regression analysis for each gauge of general psychological well-being (table 5.3.1).

Age is the most important factor determining Poles' psychological well-being in this, just as it was in the previous, study. The older, the worse the psychological condition, especially in terms of maladjustment symptoms (depression). In relation to depression, age determines 14.5% of symptom incidence (after the elimination of all other factors), and without the elimination of other factors the figure rises to around 40% (a size unknown in social studies). What is more, as opposed to Western societies (USA, Canada), in Poland the relation between age and depression (a number of times stronger here than there) is not negative, but positive. In the US, it is the youth that suffer depression more often than the elderly[6] while in Poland the incidence of psychological depression symptoms increases with every year[60]..

The second most significant factor for general psychological well-being is marriage, and the fifth the number of friends, which together with marriage might be treated as a single indicator of social support. The Transformation disturbed certain basic social bonds, so a feeling of disinterested kindness and support from others became all the more sought after, especially in times of hardship. As the saying goes, a friend in need is a friend indeed, as this study proves. The role of close friends is especially significant as far as the basic measure of well-being - the will to live - is concerned. It is our close friends that maintain our will to live in difficult life situations and keep our minds off suicidal thoughts (see chapter 5.9). In third place, like two years ago, was alcohol abuse, an important life-quality prophylactic indicator, and fourth was per capita household income.

Factors like narcotics use (this is still very rare in Poland, see chapter 5.10.4.3), professional status, cigarette smoking, supporting children, housing conditions and place of residence class have very little significance on psychological well-being.

A factor favouring both physical and psychological health is physical activity (see Machon, Norton, Ariely, 2008; Penedo, Dahn, 2005; Ross, Hayes, 1998). *Diagnosis* data also confirm this, as in terms of all the main indicators of psychological well-being, the effect of any kind of active sport or physical exercise is very strong.

As regards depression, physical activity with control for age and gender explains 14% of the symptom intensity variation (figure 5.3.1). Moreover, it appears that the positive effect of activity is much greater in women who generally have higher depression indicators than men, but only for a limited number of kinds of sport or exercise as more than three kinds are linked in women with raised indicators of depression. However, there is no marked interaction effect of physical activity and gender in the case of assessment of whole lives hitherto, where activity alone explains 14% (figure 5.3.2). Physical activity explains 20% of the synthetic psychological well-being indicator (see chapter 9.2) differentiation (figure 5.3.3). Here also the interaction effect with gender is insignificant, though women have a limit of optimal number of activity type at three.

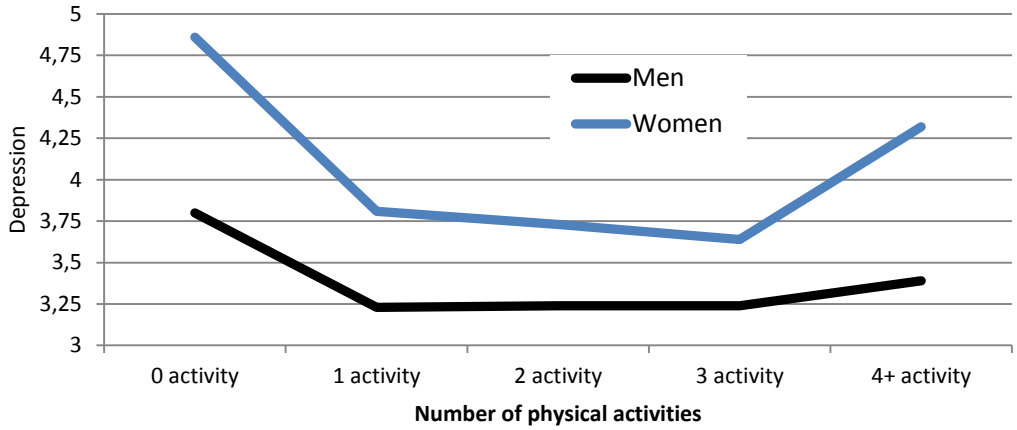
Section model analysis do not settle the direction of dependency as to whether physical activity strengthens well-being or better psychological condition motivates people to do sport. The results of a number of experimental or quasi-experimental studies however show that physical activity raises mood and improve other well-being indicators (Thayer, 1987, 2001). On the other hand, the mechanism of the influence of physical activity on well-being has not been clarified; quite likely it concerns the release of endorphins or other substances responsible for the regulation of mood in the brain, but it cannot be ruled out that social relations that accompany many kinds of sport are also important, as well as a feeling of ability and success.

[60] We do not know why in Poland the relation between age and depression is reverse to that in developed countries. Perhaps it is to do with generational differentiation in adaptive capacity as those who spent more time learning the rules of life under Communism have now more trouble taking on the new rules effective after systemic change. So the elderly are more disorientated and less open, at least on the labour market, to the new reality. However, why does this inverse and remarkably strong relation between age and depression not weaken over time? Today's 30-year-olds became adults in IIIrd RP, and they are much more prone to depression than 20-year-olds, just like the 30-year-olds in 1992. This remains on of the greatest mysteries of both the Transformation and the Poles.

Table 5.3.1. Percentage of specific indicator of general psychological well-being variance specifically explained by the effect of remaining predictors in terms of average percentage of explained variance of all indicators of general psychological well-being in 2011 and 2013[61].

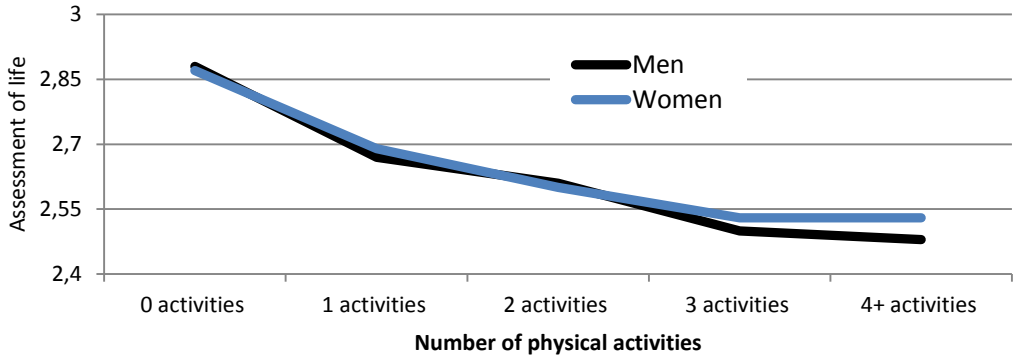
Predictor	Assessment of life as a whole		Sense of happiness		Suicidal tendencies		Desire to live		Assessment of the past year		Depression		Average value of predictor		Predictor rank	
	2013	2011	2013	2011	2013	2011	2013	2011	2013	2011	2013	2011	2013	2011	2013	2011
Age	1.0	1.0	1.7	2.1	0.0	0.1	0.3	0.7	0.5	0.8	14.5	13.3	3.0	3,0	1	1
Marriage	4.0	4.0	1.6	1.7	0.1	0.1	0.6	0.8	0.7	0.5	0.5	0.2	1.3	1,2	2	2
Alcohol abuse	0.8	1.1	0.7	0.6	1.4	1.3	0.8	1.0	0.5	0.6	1.4	1.2	0.9	1,0	3	3
Per capita income	1.6	2.0	1.6	1.5	0.2	0.3	0.6	0.9	1.0	0.9	0.2	0.2	0.9	1,0	4	3
Number of friends	0.9	1.3	0.7	0.9	0.1	0.3	1.2	1.2	0.2	0.4	0.6	0.7	0.6	0,8	5	4
Unemployment	1.1	0.8	0.2	0.8	0.0	0.1	0.1	0.1	0.9	0.8	0.1	0.1	0.4	0,5	6	5
Gender	0.4	0.1	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.0	2.1	1.9	0.4	0,4	6	6
Educational	0.5	0.5	0.1	0.1	0.1	0.0	0.2	0.1	0.1	0.2	1.0	1.2	0.3	0,4	7	6
Religious practices	0.3	0.6	0.4	0.5	0.0	0.1	0.2	0.3	0.3	0.4	0.2	0.2	0.3	0,4	7	6
Smoking	0.6	0.5	0.5	0.4	0.2	0.2	0.3	0.2	0.3	0.4	0.0	0.0	0.3	0,3	7	7
Being a pensioner	0.5	0.5	0.3	0.3	0.0	0.1	0.0	0.0	0.0	0.2	0.3	0.5	0.3	0,3	7	7
Being an other non-working person	0.8	0.6	0.5	0.3	0.1	0.0	0.0	0.0	0.2	0.2	0.0	0.0	0.3	0,2	7	8
Work in the private sector	0.4	0.6	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.1	0,2	8	8
Work in the public sector	0.4	0.4	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2	0.1	0,1	8	9
Being a farmer	0.3	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.1	0,1	8	9
Receiving welfare benefits	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.1	0,1	8	9
Being an entrepreneur	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0,1		9
Drug use	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0,1		9
Housing conditions	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0,0		
Raising children	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0,0		
Place of residence class	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0,0		
Total percent of variation explained (adjusted R^2 *x 100*)	16.7	17.6	14.0	14.6	3.9	4.4	7.7	9.1	8.2	8.9	46.1	46.9				

[8]Percentage of variance was counted as the square of partial correlation multiplied by 100.



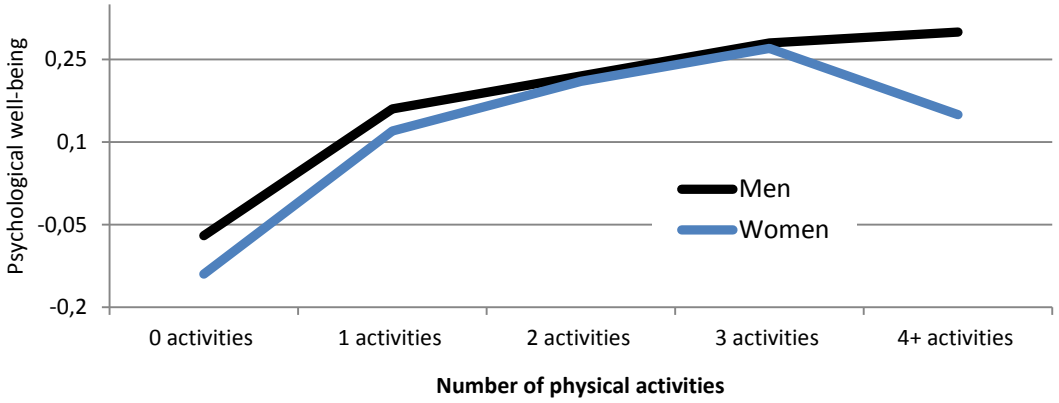
NOTE: main effect of physical activity F(4, 25377)=88.601, p<0.000, η^2=0.014; effect of gender F(1, 25377)=97.463, p <0.000, η^2=0.004; physical activity and gender interaction effect F(1, 25377)=10.195, p <0.000, η^2=0.001; the covariate was age.

Figure 5.3.1. The intensity of clinical depression symptoms by number of physical activities and gender with control for age



NOTE: scale of satisfaction with life:1 – my life is magnificent, 7 – my life is terrible; main effect of physical activity F(4, 25723)=94.468, p<0.000, η^2=0,014; effect of gender F <1, ns.; effect of physical activity and gender interaction F<1; the covariate was age.

Figure 5.3.2. Assessment of life as a whole by number of physical activities and gender with control for age



NOTE: main effect of physical activity F(4, 24604)=126.311, p<0.000, η^2=0.020; effect of gender F(4, 24604)=6.987, p<0.000, η^2=0.000; effect of physical activity and gender interaction F<1; the covariate was age.

Figure 5.3.3. Level of psychological well-being by number of physical activities and gender with control for age

5.4. Happiness theories in the light of *Social Diagnosis* data

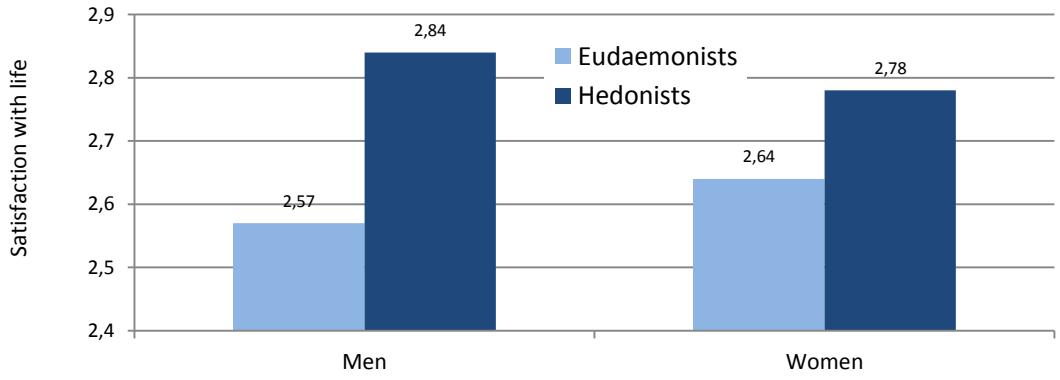
5.4.1 Hedonism and eudaemonism

There are currently two currents in the history of the considerations on happiness. One, known as the hedonistic, refers to the Cyrenaic School in the 4th century BC, and the second is eudemonistic and hails back to the Aristotelian definition of the good life (Czapiński, 2004). Both these currents are active in the empirical studies of dynamically developing positivistic psychology[62]. They offer differing views on what in fact is a happy, successful life. Advocates of the hedonistic approach do not delve into life aims and how they are realized. Of importance is only whether one is pleased with one's life and whether it gives more joy than pain. The measure of the good life is here an account of pleasure and sadness. However, for Aristotle and in particular the Stoics, happiness was identified with an eudemonia not connected to a balance of pleasure or sadness. Its measure is to be not positive emotional experiences but achievement of what is worth the effort, that what gives a feeling of the sense of life whatever experiences of suffering or disappointment.

In current popular thinking there are also two life orientations, with those for whom most important is achieving goals that give life a meaning, and others for whom the measure of happiness is the maximization of pleasant experiences.

In this year's edition of *Diagnosis*, as two, four and six years ago, we posed three questions that allowed us to identify the declared supporters of eudemonism and hedonism. The first criteria question was: *What is more important in life – pleasure, prosperity and a lack of stress or a feeling of sense, the achievement of important goals despite obstacles, pain and self-denial.* We also asked respondents to assess to what extent they agree with two additional statements: 1. *My life, despite its painful experiences, has meaning and great value* and 2. *It is most important that in life there is a lot of pleasure and little pain.* We treated as declared eudaemonists those who chose a feeling of sense as most important in life and who either agreed of definitely agreed that their life had meaning despite painful experiences. Declared hedonists were people who were in favour of a life full of pleasure free of unhappiness and who agreed or definitely agreed that the maximization of pleasure is the most important thing in life. We also created the categories of moderate eudaemonists and moderate hedonists (answers to the criteria question and the two additional questions that were not entirely consistent), but let us here concentrate on the differences only between declared life eudaemonists and hedonists.

There were slightly more so defined clear eudaemonists than two years ago (41.2% and 38.5% in 2011), and distinct hedonists slightly less than in 2011 (21.3% and 25.3% respectively).



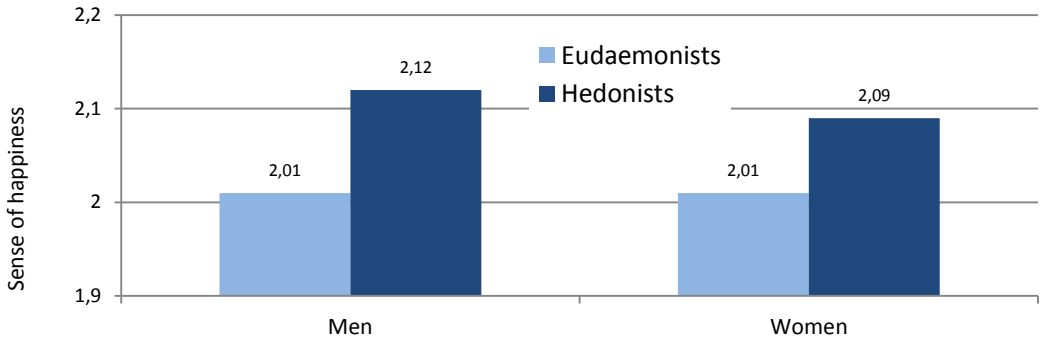
NOTE: scale of satisfaction with life:1 – my life is delighted, 7 – my life is terrible; main effect of orientation F(1, 16362)=183.213, p<0.000, η^2=0.011; gender effect ns.; effect of interaction of orientation and gender F(1, 16362)=20.184, p <0.000, η^2=0.001; the covariate was age.

Figure 5.4.1. Eudaemonists' and hedonists' satisfaction with their whole life up to now by gender

Let us examine what according to *Diagnosis* data distinguishes the representatives of these differing life orientations. Above all, it is satisfaction with life as a whole up to now, especially in the male group;

[62] The main representatives of the hedonistic approach are Ed Diener (Diener, Biswas-Diener, 2008; Diener, Lucas, Oishi, 2004), Daniel Kahneman (1999) and Ruut Veenhoven (1984, 2007). The eudaemonistic tradition was present in the work of the humanistic psychologists like Rogers (19 61) and Maslow (1986, 1990), currently represented by Carol Ryff (1989; Ryff, Singer, 2004), Martin Seligman (2004, 2005) and Baltes (Baltes, Glück, Kunzmann (2004); for a review of research and theory of happiness see: Aspinwall, Staudinger (2003), Czapiński (2004b), Eid, Larsen (2008), Kahneman, Diener, Schwarz (1999), Linley, Joseph (2007), Lopez (2009), Snyder, Lopez (2002, 2007).

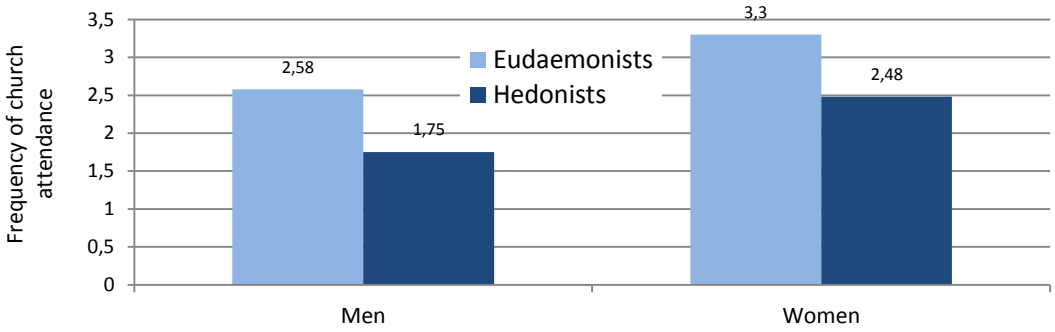
people of a eudemonic orientation are happier (figure 5.4.1), and they also stand out, this time irrespective of gender, in terms of a feeling of happiness (figure 5.4.2). The eudaemonists also less often reveal suicidal tendencies, have a greater desire to live and fewer symptoms of depression. Their psychological well-being is better even though they do not seek the maximization of pleasure.



NOTE: scale of happiness:1 – my life is magnificent, 1 – very happy, 4 - unhappy; F(1, 16360)=116.098, p<0.000, η^2=0.007; gender effect ns.; effect of interaction of orientation and gender ns.; age was the covariate.

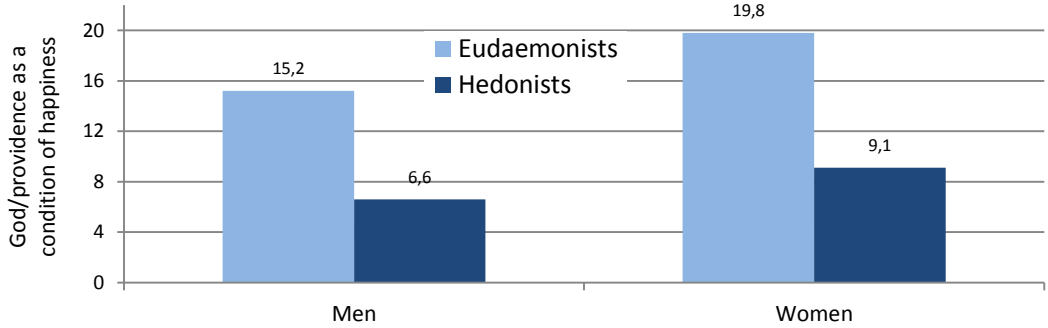
Figure 5.4.2. Eudaemonists' and hedonists' sense of happiness by gender

Those with an eudaemonistic approach are more religious than the hedonists – they go to church more often and include God in the three main conditions of a happy, successful life (figures 5.4.3, 5.4.4).



NOTE: Main effect of orientation F(1, 16289)=286.524, p<0.000, η^2=0.017; effect of gender F(1, 16289)=219.935, p<0.000, η^2=0.013; ns.; effect of orientation and gender interaction; age was the covariate.

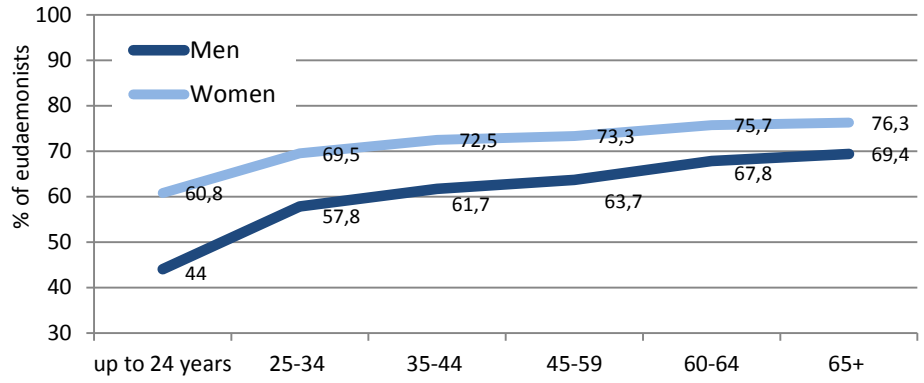
Figure 5.4.3. Frequency of church attendance among eudaemonists and hedonists by gender with control for age



NOTE: main effect of orientation F(1, 16172)=311.861, p<0.000, η^2=0.019; effect of gender F(1, 16172)=41.501, p<0.000, η^2=0.003; effect of orientation and gender interaction F(1, 16172)=3.852, p<0.05, η^2=0.000; age was the covariate.

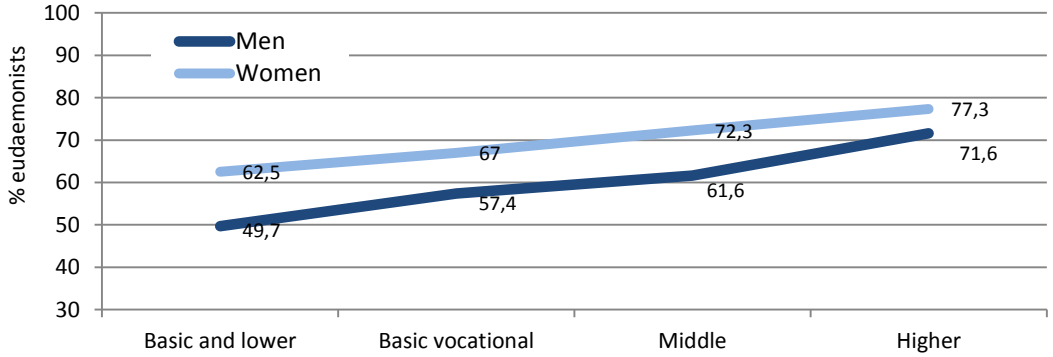
Figure 5.4.4. The percentage of persons for whom God/providence is one of three conditions of a successful, happy life among eudaemonists and hedonists by gender and control for age

Who are the eudaemonists and the hedonists? What are the differences between them in terms socio-demographic variables? There are significantly more eudaemonists among women and the elderly (figure 5.4.5), and the share rises with education (figure 5.4.6).



NOTE: main effect of age F(5, 16099)=56,990, p<0,000, η^2=0,017; effect of gender F(1, 16099)=198,756, p<0,000, η^2=0,011; effect interaction of age and gender F(1, 16099)=3.129, p<0.01, η^2=0.001.

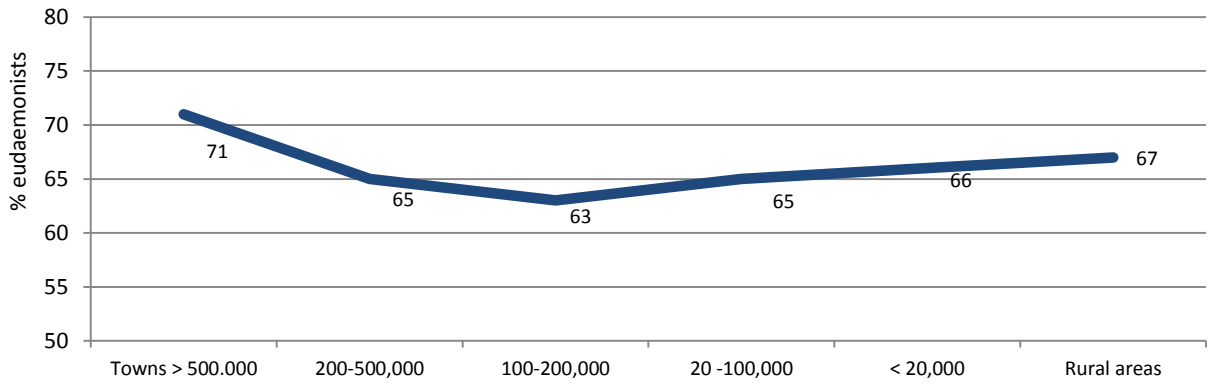
Figure 5.4.5. Percentage of eudaemonists by age among men and women



NOTE: main effect of education F(3, 16062)=78.171, p<0.000, η^2=0.014; effect of gender F(1, 16062)=144.549, p<0.000, η^2=0.009; effect of education and gender interaction ns.; age was the covariate.

Figure 5.4.6. Percentage of eudaemonists by educational attainment and gender with control for age

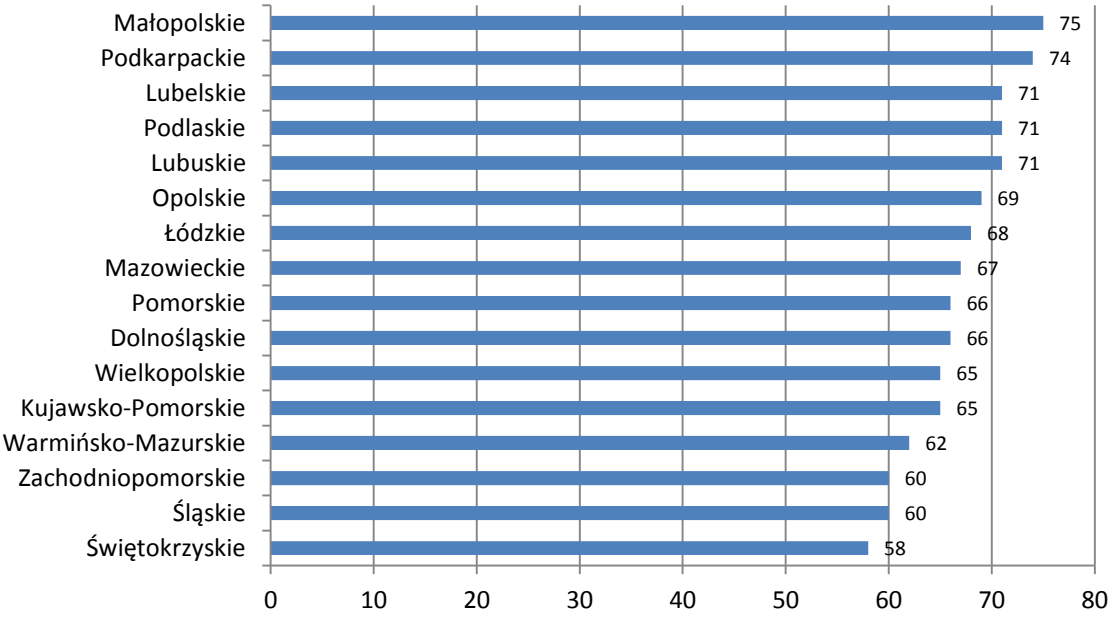
Life orientation depends also on place of residence class, with the most eudaemonistically orientated in the largest cities and the least in the middle-sized.



NOTE: main effect of place of residence class F(5, 15783)=6.070, p<0.000, η^2=0.002; the covariates were age and gender.

Figure 5.4.7. Percentage of eudaemonists by place of residence class

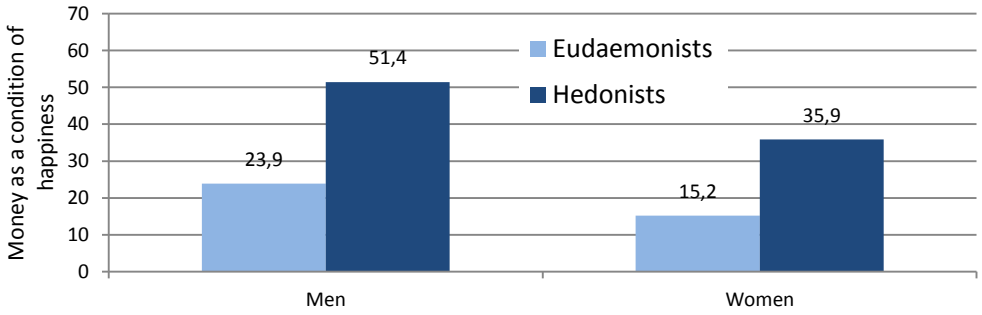
In terms of Voivodeship, the differentiation is relatively small. The most of eudaemonistic orientation live in eastern Voivodeships and the least in Świętokrzyskie and Śląskie (figure 5.4.8).



NOTE: main effect of Voivodeship F(15, 15765)=10.995, p<0.000, η^2=0.010; the covariate was age and education.

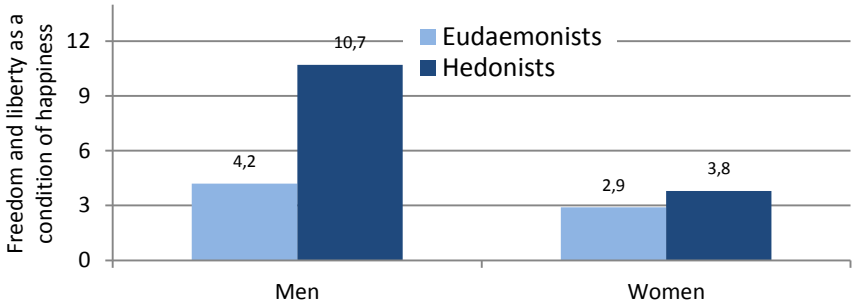
Figure 5.4.8. Percentage of eudaemonists by Voivodeship

Hedonists, who are oriented towards pleasure out to more often than eudaemonists consider money and freedom as conditions of a successful life, and eudaemonists that what limits the quest for pleasure, such as family values (eg. children) and honesty. It is significant that it is exactly these differences that are revealed between the advocates of these two life orientations (figures 5.4.9-5.4.11).



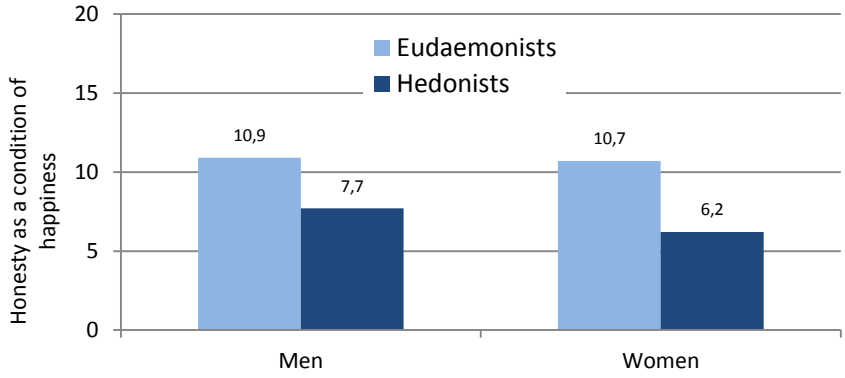
NOTE: main effect of orientation F(1, 16098)=1141.163, p<0.000, η^2=0.066; effect of gender F(1, 16098)=290.799, p<0.018, η^2=0.004; effect of orientation and gender interaction F(1, 16098)=23.487, p<0.000, η^2=0.001; age was the covariate.

Figure 5.4.9. Percentage indicating money as one of the three most important conditions of a successful, happy life among eudaemonists and hedonists by gender



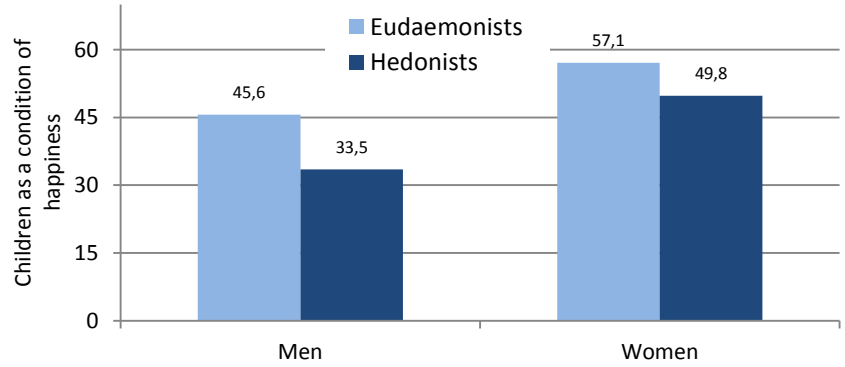
NOTE: main effect of orientation F(1, 16092)=103.845, p<0.000, η^2=0.006; effect of gender F(1, 16092)=129.659, p<0.000, η^2=0.008; effect of orientation and gender interaction F(1, 16092)=59.734, p<0.000, η^2=0.000; the covariate was age.

Figure 5.4.10. Percentage indicating freedom and liberty as one of the three most important conditions of a successful, happy life among eudaemonists and hedonists by gender



NOTE: main effect of orientation F(1, 16092)=61.785, p<0.000, η^2=0.004; effect of gender ns.; effect of orientation and gender interaction ns.; age was the covariate.

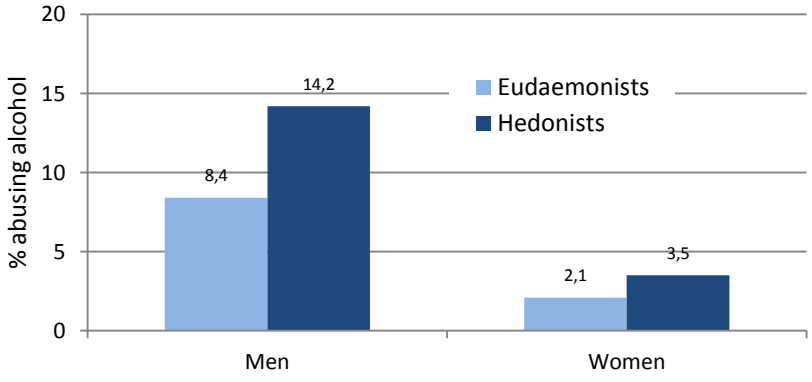
Figure 5.4.11. Percentage indicating honesty as one of the three most important conditions of a successful, happy life among eudaemonists and hedonists by gender



NOTE: main effect of orientation F(1, 16098)=142.264, p<0.000, η^2=0.009; effect of gender F(1, 16098)=292.834, p<0.000, η^2=0.018; effect of orientation and gender interaction F(1, 16098)=8.863, p<0.005, η^2=0.001; the covariate was age.

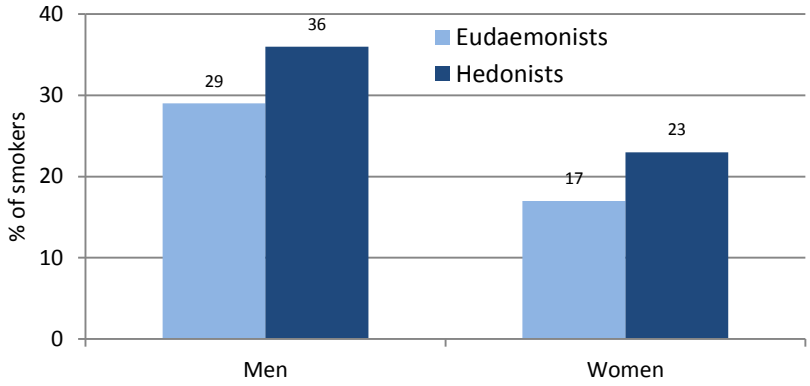
Figure 5.4.12. Percentage indicating children as one of the three most important conditions of a successful, happy life among eudaemonists and hedonists by gender

If the purpose of drug-use is pleasure, than we can suppose that those who abuse alcohol, take drugs and smoke cigarettes are declared hedonists rather than eudaemonists. In the case of drugs, the relation is insignificant, but orientation does determine frequency of alcohol abuse (figure 5.4.13) and smoking cigarettes (figure 5.4.14).



NOTE: main effect of orientation F(1, 16096)=79.423, p<0.000, η^2=0.005; effect of gender F(1, 16096)=437.765, p<0.000, η^2=0.026; effect of orientation and gender interaction F(1, 16096)=25,625, p<0,000, η^2=0,002; the covariate was age.

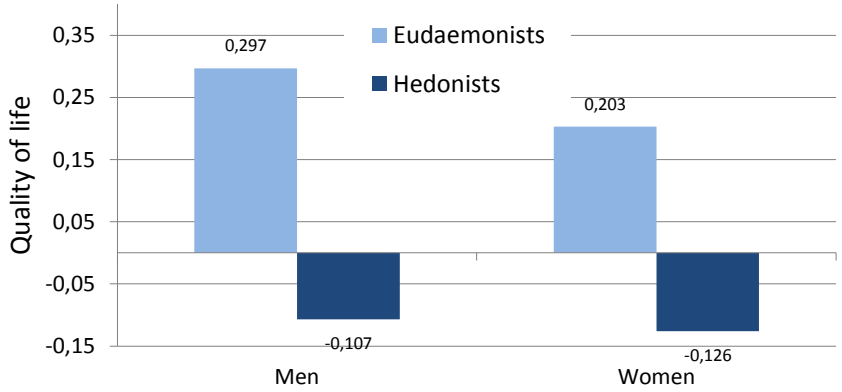
Figure 5.4.13. Percentage of eudaemonists and hedonists who abused alcohol by gender



NOTE: main effect of orientation F(1, 16090)=62.390, p<0.000, η^2=0.004; effect of gender F(1, 16090)=290.634, p<0.000, η^2=0.018; effect of orientation and gender interaction ns.; the covariate was age.

Figure 5.4.14. Percentage of eudaemonists and hedonist smokers by gender

The basic question is which orientation offers the greater probability of a successful life? Taking into account the general indicator of life quality (see chapter 9.2), the differentiation is clearly in favour of the eudaemonists both among women and men (figure 5.4.15).



NOTES: main effect of orientation F(1,13339)=466.395, p<0.000, η^2=0.034; effect of gender F(1,13339)=11.215, p<0.005, η^2=0.001; effect of orientation and gender interaction F(1,13339)=4.979, p<0.05, η^2=0.000; the covariate was age.

Figure 5.4.15. Quality of life of eudaemonists and hedonists by gender

The proportion of declared eudaemonists and hedonists differs according to many socio-economic aspects. Earlier we showed the effect of place of residence class, Voivodeship, education and gender. A more systematic analysis by repeated logistical regression confirms the differences presented above in the frequency of a clear hedonistic attitude in the whole sample with mutual control of the meaning of each socio-demographic criteria and reveals marked differentiation in terms of still other criteria (table 5.4.1). The coefficient Exp(B) shows the relation of the probability of being a declared hedonist in a given group to the chances of relation in the group under the assumption that the groups do not differ in terms of all remaining predictors. The chance of a woman being a hedonist is 1/3 that of a man. In comparison to singles, the chance of being a hedonist is ¼ less among married couples. It would appear that hedonism is the main features selecting the divorced, who do not differ significantly in this respect from single people. Also, it is not impossible that this is the basic cause of the relationship breaking down. Amount of personal income does not determine to a significant degree the probability of being a hedonist. The chances of hedonism fall with age, as the most elderly (65 and over) are three times less likely to present the attitude than the youngest. Abuse of alcohol increases the chances of being a hedonist, even more so because a materialistic attitude increases the probability of hedonistic orientation by two and a half.

Generally, in the model without the seven regression predictors always considered in the equation, around 33% of the probability differentiation of being a hedonist is explained.

Table 5.4.1. Results of logistical regression for declared hedonists (among all respondents)

Predictor	B	Standard error	Wald	df	Significance	Exp(B)
Women	-0.423	0.034	151.630	1	0.000	0.655
Education (primary*)			394.234	3	0.000	
basic vocational	-0.671	0.040	280.532	1	0.000	0.511
secondary	-0.699	0.044	255.390	1	0.000	0.497
higher	-0.876	0.056	241.936	1	0.000	0.416
Civil state (unmarried*)			36.262	3	0.000	
married	-0.278	0.049	32.227	1	0.000	0.757
widowed	-0.194	0.083	5.516	1	0.019	0.823
divorced/separated	-0.080	0.088	0.824	1	0.364	0.923
Personal income (1 quartile*)			11.532	3	0.009	
2 quartile	-0.118	0.049	5.927	1	0.015	0.888
3 quartile	0.065	0.049	1.736	1	0.188	1.067
4 quartile	-0.006	0.050	0.017	1	0.898	0.994
Age (16-24*)			250.845	5	0.000	
25-34	-0.528	0.054	94.885	1	0.000	0.590
35-44	-0.608	0.065	88.747	1	0.000	0.544
45-59	-0.729	0.061	141.704	1	0.000	0.482
60-64	-0.894	0.080	124.167	1	0.000	0.409
65+	-1.059	0.072	218.065	1	0.000	0.347
Alcohol abusers	0.197	0.060	10.837	1	0.001	1.218
Materialists	0.891	0.032	783.489	1	0.000	2.436
General percentage of explained variance Cox & Snell R^2 x 100		33,5				
General percentage of explained variance Nagelkerke R^2 x 100		44,7				

* Referrence groups

In summary, it is possible to say that hedonistic attitudes in the search for happiness do not favour its achievement, or that of a better quality of life. The better course is the orientation to realize aims and the search for a sense to life. Fortunately, there are almost twice as many declared eudaemonists in Poland than there are hedonists.

5.4.2. A Verification of the Onion Theory of Happiness

A panel study is a perfect opportunity to verify the accuracy of the basis of the onion theory of happiness (Czapiński, 1992, 2001a, 2004b, 2011a). It assumes that psychological well-being is stratified, that is, the "deeper" layers closer to the core of the "onion", are more strongly genetically conditioned, while the outer layers, less essential for survival in difficult life situations, are more easily influenced life events, although here there is also a hierarchy; satisfaction with general matter is less "realistic" than that with more concrete concerns. According to this theory, everyone has an innate "Attractor of Happiness", which is characterised by its tending towards a "predetermined" level of well-being (characteristic of a particular individual) irrespective of life developments. The Attractor is not resistant to negative developments; i.e. it does not guarantee good psychological well-being under all circumstances. Rather, it spontaneously restores the level of well-being "typical" of a given individual, irrespective of whether or not the person objectively managed to cope with the difficult situation. The attractor of happiness should first of all e restore the "proper" level of the most important aspect of well-being, its core, referred to as the will-to-live, as it is this that determines the subjective response to the fundamental question of "to be or not to be" and radiates (positively or negatively, in line with the "top-down" model) to the more peripheral layers of well-being – the overall satisfaction with life, a sense of the purposefulness of life, the balance of emotions experienced, ability to mobilize, etc. ("overall subjective well-being") and further on to the satisfaction with particular areas or aspects of life ("domain satisfactions").

The Onion Theory of Happiness presents four hypotheses, which we would like to verify now against the data from the *Diagnosis*:

1. External factors (life events, change in living standards, change in the level of stress, health and other factors) exert an influence on positive change in psychological well-being that is smaller than the internal mechanism of the Attractor, and the deeper the layer of well-being, the greater the disproportion. It is the greatest for the will to live, and the smallest for domain satisfactions.

2. External factors have a greater influence on decline than on improvement of psychological well-being, and the disproportion becomes greater for deeper layers of well-being. It is the greatest for the will to live and the smallest for domain satisfactions.
3. The weakening of the internal mechanism of the attractor, which progresses with age, is less intensive for the deepest layer of well-being, the will to live, than for the intermediate layer of overall subjective well-being. For domain satisfactions, which are most sensitive to change in external circumstances, the internal mechanism of the attractor is generally much weaker.
4. The improvement in living conditions that depend on the individual (e.g. increase in income, finding a partner) influences the level of psychological well-being to an extent that is not greater than the reverse - the influence of psychological well-being on the improvement of the living conditions on which the individual has an influence.
5. Negative life events have a greater influence on psychological well-being than the positive. The adaptation process to negative change is more difficult than that for the positive (this hypothesis derives from the theory of positive/negative asymmetry – see Peeters, Czapiński, 1990).

These hypotheses have already been partially verified by the results of the previous panel surveys (Czapiński, 2004c, Czapiński, Panek, 2007, 2009, 2011), though the present edition of the *Diagnosis* provides data for much larger panel samples over a longer period of time, which enhances the reliability of verification.

The first hypothesis is fully supported (Figures 5.4.16-5.4.17). Given a two-year and six-year time span, the change in well-being indicators depends more on the internal mechanism (a greater proportion of variance is explained by the initial level of well-being indicators) than on external factors such as the initial level of stress in life, the incidence of pathological symptoms, serious illness, equivalent household income and changes in those factors between the two waves. The internal mechanism plays a greater role for the will to live than for domain satisfactions, while the above-mentioned factors more strongly influence domain satisfactions than the will to live.

With a six year delay (between 2007 and 2013), the dominance of the internal mechanism is also apparent, and also even more clearly evident is the role of external factors in the determination of changes in partial satisfactions.

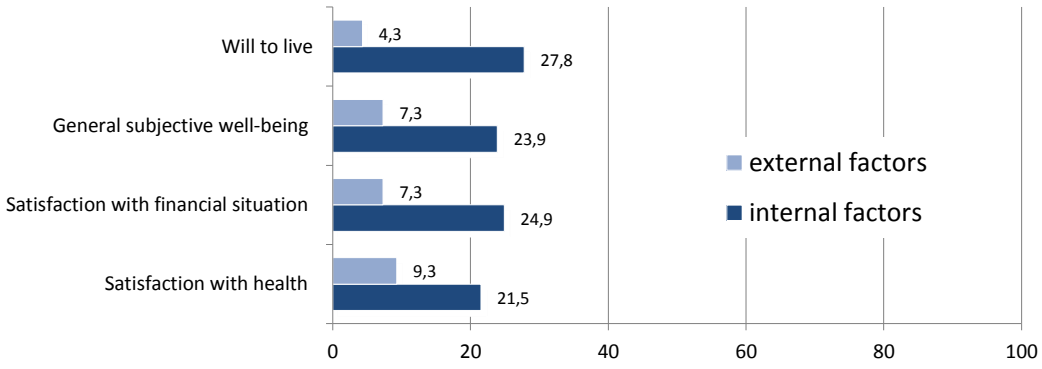


Figure 5.4.16. Predictive value (percentage of specifically explained variance) of external factors (change in life stress intensity, stress level in 2011, change in income and its level in 2011, change in the incidence of somatic symptoms and their level in 2011, change in number of negative events in 2007, hospitalisation in 2012 and of internal factors (the level of the relevant well-being indicators in 2011) for the decrease and increase in two synthetic indicators of psychological well-being (will to live and overall subjective well-being) and for domain satisfactions (satisfaction with the family's financial situation and one's health) between 2011 and 2013 for the panel sample (N=14892) (internal factors as first in regression equation)

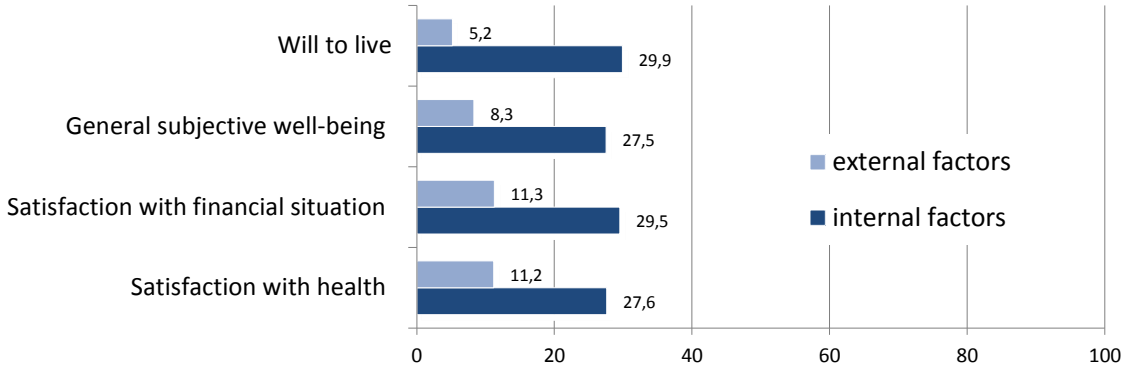
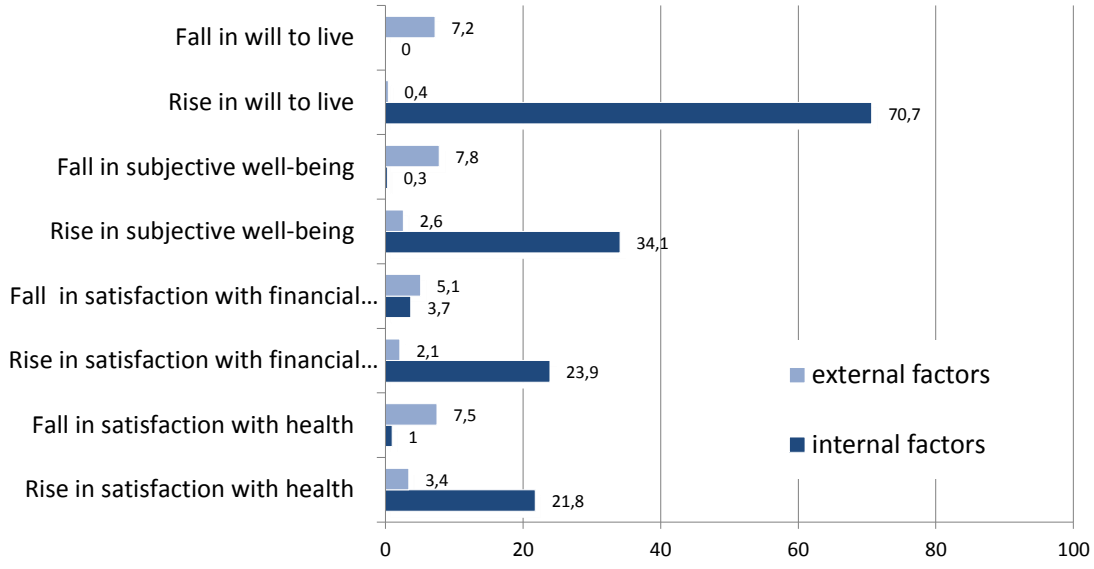


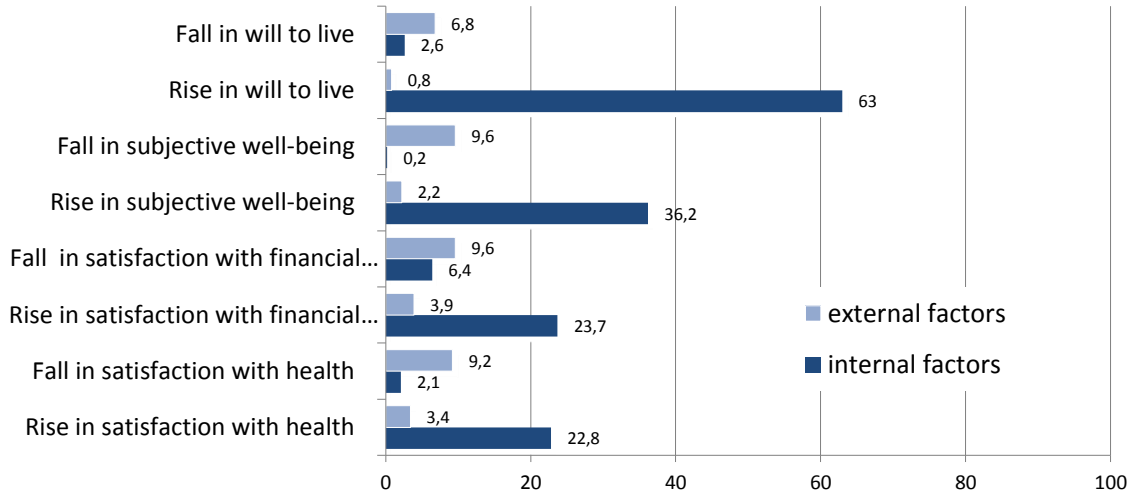
Figure 5.4.17. Predictive value (percentage of specifically explained variance) of external factors (change in life stress intensity, stress level in 2007, change in income and its level in 2007, change in the incidence of somatic symptoms and their level in 2007, change in number of negative events in 2007, hospitalisation in 2012 and of internal factors (the level of the relevant well-being indicators in 2007) for changes in synthetic psychological well-being indicators of (will to live and overall subjective well-being) and for domain satisfactions (satisfaction with the family's financial situation and one's health) between 2007 and 2013 for the panel sample (N=3113) (internal factors as first in regression equation)

The basic test of the first hypothesis requires a separation of positive and negative changes in all three layers of well-being. When we divided the panel sample according to well-being indicator direction of change, it turned out that with a two year delay between 2011 and 2013, 70% of improvement in the will to live indicator was decided by the entrance level of that indicator (the lower, the greater the improvement) and negative changes resulted only from external factors (figures 5.4.18 and 5.4.19).



NOTE: the will to live indicator is the sum of standardised values of the desire to live and suicidal tendency scales. The general subjective well-being indicator is the sum of standardised values of the sense of happiness, assessment of one's whole life up to now and that of the last year. Values over 0.5 are significant.

Figure 5.4.18. Predictive value (percentage of specifically explained variance) of external factors (change in life stress intensity, stress level in 2011, change in income and its level in 2011, change in the incidence of somatic symptoms and their level in 2011, change in number of negative events in 2011, hospitalisation in 2012 and of internal factors (the level of the relevant well-being indicators in 2011) for the decrease and increase in two synthetic indicators of psychological well-being (will to live and overall subjective well-being) and for domain satisfactions (satisfaction with the family's financial situation and one's health) between 2011 and 2013 for the panel sample (N=14892) (internal factors as first in regression equation)



NOTE: the will to live indicator is the sum of standardised values of the desire to live and suicidal tendency scales. The general subjective well-being indicator is the sum of standardised values of the sense of happiness, assessment of one's whole life up to now and that of the last year. Values over 0.5 are significant.

Figure 5.4.19. Predictive value (percentage of specifically explained variance) of external factors (change in life stress intensity, stress level in 2007, change in income and its level in 2007, change in the incidence of somatic symptoms and their level in 2007, change in number of negative events in 2007, hospitalisation in 2012 and of internal factors (the level of the relevant well-being indicators in 2007) for the decrease and increase in two synthetic indicators of psychological well-being (will to live and overall subjective well-being) and for domain satisfactions (satisfaction with the family's financial situation and one's health) between 2007 and 2013 for the panel sample (N=1013) (internal factors as first in regression equation)

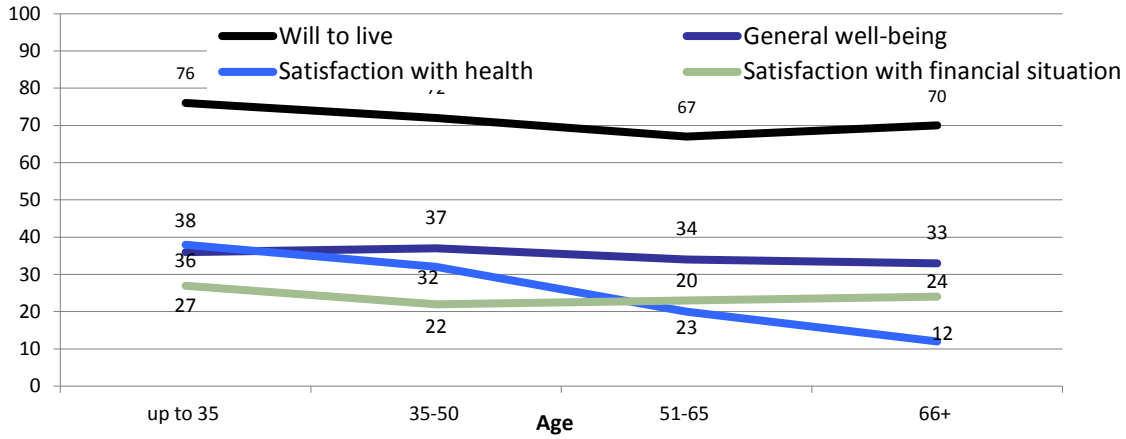
This proves the extreme efficiency of the mechanism of the internal attractor at the deeper levels of well-being, most effective is at the level of will to live responsible for over 70% of positive change. At the intermediate level – that of the overall subjective well-being – the mechanism proves much less efficient, as it accounts for 34% of positive changes, and at the most peripheral level (that of satisfaction with health and the family's financial situation), the one-directional adaption mechanism of the "happy" attractor changes into a two-directional mechanism of adaptation and motivation. Therefore, greater satisfaction with the family's financial situation depends on its initial level to a much lesser extent than does the increase in overall subjective well-being and the will to live, and to a much greater extent on external factors than the deeper layers of well-being. This two-directional mechanism is even more visible for satisfaction with health; its decline is mostly conditioned by external factors (disease), while its growth by the internal mechanism, aided to a considerable extent by external factors (improved health condition).

The second hypothesis was also confirmed. Both with a two and a six-year delay, external factors have a greater influence on the fall than the rise of psychological well-being in the two deeper layers. In the inner layer of the happiness „onion", the disproportion between the influence of external and internal factors is smaller, though also here it is the inner factors that have a greater influence on rises in satisfaction (with the family financial situation and health) than the outer (5.4.20 and 5.4.21).

Thus, the change in well-being at its deeper levels, especially in the will to live, has an internal source and depends on external factors only to a limited extent, yet the decline in well-being here is mainly determined by the deterioration in personal life situation. Domain satisfactions are less "protected" by the Attractor, and their change reflects the changes in external circumstances to a much greater extent. Owing to the fact that for domain satisfactions the Attractor works in two directions, both weakening their unusually high level and raising their unusually low level, it prevents dissatisfaction with important areas of life from persisting for too long, which could permanently diminish well-being also at deeper levels. On the other hand, it motivates raised aspirations and action to fulfil them, being thus responsible for the illusion of hedonistic progress ("you will be happier when you achieve even more").

Diagnosis data provide full support for hypothesis No. 3. Figure 5.4.21 proves that in principle, the effectiveness of the internal attractor mechanism does not subside with age for the deepest level of

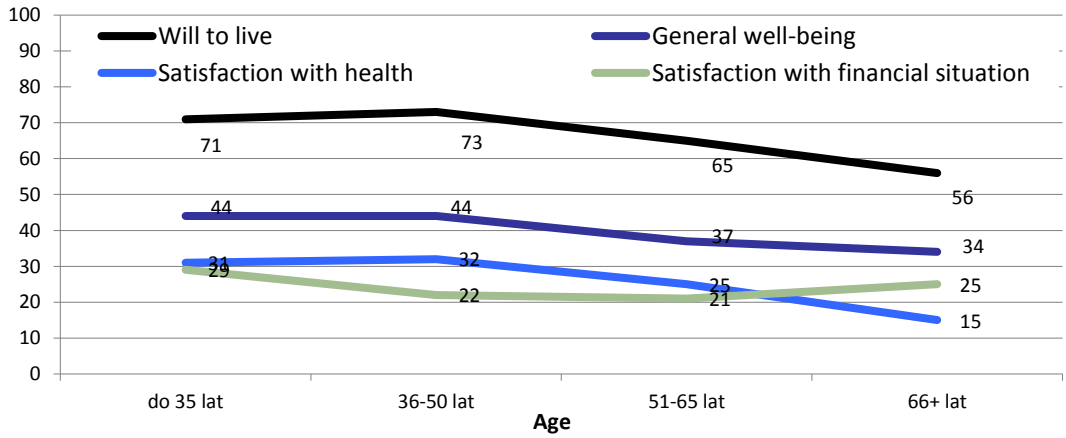
psychological well-being, the will to live. This is lower though still stable throughout life in respect to overall subjective well-being. Domain satisfactions (satisfaction with one's health and the family's financial situation) are much less influenced by the Internal Attractor mechanism throughout life, and in the case of satisfaction with one's health, the effectiveness of the Attractor rapidly declines with age. This is obviously a result of accumulating somatic disorders of all kinds, the influence of which on satisfaction with life becomes increasingly stronger than that of the internal Attractor of psychological adaptation.



NOTE: The indicator of the will-to-live is the sum of standardized values for the scales of the desire to live and suicidal tendencies; the indicator of overall well-being is the sum of standardized values for the scales of the sense of happiness, assessment of one's whole life up to now and that of the past year.

Figure 5.4.20. Effectiveness of the "happy" attractor in terms of various psychological well-being indicators, that is the predictive value (percentage of variance explained) of the initial readings of well-being level for the positive change of four well-being indicators (will to live, general subjective well-being, satisfaction with health and with the family's financial situation) between 2011 and 2013 in different age groups (by age in 2013) (N= 1 age group of 1084, 2 - 1068, 3 - 1639, 4 - 1085)

With a longer delay of six years the breakdown of the dependency on age of the effectiveness of the „happiness" attractor's internal mechanisms remains similar, though in terms of all indicators this mechanism turns out to be slightly less effective (figure 5.4.22). In nearly all age groups the differences between particular well-being indicators remain almost exactly the same as with a three-time shorter reading delay. Only the mechanism of internal will-to-live rebuilding is significantly weaker in the oldest group with a 6-year delay.



NOTE: the will to live indicator is the sum of standardised values of the desire to live and suicidal tendency scales. The general subjective well-being indicator is the sum of standardised values of the sense of happiness, assessment of one's whole life up to now and that of the last year. Values over 0.5 are significant.

Figure 5.4.21. Effectiveness of the "happy" attractor in terms of various psychological well-being indicators, that is the predictive value (percentage of variance explained) of the initial readings of well-being level for the positive change of four well-being indicators (will to live, general subjective well-being, satisfaction with health and with the family's financial situation) between 2007 and 2013 in different age groups (by age in 2013) (N= 1 age group of 163, 2 - 308, 3 - 522, 4 - 374)

As we recall the last hypothesis predicts that the improvement in living conditions on which the individual has an influence (e.g. higher income or finding a partner) influences the level of psychological well-being to an extent that is not larger than the reverse - the influence of psychological well-being on the improvement of those circumstances. In other words, the life of the happy is better than that of the unhappy precisely because the former are happy.

We checked whether the level of well-being (sense of happiness) determines the chances of unmarried persons getting married within 8 years[63]. A regression analysis proved that the happier are significantly more likely to get married. A reverse relation is not however significant as marriage does not increase this feeling[64] (Tables 5.4.2 - 5.4.3). The level of well-being in 2005 explains 4% of the differences in marital status between 2005 and 2013 among those unmarried in 2005, and getting married explains 0.3% of the increase in well-being.

Table 5.4.2. Predictive value of sense of happiness in 2005 for marrying within the next 8 years

Predictors	Unstandardized indicators		Standardized indicators	t	p
	B	Standard deviation	Beta		
Constant	0.413	0.069		5.970	0.000
Sense of happiness 2005	-0.118	0.030	-0.208	-3.977	0.000
Constant	0.341	0.095		3.599	0.000
Sense of happiness 2005	-0.090	0.031	-0.159	-2.886	0.004
Age	-0.003	0.001	-0.121	-2.210	0.028
Gender	0.086	0.038	0.120	2.279	0.023

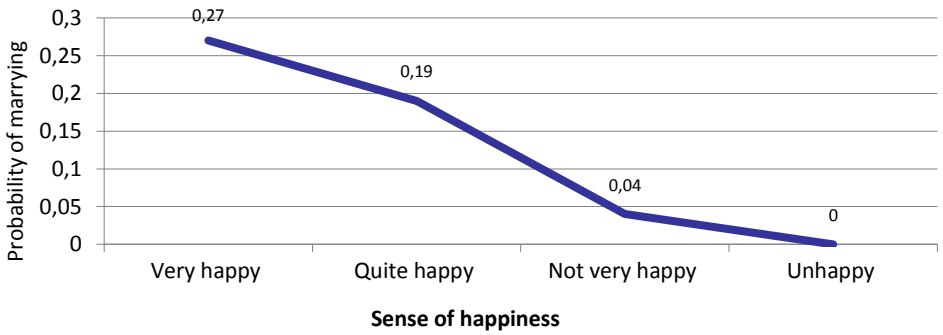
R^2 for well-being = 0.04

Table 5.4.3. Predictive value of marrying after 2005 for change in sense of happiness between 2005 and 2013

Predictors	Unstandardized indicators		Standardized indicators	t	p
	B	Standard deviation	Beta		
Constant	1.329	0.116		11.435	0.000
Sense of happiness 2005	0.340	0.049	0.375	6.893	0.000
Constant	1.387	0.123		11.295	0.000
Sense of happiness 2005	0.323	0.051	0.356	6.367	0.000
Marrying	-0.125	0.086	-0.081	-1.445	0.149
Constant	1.169	0.158		7.415	0.000
Sense of happiness 2005	0.288	0.052	0.318	5.530	0.000
Marrying	-0.112	0.087	-0.073	-1.289	0.198
Age	0.006	0.002	0.154	2.715	0.007
Gender	0.050	0.061	0.045	0.821	0.412

R^2 for marrying = 0.003

Figure 5.4.22 illustrates the size of the psychological well-being effect in terms of the chances of finding a life partner. Those who were very happy in 2005 were over 6 times more likely to marry in the next 8 years than those who felt rather unhappy in 2005.



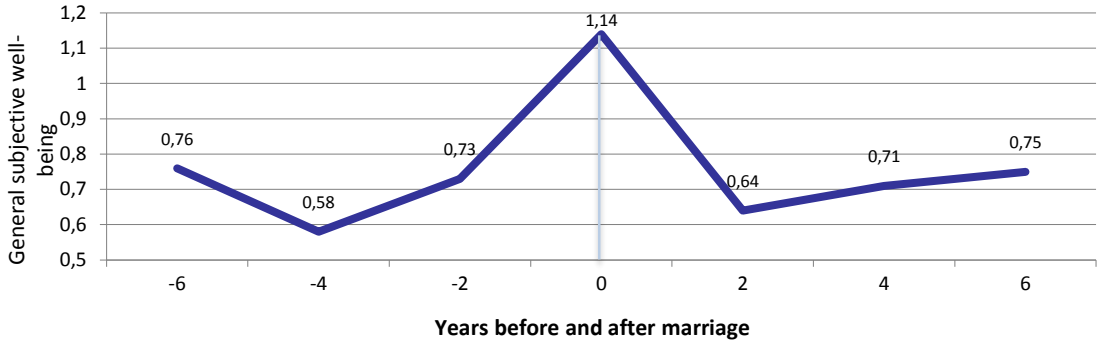
NOTES: The main effect of happiness $F(3350) = 5.568$, $p < 0.005$, $\eta^2 = 0.046$.

Figure 5.4.22. Probability of marrying between 2005 and 2011 among the unmarried in 2005 depending on sense of happiness in the 2005 panel sample

[63] The causal relation between psychological well-being and later interpersonal relations, including the chances of getting married, was detected earlier by other researchers (Harker, Keltner, 2001; Stutzer, Frey, 2006). However, Russian panel study research in five-year interval readings did not detect a statistically significant influence of well-being on the probability of getting married (Graham, Eggers i Sukhtankar, 2004).

[64] Also with a complex standard indicator of psychological well-being (see chapter 9), only the relation between change in civil status and initial level of well being is statistically significant..

The effect of getting married in terms of psychological well-being is not permanent as has already been shown by other studies (Easterlin, 2005). The general pattern is that psychological well-being improves as the date of the wedding approaches, then declines in the subsequent years to that from many years before the wedding (Figure 5.4.23 - 5.4.24). The level of well-being declines rapidly within the first two years of marriage, and then stabilises over the next two years, only to start declining again after the fourth year to that the same number of years before marriage. In other words, there is an almost full symmetry of change in psychological well-being before and after getting married. This suggests that the significant difference in terms of various psychological well-being indicators between those who are married and those who did not get married or got divorced consistently found in many surveys (Myers, 2004), may follow not from the "happiness-giving" role of marriage but rather from individual differences in the level of psychological well-being. Those who are happy get married more often and get divorced less often than those who are unhappy.



NOTE: Well-being was the sum of standardised values of the assessment of life up to now, the sense of happiness and the assessment of the past year. The differences of all groups to group 0 are statistically significant in dependent group pair "t" tests

Figure 5.4.23. The level of general subjective well-being at various times before and after marriage

NOTE: differences for all groups with the exception of group 6 (too small sample size) to group 0 are statistically significant in dependent group pair "t" tests

Figure 5.4.24. Percentage of the very happy at different times before and after marriage

In the case of divorce, the breakdown of relations is somewhat different. Not only does poorer psychological well-being increase the likelihood of divorce, also divorce causes a relatively permanent negative effect as far as subjective well-being is concerned (table 5.4.4-5.4.5). Therefore there is no symmetrical change in psychological well-being before and after divorce (figure 5.4.25). While separation is taking place, subjective well-being falls slightly, and then remains at a lower level in the following years. Supposedly, marriage brings with it both positive and negative changes in the subjective quality of life, while the consequences of divorce tend to be almost entirely negative, at least in the horizon of two years, and their painful effects may even sometimes increase (impoverishment, problems with parenting, alcoholism etc.). However, it does not affect the deepest levels of well-being, which is the will to live. This is weaker compared to the married, who in following years do not divorce, even 6 years before divorce, and does not suffer further reduction after divorce.

Table 5.4.4. Predictive value of well-being in 2007 for marital breakdown in the 6 years following marriage

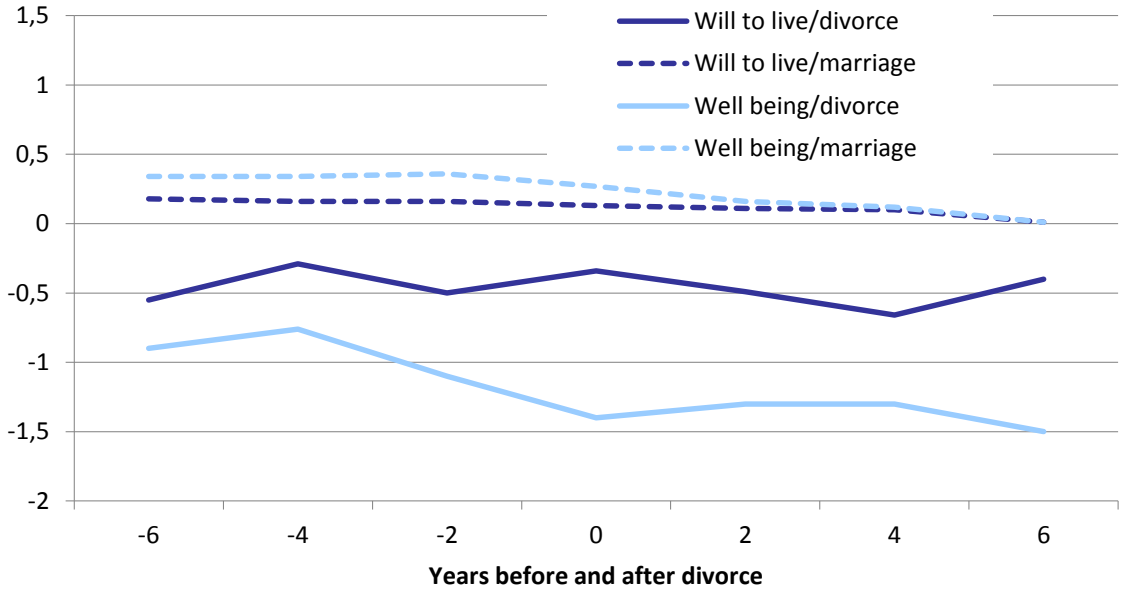
Predictors	Unstandardized indicators		Standardized indicators	t	p
	B	Standard deviation	Beta		
Constant	-0.011	0.005		-2.114	0.035
Sense of happiness in 2007	0.011	0.002	0.053	4.825	0.000
Constant	0.010	0.008		1.258	0.209
Sense of happiness in 2007	0.013	0.002	0.064	5.733	0.000
Age	0.003	0.002	0.013	1.194	0.233
Gender	-0.001	0.000	-0.065	-5.785	0.000

R^2 for well-being = 0.006

Table 5.4.5. Predictive value for marital breakdown after 2007 for changes in subjective well-being between 2007 and 2013

Predictors	Unstandardized indicators		Standardized indicators	t	p
	B	Standard deviation	Beta		
Constant	-0.038	0.017		-2.276	0.023
Well-being in 2007	-0.591	0.019	-0.520	-31.843	0.000
Constant	-0.004	0.017		-0.232	0.817
Well-being in 2007	-0.618	0.019	-0.545	-32.831	0.000
Divorce	-0.453	0.066	-0.114	-6.849	0.000
Constant	0.294	0.097		3.036	0.002
Well-being in 2007	-0.625	0.019	-0.550	-33.076	0.000
Divorce	-0.465	0.066	-0.117	-6.992	0.000
Age	-0.005	0.001	-0.057	-3.503	0.000
Gender	-0.023	0.034	-0.011	-0.690	0.490

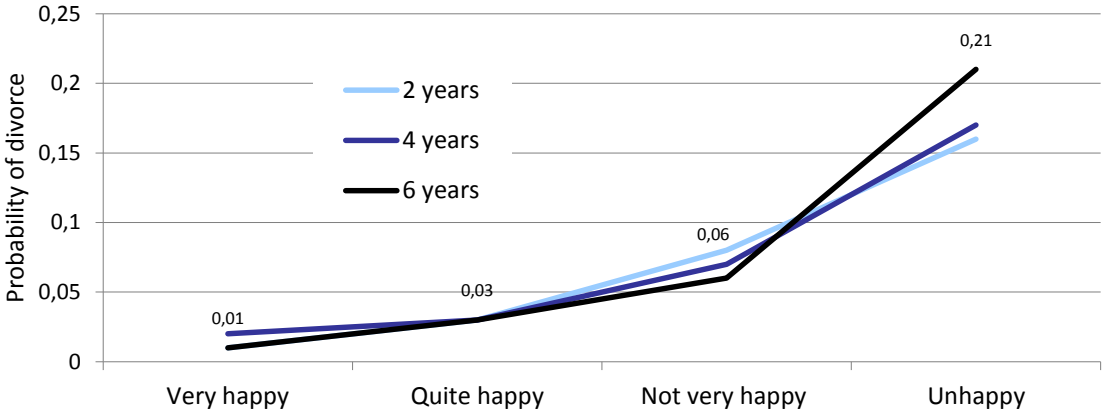
R^2 for divorce = 0,012



NOTE: all differences between marriage and divorce are statistically significant both for will to live and well-being. However, differences between will to live and well-being in the divorce group are not significant with the exception of period -2

Figure 5.4.25. Will to live and general subjective well-being at various times before and after marital breakdown among divorcees and marriages in the same periods of time

Therefore divorce, like marriage, depends on individual features linked to psychological well-being. Among the unhappily married the likelihood of divorce after six years is double that among the happily married (figure 5.4.26).



NOTE: main effect of general level of well-being 2 years before divorce F(3.16338) =97.268, p <0.000, η^2=0.018;, 4 years before divorce F(3.5315) =27.465, p <0.000, η^2=0.015; 6 years before divorce F(3.2627) =23.333, p <0.000, η^2=0.026

Figure 5.4.26. The probability of divorce between 2005 and 2013 depending on sense of happiness at various times prior to divorce in the panel sample

Psychological well-being is not a factor that differentiates the probability of two other life events: childbirth and the death of a spouse. The relation between childbirth and well-being is one-sided; the arrival of a child changes parents' well-being though it does not allow prediction of whether someone is going to have a child. Two years after birth, both the feeling of happiness fall to the level of two years before birth (figure 5.4.27).

Although the research results in the subject literature are not wholly unambiguous, the majority shows a weak negative effect of children in terms of the various measures of psychological well-being (satisfaction with life, sense of happiness eg. Ball and Chernova, 2008; Bjørnskov et al. 2008; Clark et al., 2008; Clark and Georgellis, 2010; Haller and Hadler, 2006; Margolis 2010; Stanca 2009; Alesina et al. 2004; Di Tella et al. 2003; Angeles, 2009; Clark, 2007). This negative effect flys in the face of the general opinion that children bring happiness (Hansen, 2012). Also in *Social Diagnosis*, nearly half the respondents indicate children among the three most important conditions of a successful, happy life. However, our results do not, despite appearances, actually disagree with those that dominate the subject literature. Also in the *Diagnosis*, when children supported of any age are factored into the analysis, the effect turns out to be, though weak, statistically significant as negative both in terms of general subjective well-being and sense of happiness with control for gender, age, education and prosperity (figure 5.4,28 and 5.4.29). Parents' well-being depends not only on the child's age, but also on the number of children (figure 5.4.30). One matter is the rise in well-being just before the birth of a first child and in the first years of their life, and another the long-term effect in the whole period of bringing up a child. Children do bring happiness, but only for a short time.

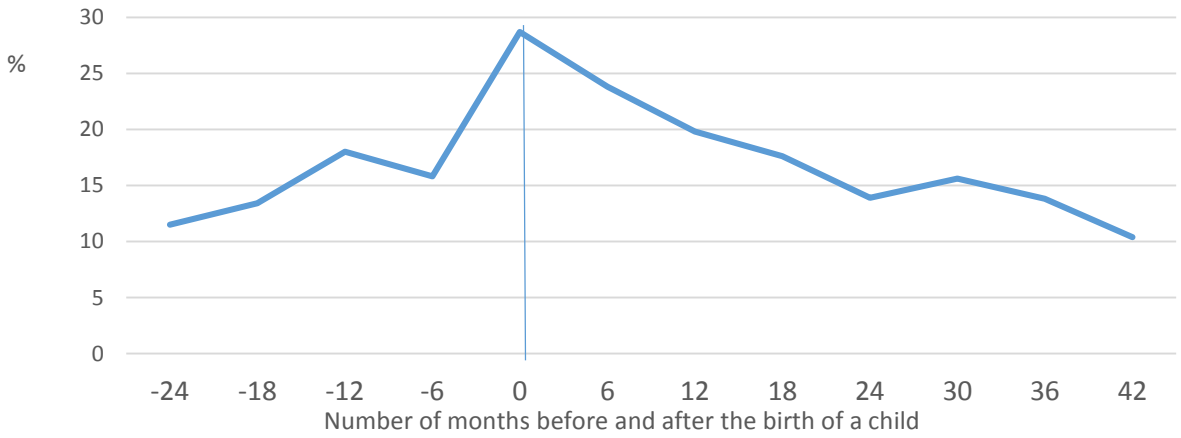
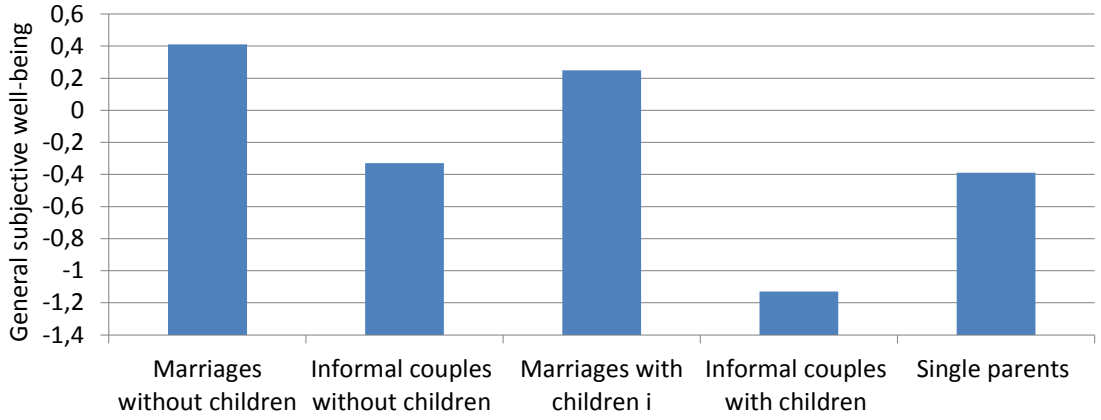
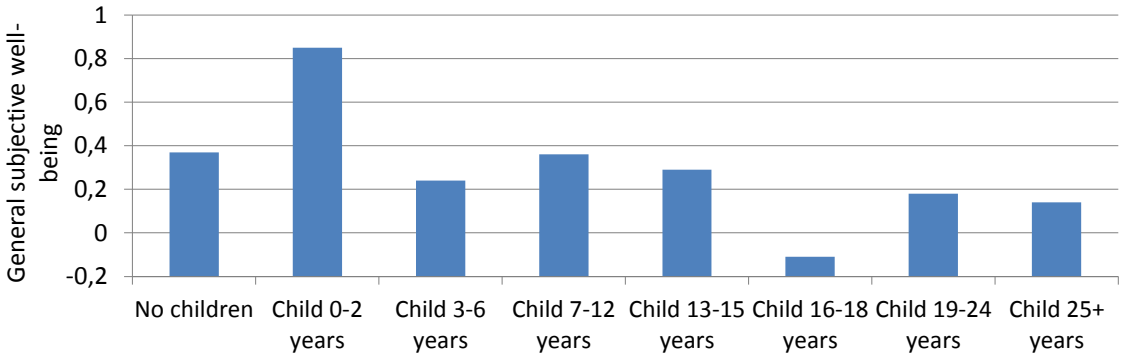


Figure 5.4.27. Percentage of the very happy at various times before and after births compared to the childless in the same period (only married couples were compared)



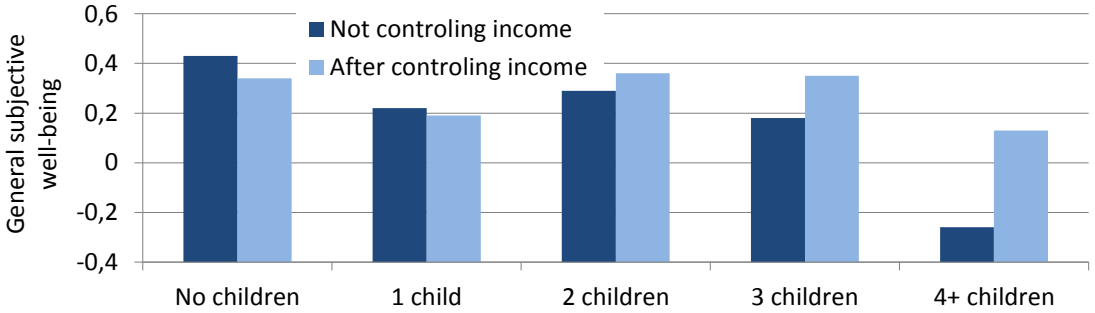
NOTE: in the case of informal couples and single parents, only the formally single were considered (the divorced, widowed and separated were not included). The main effect of family type was F(4.11771)=27.491, p<0.000, η^2=0.009 and the result of all groups is different to a statistically significant extent to that of couples without children. As far as the remaining comparisons are concerned, the insignificant pairs are the differences between informal couples with children and single parents as well as childless informal couples and single parents.

Figure 5.4.28. General subjective well-being in terms of family type with control for age, gender, educational attainment and income



NOTE: only those with one child were considered. Main effect of having children and their age was F(7.5286)=4.791, p<0.000, η^2=0.006. In relation to the childless, statistically significant were those with children between 0 and 2 years and 18 or older.

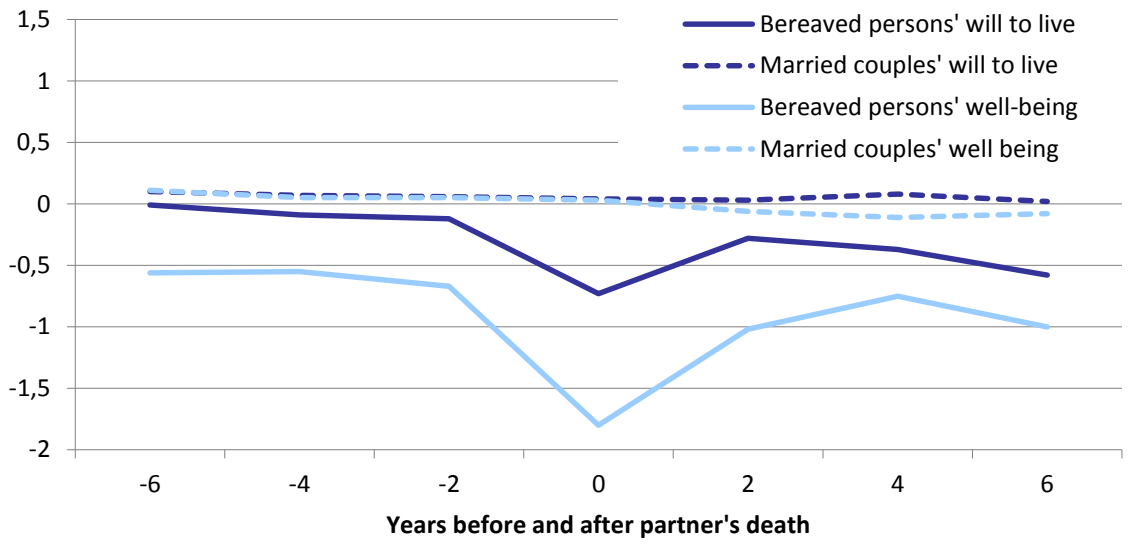
Figure 5.4.29. General subjective well-being of those up to 57 years of age in terms of having children and the child's age with control for parents' age, gender, educational attainment and income



NOTE: in the case of a lack of control of income level per equivalent individual, the main effect of child number is F(4.12684)=4.619, p<0.005, η2=0.001, statistically significant differences are between the group without children and those with one, three or a greater number. With income level control, the main effect of child number is F(4.13251)=5.119, p<0.000, η^2=0.002, with the only significant difference between the group without children and that with one child.

Figure 5.4.30. General subjective well-being in terms of number of children with control for age, gender, educational attainment and, optionally, income

In the case of the death of a spouse, the effect of the negativity expressed in hypothesis 5 is clearly visible. As opposed to marriage, the loss of a partner gives a more long-term effect in terms of various measures of well-being (figure 5.4.31), with the adaptation process in this case being less full. Like with divorce in terms of general subjective well-being, where with time there are no apparent signs of adaptation (figure 5.4.25).



NOTE: differences between couples and the bereaved for periods -6 and -4 are statistically insignificant. No difference between the will to live and well-being for the bereaved is significant.

Figure 5.4.31. Will to live and general subjective well-being at various times before and after death of spouse among the bereaved and the married over the same period

In the case of income the relation is asymmetrical. Well-being conditions change in personal income in all readings going back in time (2, 4 and 6 years) to a much greater degree than change in income influencing well-being (figure 5.4.32). So, persons in better psychological shape have a better chance of getting rich quick in the following years than those in worse psychological condition. However, an increase in wealth also, though to a lesser extent, carries with it a rise in psychological well-being. Money does bring happiness to a lesser extent than happiness brings happiness.[65]

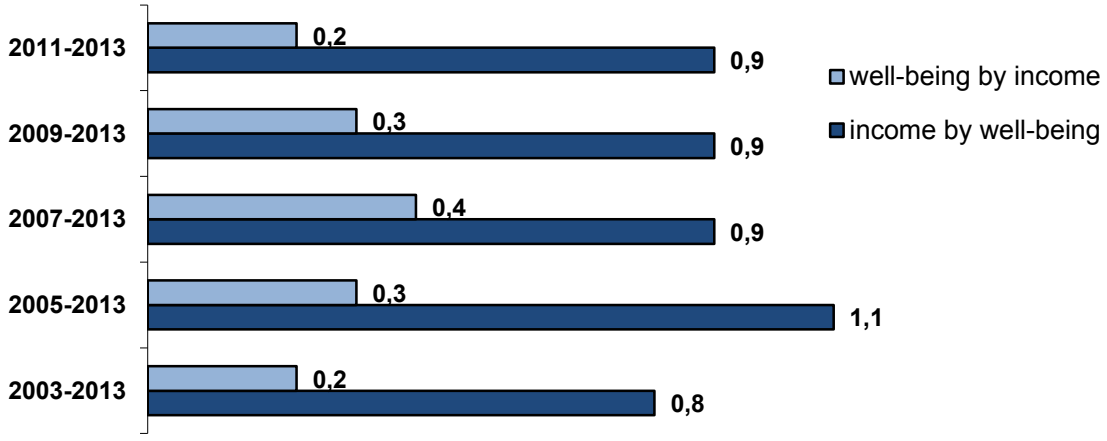


Figure 5.4.32. Percentage of variance in changes in general subjective well-being explained by changes in personal income after controlling the effect of well-being in the first measurement and percentage of variance of changes in personal income explained by psychological well-being in in the first measurement after controlling the effect of first measurement of personal income level in 2003-2013, 2005-2013, 2007-2013, 2009-2013 and 2011-2013 (all values were statistically significant)

[65] There is however much empirical data that money does bring happiness, though mainly to the poor. After the crossing of a certain level of prosperity, only the relation of well-being to money remains (Czapiński, 2004c, 2012).

5.5. Personal finance

5.5.1. Personal income: present and expected in two years

Average monthly net personal income reported for the last quarter was 1880 zł (median 1500 zł, standard deviation 1522) in the entire sample, and in the panel sample somewhat less at 1812 zł. In comparison to 2011 it increased by 4.4% in the entire sample (a fall of 0.5% in real terms). These are the first real-terms falls in personal income since the beginning of the study in 2000.

The distribution of average income in terms of social cross-sections is very diverse (Table 5.5.1). Personal income reported by men is 30.5% higher than that of women (in 2011 the difference was 34.2%); people with higher and post high-school education declare income over twice that of people with basic education. Personal income increases with age until 35-44, and then systematically decreases. The growth is linear in terms of the size of place of residence; residents of rural areas earn 57% (in 2011 the difference was also 57%) of the income of those in the largest cities. Income is the highest in the Mazowieckie, Pomorskie, Dolnośląskie and Śląskie Voivodeships, and the lowest in Świętokrzyskie (68% of income in Mazowieckie), Podkarpackie and Lubelskie.

In terms of social and professional status, entrepreneurs earn best with unemployed persons, receivers of welfare benefits and other professionally inactive persons, not counting school and university students, earning the least. Retirees' incomes are higher than those of farmers.

It therefore comes as no surprise that the personal income of upper quartile income households by household equivalent unit are double that of the lower income quartile (personal incomes are an element of household income). It is also worth noting that, compared to 2011, real incomes increased in certain groups (most among other passive labour by 6.5%, farmers 3.5% and pensioners 2.5%), and fell in others (most among entrepreneurs, by 11.5%, the unemployed 6.6%, welfare benefit receivers 1.7%, private sector workers also 1.7% and public sector workers 1.1%).

We also asked about net income expected in two years' time, and respondents expected their income to grow by an average of 43% (table 5.5.1). Two years ago expectations were slightly higher at 48%.

The amount of expected income is mainly determined by the current level of income and by factors that are strongly correlated to it; the higher the present income, the higher the income expected. However, the size of the difference between the current and expected income in percentage terms depends on slightly different socio-demographic factors, while in relation to the current financial situation this relation is partially reversed; the lower the current income, the higher its expected growth in percentage terms (r=-0,132). Similarly to 2011, in general unemployed persons, school and university students, and the youngest expect the greatest financial improvement in percentage terms (by over 100%). The expectations of entrepreneurs and farmers are greater than those of employees, especially of those who work in the public sector. The smallest growth in income is expected by retirees (13% and 16% two years ago) and public sector workers (by 29% and 33% two years ago) and welfare benefit receivers (34% and 31% two years ago). In terms of the class of the place of residence and Voivodeship, expectations are rather similar with the exception of Warmińsko-Mazurskie, where they do not exceed 30%. A factor that strongly differentiates expected income growth is age as the older the respondent is, the lower is the expectation. Men expect slightly larger rises than women.

Expectations are generally more modest than in 2011, though in some groups the fall in expectations is very great, e.g. among entrepreneurs it amounted to 15 p.p., among the dwellers of the largest and smallest towns it varied between 10 p.p. to 15 p.p., and in Opolskie by 20 p.p. Among the few groups with a rise in expectations were farmers (by 11 p.p. on 2011), who enjoyed one of the largest real-terms rises in income.

In terms of particular occupations, subsistence farmers, artists, writers and journalists expected income increases of over 100%. Professional soldiers, railway workers, representatives of the authorities and directors were the most modest in their expectations of less than 20% (table 5.5.2).

We are able to check the accuracy of expectations from two years ago. It turns out that this time they proved more unrealistic than in the previous editions of the *Diagnosis* (table 5.5.3). This is due to a significant decrease in the growth of personal income in the past two years. The nominal increase in personal income between 2011 and 2013 was by more than eight times less than respondents' expectations, and it was much greater the expectation for two years ago which was only double that actually received.

Table 5.5.1. Personal net income at present and as expected in two years in the whole 2013 sample, and expected percentage personal income growth in 2011 and 2013

Social category	Present income		Expected income in two years' time		Expected percentage income growth in 2013*	Expected percentage income growth in 2011*
	Average	Standard deviation	Average	Standard deviation		
Total	1880	1522	2462	2218	48	43
Gender						
Men	2136	1739	2844	2594	54	47
Women	1637	1235	2096	2095	43	40
Age						
Under 24	1248	776	2329	2318	148	113
25-34	2031	1351	2940	2285	65	69
35-44	2356	1756	3183	2771	54	53
45-59	1964	1959	2472	2406	41	37
60-64	1629	1068	1811	1325	20	15
65 and above	1523	850	1667	864	16	12
Place of residence						
Towns over 500k residents	2700	2416	3436	2966	51	41
Towns 200k – 500k	2195	2045	2919	2610	41	47
Towns 100 k– 200k	1884	1018	2566	2809	49	44
Towns 20kk – 100k	1826	1128	2308	1585	42	34
Towns up to 20k	1823	1378	2316	2018	53	38
Rural areas	1549	1070	2112	1862	50	49
Voivodeship						
Dolnośląskie	1980	1345	2570	2087	46	44
Kujawsko-pomorskie	1751	2198	2208	2334	40	40
Lubelskie	1576	1153	2038	1582	57	41
Lubuskie	1762	1097	2574	3287	59	46
Łódzkie	1737	1334	2355	2022	43	47
Małopolskie	1858	1275	2549	2803	51	48
Mazowieckie	2245	2270	2912	2701	51	47
Opolskie	1790	1317	2351	1677	62	43
Podkarpackie	1536	982	2081	1499	55	43
Podlaskie	1770	1268	2231	1833	37	35
Pomorskie	2027	1433	2625	1972	51	43
Śląskie	1973	1127	2513	1617	41	36
Świętokrzyskie	1530	938	1990	1295	40	45
Warmińsko-mazurskie	1710	1153	2162	2788	38	29
Wielkopolskie	1841	1339	2417	2241	54	47
Zachodnio-pomorskie	1976	1537	2574	1988	42	43
Educational attainment						
Primary and lower	1200	707	1479	965	30	27
Basic vocational/lower secondary	1579	1006	2175	2257	57	53
Secondary	1858	1456	2438	1941	47	42
Higher and post-secondary	2682	2040	3458	2648	51	44
Income per capita						
Lower quartile	1121	694	1705	1478	67	62
2nd quartile	1501	830	2019	2036	43	41
3 rd quartile	1829	881	2357	1395	40	36
Upper quartile	2913	2309	3649	2938	37	33
Social and professional status						
Public sector	2425	1494,3	3003	2031,7	33	29
Private sector	2191	1593,5	2962	2080,8	50	45
Private entrepreneurs	3048	2986,0	4514	4000,4	76	61
Farmers	1442	1233,2	2200	3403,0	70	81
Pensioners	1137	563,1	1414	1709,4	31	34
Retirees	1577	835,4	1734	887,8	16	13
School and university students	935	777,8	2435	2742,3	194	178
Unemployed	940	840,0	2024	1313,9	168	153
Other inactive labour	1041	1810,2	1904	2596,8	102	88

* These are averages of individual percentage differences between personal income in 2013 and that expected in two years for those whose income exceeded PLN 0 in 2013 if their expected income also exceeded PLN 0. The total average in this table is higher than the percentage difference in actual and expected average income for the entire sample (31%) because the average of individual differences is made excessively high by instances where a very low initial level is accompanied by considerable changes.

Table 5.5.2. Net personal monthly income at present and expected in two years in 2013 and percentage expected personal income growth in 2011 and 2013 by selected professional groups (in order of size of expected income growth in 2011)

Current profession	Average		Expected income growth*	
	current	expected income	2013.	2011
Subsistence farmers	1092	3115	110	175
Creatives, artists, writers and journalists	3017	5084	83	113
Waiters and bartenders	1647	2822	70	84
Farmers of plant crops	1476	2146	79	70
Farmers of plant crops and cattle	1414	1986	57	68
Hairdressers and cosmeticians	1570	2164	75	66
Other middle personnel	2018	2613	50	65
Machinery operators and mechanics	2113	2916	53	63
Sales Workers	1606	2209	51	63
Lawyers	4137	5565	48	62
Builders and decorators	2079	2971	57	61
Otherwise unclassified labour	1808	2425	45	58
Construction workers	2169	3088	49	57
Drivers of personal and delivery vehicles	1960	3073	54	56
Other manual labour	1453	2092	48	55
Carpenters and paper/pulp sector workers	1710	2611	49	53
Small retailers	1660	2353	47	49
Civil servants	2379	3026	34	48
Salespersons in trade and business	2973	4095	45	48
Auxiliary workers in mining and construction	1663	2282	44	47
Other specialists	2710	3610	45	47
Information technology specialists	3487	4805	50	46
Electricians and electronics specialists	2424	3429	37	44
Mining machinery operators	2773	3939	31	44
Food-processing workers	1918	2485	44	43
Smelters and welders	2433	3409	44	43
Textile workers	1610	2085	41	43
Science and engineering professionals	3135	4224	39	42
Personal care workers	1572	2014	47	42
Painters and decorators	2439	2970	43	40
Steel mill workers	1928	2597	31	40
Household cleaners	1324	1757	32	39
Marketing specialists	3283	4314	41	39
Bus and truck drivers	2365	3158	36	37
Financial associate professionals	3299	3924	37	37
Managers of various specialisations	3778	4963	37	37
Office service workers	1916	2509	35	37
Technicians and associate professionals	2602	3355	33	36
Business and Administration Professionals	3206	4369	32	35
Cooks	1657	2216	40	35
Material recording and transport clerks	2085	2669	31	35
Middle financial personnel	2417	3060	30	34
Doctors, dentists and vets	5409	6419	25	32
Nursing and midwifery professionals	2428	3040	31	32
Other machinery operators	1980	2584	29	32
Other health professionals	2331	2953	27	30
Blacksmiths and lathe operators	2120	2640	28	28
Secondary education teachers	2643	3151	24	27
Security workers (police and others)	2289	2777	24	26
Assembly workers	2249	2621	29	25
Other personal service workers	1665	2025	32	25
Primary school teachers	2480	3009	23	24
University and higher education teachers	3279	3782	16	22
Chief executives, senior officials and legislators	4707	5780	19	19
Railway staff	2389	2721	17	17
Professional soldiers	3103	3532	15	15

* See table 5.5.1

Table 5.5.3. Difference between expected and actual percentage growth in personal income in the 2011-2013 and 2009-2011 panel samples

Social category	Percentage expectation error		Difference in expectation error in 2011-2013 and 2009-2011	Difference in expectation error in 2009-2011 and 2007-2009	Difference between 3 and 4
	2011-2013 [a]	2009-2011[b]			
	1	2	3	4	5
Total	35	20	15	9	6
Gender					
Men	40	24	16	10	6
Women	31	16	15	7	6
Age					
up to 24	86	63	17	30	-13
25-34	64	35	31	11	20
35-44	50	29	21	12	9
45-59	43	17	26	5	21
60-64	19	4	15	7	8
65 and over	8	4	4	5	-1
Place of residence					
Towns over 500k	34	17	17	4	13
Towns 200k – 500k	34	24	10	7	3
Towns 100 k– 200k	25	15	10	6	4
Towns 20kk – 100k	30	21	9	10	-1
Towns up to 20k	34	17	17	14	3
Rural areas	39	20	19	7	12
Voivodeship					
Dolnośląskie	37	23	14	17	-3
Kujawsko-pomorskie	39	25	14	2	12
Lubelskie	39	22	17	21	-4
Lubuskie	41	16	25	14	11
Łódzkie	32	26	6	1	5
Małopolskie	33	26	7	6	1
Mazowieckie	41	20	21	11	10
Opolskie	29	21	8	5	3
Podkarpackie	38	18	20	-1	21
Podlaskie	25	15	10	9	1
Pomorskie	40	23	23	16	7
Śląskie	28	13	15	7	8
Świętokrzyskie	37	17	20	16	4
Warmińsko-mazurskie	25	13	12	1	11
Wielkopolskie	33	16	17	13	4
Zachodnio-pomorskie	35	17	18	-11	38
Educational attainment					
Primary and lower	24	13	11	5	6
Basic vocational	40	23	17	7	10
Secondary	37	23	14	11	3
Higher	35	17	18	10	8
Income per capita					
Lower quartile	78	21	57	3	54
2 nd quartile	35	17	18	7	11
3 rd quartile	31	18	13	9	4
Upper quartile	32	25	7	14	-7
Social and work status					
Public sector	25	15	10	14	-4
Private sector	40	31	9	10	-1
Private entrepreneurs	67	43	24	-8	32
Farmers	67	26	41	12	19
Pensioners	26	7	19	5	14
Retirees	10	4	6	5	1
School and university	168	78	90	13	77
Unemployed	164	51	113	14	99
Other inactive labour	94	41	53	-5	58

a These are individual average percentage differences between personal income in 2013 and expected income in the next two years in the 2011 panel sample study

b These are individual average percentage differences between personal income in 2011 and expected income in the next two years in the 2009 panel sample study.

Let us see then who was more and less wrong. School and university students, the youngest persons, unemployed persons, private entrepreneurs and other passive labour were most excessively optimistic (168%, 86%, 67%, 94% and 67% respectively). The most elderly, pensioners and receivers of welfare benefits proved to be the greatest realists (an error of not more than 10%). These are the groups who have already completed their professional career.

Approximately 30% had the opportunity to be "positively disappointed", as they had achieved a higher income than expected. This is the same as in in 2011 but much less than in 2009 (43% were "positively disappointed" then). However, they are not visible in our breakdowns as unrealistic optimists are a majority in each of the groups defined.

Do past errors in future income estimates teach us something and do they lead to a correction of expectations? The average expected rise in income in the current research was much higher than the analogous indicator from two years ago (respectively in whole samples 35 and 20%, table 5.5.3, column 1 and 2). However, it should not be ruled out that those who more over-estimated the possibilities of rises in their income are currently more careful on their estimates and expect smaller economic progress in the years to come, while those who underestimated their rise in income or made a small error of unrealistic optimism are likely to correct upwards, now expecting a much greater increase in income. If it were so, the correlation between relative size of expectation error from two years before and the percentage difference between currently declared and expected income in the coming years should be negative. However, the opposite is the case, the size of the income rise overestimation error from two years ago correlates positively with the presently predicted tempo of personal income increase (in 2007, r. r=0.24, p < 0,000, w 2009 r. r=0,23, p<0,000, w 2011 r. r=0,27, p<0,000, w 2013 r. r=0,48). The unrealistic optimism of Poles is not much verified in the light of realistic changes in the economy. The fact that this year this correlation is nearly twice as high as in previous years even proves that with a weakening economy and falling personal income, unrealistic optimism is actually on the rise. This is also borne out by another indicator showing that while the expectation error between 2009 and 2011 rose by 9 p.p., in the next two years it increased by 15 p.p. (table 5.5.3 column 3 and 4). However, the dynamic of unrealistic optimism is not rising to the same degree in all socio-demographic groups, and in some there was even a fall (the greatest among the youngest though not among school and university students. The huge rise in the dynamic of income increase overestimation in the last two years is probably a result of the unemployed in 2011, in the worsening job-market situation, had fewer chances of finding work during this year's study than those of 2009 and previous to the 2011 study. This resulted in the expectations of the first being significantly more overestimated than those of the second. A similar explanation may also apply to other passive professionals and members of the most impoverished households, who in the last two years had smaller earning opportunities than before. The large rise in expectation error in the group of private entrepreneurs is linked to a fall in demand and consumption, and with it their personal income (with the unemployed and other passive professionals, private entrepreneurs were hit by the greatest fall in income of 5.5%). The rate of growth of unrealistic expectations can also be treated as a measure of disappointment and financial stress. Significantly, satisfaction with the financial situation of the family is the lowest among the unemployed and other passive professionals. Also in the group of private entrepreneurs, satisfaction with family finances is clearly smaller than that among pensioners and hired workers. Also, financial stress is the highest among the unemployed and private entrepreneurs.

5.5.3. Rate of return on investment in higher education

One of the main, if not the most important factor differentiating personal income is education. The educational boom, which began in Poland in the first years of the transformation, proves that this relation has been perfectly understood. It is however worthwhile to look more closely at this relation to assess the extent to which higher education, to which 70% of 16 year old students' parents aspire (see chapter 4.5.3), is a profit-making investment. An indicator of the profitability of every investment is rate of return, which in the case of educational investments is comparatively easy to calculate. From the difference in earnings of a graduate of a given educational attainment and their counterpart of the same gender who completed their studies one level lower, it is necessary to subtract the cost of further education (fees and earnings foregone during study) spread over the whole period of professional activity and divide the result by the income of the less well-educated and multiply that by 100 (in order to express the result as a percentage value of net earning advantage of the better educated over the less

well). This we did for PhD in comparison with Master's degrees and higher education graduates compared to high-school graduates. Also, we divided the higher education group into Master's and Bachelor's degree graduates [66].

In Poland, the rate of return on education has been for years much higher than in countries of a similar level of development (Psacharopoulos, Patrinos, 2004). A Bachelor's degree yields a five times smaller rate of return than a Masters, and a PhD increases that by a further 38% (figure 5.5.1). In the last two years, the rate of return increased significantly only for PhD. Masters degrees retained their financial significance, but a Bachelor's ceased to be a profitable investment.

What educational qualifications do employers appreciate most in Poland today? Public-sector workers gain the least from higher education in terms of profit compared to those with middle education than private-sector employees (figure 5.5.3). There is an especially large difference between the sectors in men's Master's and PhD. In the public sector, only a women's PhD gives a greater rate of return than in the private sector. The greatest in differences in both sectors are between women and men in terms of rate of return from Bachelor's and Master's degrees.

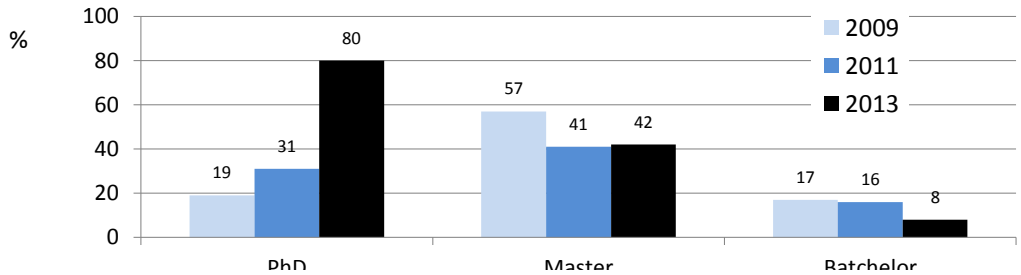


Figure 5.5.1. Rate of return on investment in education at PhD, Master's and Batchelor's degree level

Women gain from a PhD much more than do men, though in the case of a Masters and a Bachelors, there are no gender differences.

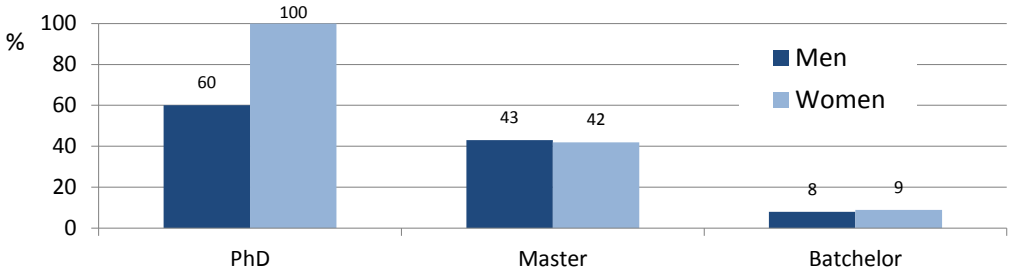


Figure 5.5.2. Rate of return on investment in education at PhD, Master's and Batchelor's degree level by gender

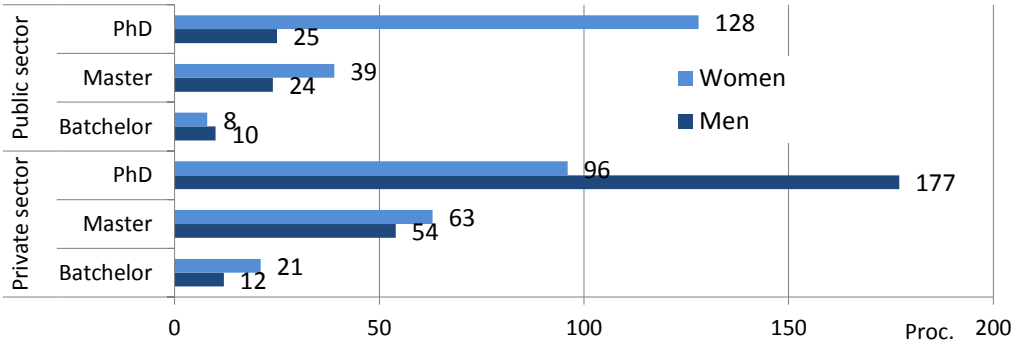
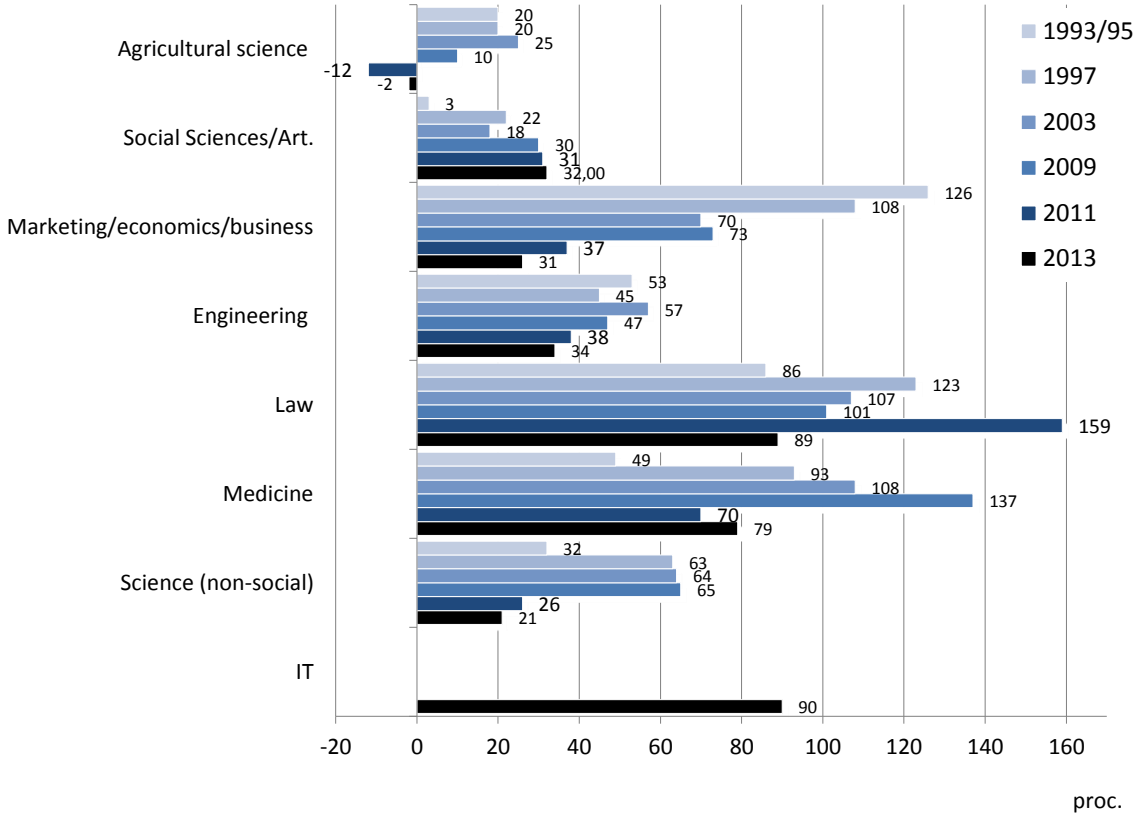


Figure 5.5.3. Rate of return on investment in education at PhD, Master's and Batchelor's degree level by gender and sector of employment

[66] We accepted the assumption that all Doctorates and students stop working and so do not earn what their colleagues with Master's and secondary education do and we accepted that Doctorates pay 8000 zł for their studies, Master's 35,000 zł and 18,000 zł Bachelor's.

Not all directions of study yield the same rate of return, with most profit to be gained from studying law and information technology, and the least from agriculture science, as in the last two studies, farmers even have negative rates of return. In the last years, there have been marked changes in the rate of return of study in various directions (figure 5.5.4).



NOTE: source of data for 1993/95 and 1997 Czapiński J. (1998). *The Poles' quality of living in times of social change.* Warsaw. University of Warsaw: Institute of Social Studies, for 2003-2013 Social *Diagnosis.*

Figure 5.5.4. Return on investment in higher education for a variety of disciplines among the professionally active in 1993/95, 1997, 2003, 2009, 2011and 2013

Since the beginning of the 90s, the rate of return on investment in medical study has been rising steadily (a jump from 49 to 137%), though in the last four years it fell steeply from 79 to 70%. Investment in law study yielded ever greater rates of return until the end of the last century, after which the profitability of these studies began to fall, only to rise again to the level of the 90s in 2011. It cannot be ruled out that this is a delayed effect of a certain regulation of the legal profession. Economics, marketing, management and finance studies, upon which the expansive development of private universities at the beginning of the 90s was based, yielded the greatest rates of return at the beginning of the transformation when there was a dramatic lack of specialists in these areas. However, gradually the profitability of these studies fell as the job market was satisfied, with rates of return at only a quarter of that from 18-20 years ago. Despite complaints about a lack of engineers and the introduction of government funding for engineering studies, the rate of return in this area has not changed significantly since the beginning of the last century. The rate of return on humanistic social and artistic disciplines is relatively low and subject to minor change, though graduates of scientific studies suffered relatively the greatest fall in rate of return (with the exception of information technology specialists.

It should however be noted that despite another hundred thousand higher education graduates and the more than doubling of the share of those with university education in the population of adult Poles, the average return on investment in studies, especially Masters degrees, remains at quite a high level. This explains why the educational boom in Poland is not weakening.

The rates of return for medical studies appear somewhat mysterious, and it would seem that the changes are to do the dynamic of pay in the Health Service. According to the Ministry of Health, the average growth of the sum of salaries of doctors employed on a work agreement basis was 104% for

doctors of second specialisation level and up to 120% for first level[67]. The subsequent growth in doctors' pay was not so dynamic, which explains why, in 2003-2009 the rate of return for medical study jumped by 30 p.p. to 137%, only to fall by a half in the next two years to 70%, placing medicine again in second place after law and administration.

Women, to a marked extent more than men, gain from investing in legal and information technology studies, while men have better yields from medicine (figure 5.5.5). In terms of the remaining directions, the rate of return is similar for both genders.

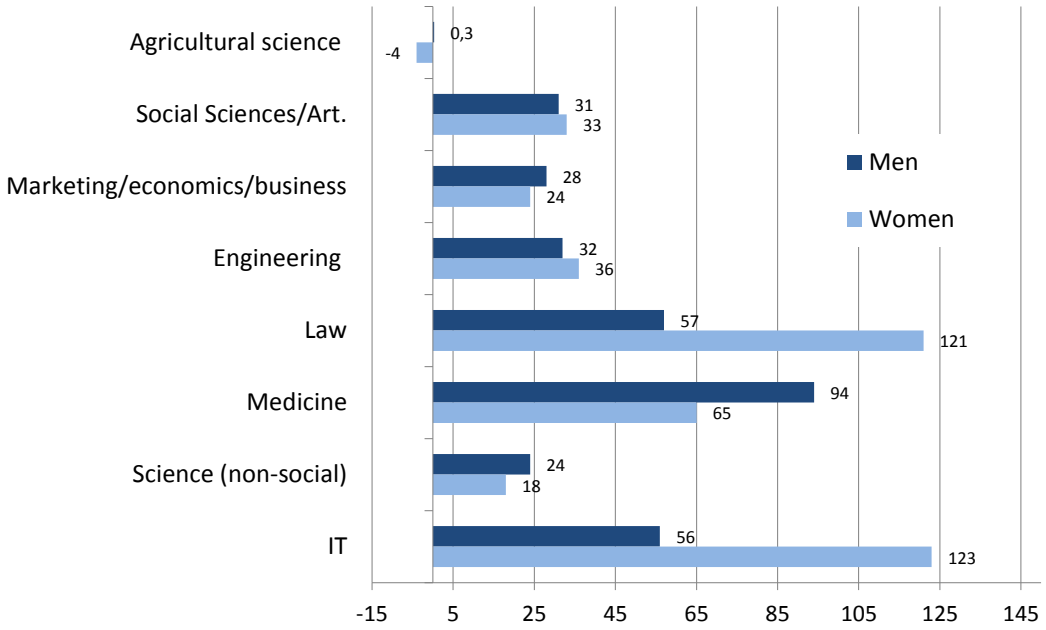


Figure 5.5.5. Return on investment in higher education for a variety of disciplines for the professionally active by gender

5.6. Health

5.6.1. Somatic symptoms

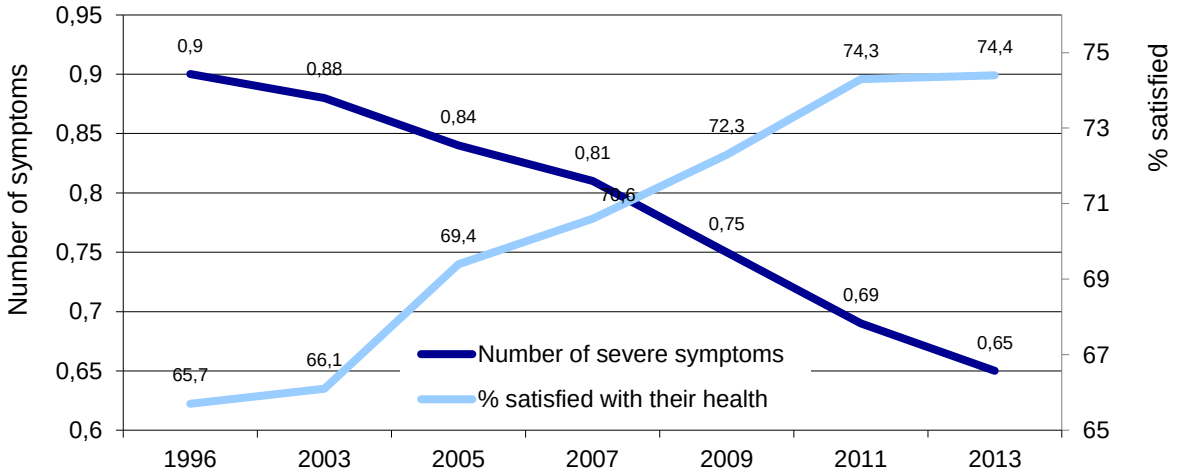
In 2003, the individual questionnaire of the *Diagnosis* was extended to include a scale of health that measures the incidence of 15 somatic symptoms (annex 1 individual questionnaire, p59). Comparison of *Diagnosis* results from 1996 and 2003-2013 reveals a steady fall in the number of symptoms lasting at least two weeks in the month preceding the study. In 2013, the number of symptoms is 1/4 less than in 2003. This fall is accompanied by a rise in satisfaction with health (figure 5.6.1). Also statistically significant is the correlation between the intensity of symptoms and satisfaction with the state of health (in 2013 r=-0.38). The correlation between answers to the question whether the respondent has been seriously ill in the last year and the number of symptoms (in 2013 r=0.32) as well as fall in the size of the correlation coefficient between "serious illness" and satisfaction with health after control of symptom number from -0.44 to -0.18 may show that the scale of symptoms may be treated as a gauge of health.

The percentage of respondents who experienced particular symptoms for at least half a month decreased over the past two years for the entire scale with the exception of the very rare shivers or twitches and nosebleeds. The largest decreases concerned the frequency of headaches and sudden jumps in blood pressure, stomachaches and constipation (Table 5.6.1). We have not recorded an increase in the frequency of any of the 15 symptoms since 2003.

The main effect of gender is significant, which is consistent with the worse self-evaluation of the health condition on the part of women found consistently in all studies. In the panel sample, the difference between the genders is similar in all 3 waves (figure 5.6.2). The lack of a significant effect of

[67] http://www.pulsmedycyny.com.pl/index/archiwum/11743/1.html

the year of measurement means that the 2009-2013 panel sample retained persons for whom the incidence of psychosomatic symptoms did not change despite them getting four years older. Given the very strong age effect, this means that in fact the health of the entire population may have improved significantly in this period.



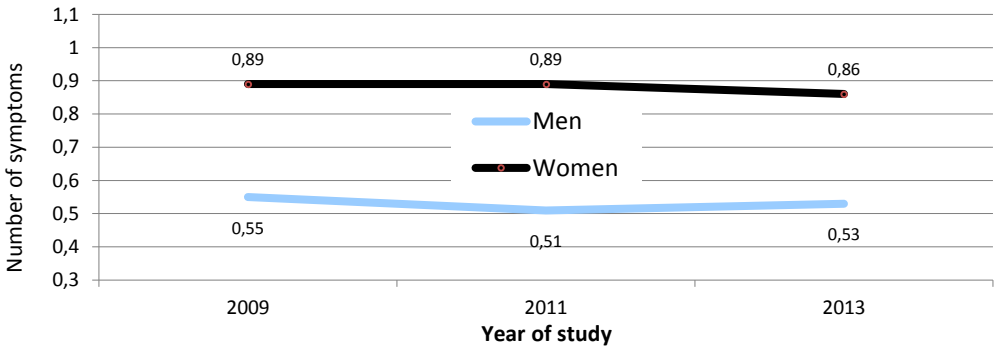
Source of data: for 1996 - Czapiński, 1998 for 1996-1997; *Social Diagnosis* for 2003-2013.

Figure 5.6.1. Average psychosomatic symptoms in the preceding month for at least two weeks and percentage satisfied with their health in 1996 and 2003-2013 in samples for respondents aged 18+

Table 5.6.1. Percentage of respondents aged 18+ with a variety of physical symptoms lasting at least two weeks in seven studies

Symptoms	1996 N=2193	1997 N=1943	2003 N=8977	2005 N=8765	2007 N=12568	2009 N=25404	2011 N=25716	2013 N=26081
Severe headaches	8.1	9.3	8.1	7.9	7.2	6.5	5.9	4.8
Stomach pains or flatulence	4.9	4.5	5.9	6.3	6.0	5.5	5.2	4.5
Neck or shoulder pains or tension	8.3	9.8	9.9	10.1	9.7	9.5	8.9	8.6
Chest or heart pains	7.1	7.1	6.8	5.7	5.5	5.2	4.5	4.0
Dryness in mouth or throat	5.0	4.0	5.3	5.3	5.3	5.0	4.6	4.3
Excessive sweating	5.6	6.0	5.9	5.8	5.5	5.0	4.6	4.2
Feeling of breathlessness	6.0	5.8	5.5	4.9	4.5	4.2	3.7	3.6
Pain in bones and in the entire body	9.1	8.9	9.2	8.7	8.0	8.0	7.3	6.8
Accelerated heartbeat (palpitations)	5.3	4.9	5.2	4.6	4.5	4.0	3.5	3.2
Shivers or convulsions	0.8	1.0	1.2	1.2	1.3	1.2	0.9	1.1
Pressure on the bladder and more frequent urination	4.0	3.3	6.4	6.1	5.5	5.4	4.8	4.3
Sense of fatigue unrelated to work	7.9	7.2	8.8	8.1	8.1	7.4	6.9	6.7
Constipation	2.7	2.4	4.4	4.1	3.7	3.5	3.2	2.6
Nosebleeds	0.3	0.4	0.9	0.9	1.0	0.8	0.8	0.8
Sudden changes of blood pressure	ND	ND	7.8	7.2	6.9	6.2	5.8	4.9

Source of data: 1996-1997 — Czapiński, 1998; 2003-2013 — *Social Diagnosis*



NOTE: main effect of gender F(1, 12028)=225.767, p<0.000, η^2= 0.018; main effect of study year ns.; effect of year of study and gender interaction ns.

Figure 5.6.2. Average serious physical symptoms by gender in panel samples for 2005-2013

5.6.2. Disability

The 2013 sample included a similar percentage of the disabled as in 2009 and 2011, and the proportions of persons with different degrees of disability were though somewhat different to previous years - a smaller percent with a severe and slight and larger with a slight moderate (table 5.6.2).

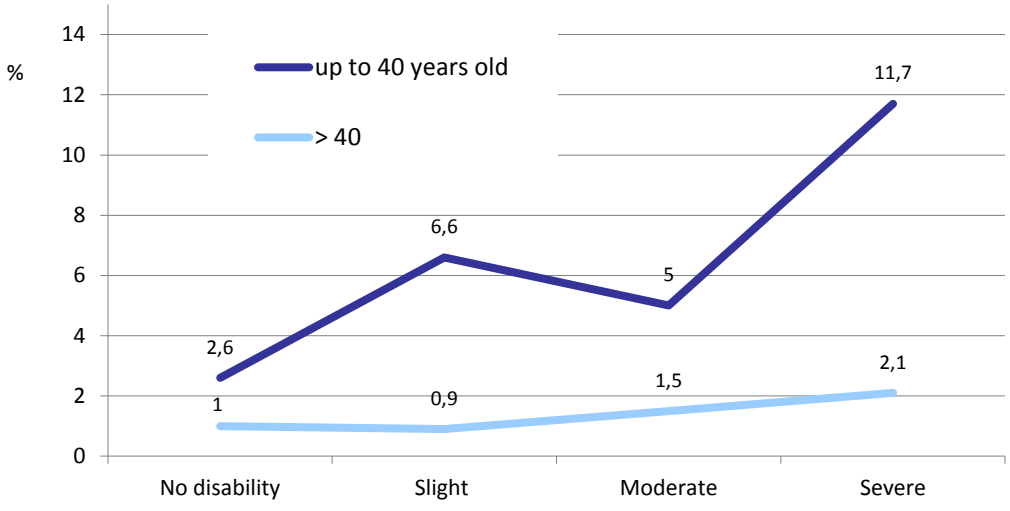
Table 5.6.2. Share of disabled in entire samples and respondents with various disability status in samples of the disabled in 2009, 2011 and 2013

Category	2009		2011		2013	
	N	%	N	%	N	%
The disabled	4105	11.1	4105	11.3	3913	11.0
A ZUS ruling	2741	7.4	2661	7.3	2573	7.2
Disability Assessment Panel at the Regional Family Care Centre ruling	542	1.5	704	1.9	664	1.9
Both rulings	162	0.4	205	0.6	202	0.6
By subjective assessment	358	1.0	298	0.8	271	0.8
Children under 16	210	0.6	129	0.4	137	0.4
Other cases	93	0.3	108	0.3	67	0.2
Non-disabled	32837	88.9	32147	88.7	31684	89.0
Degree of disability*						
Severe	1069	31.1	1058	31.1	1014	29.8
Moderate	1319	38.4	1407	41.4	1473	43.2
Slight	1047	30.5	933	27.5	920	27.0

* Only registered disabled

Slight differences, especially in terms of the degree of disability result from the changes in the panel sample making up a majority in the samples in the period between the three readings. The increased share of the disabled with a certificate of moderate disability resulted from the change in this direction in the ruling in respect of a numerous group of persons (21%) with mild disability.

In Poland, the disabled are objectively discriminated in a number ways if only because of the architectural barriers that force them to stay at home. It is therefore astounding that they do not feel much more discriminated against than the non-disabled especially if they are over 40 (figure 5.6.3).



NOTE: main effect of disability F(3, 24874)=21.807, p<0.000, η^2= 0.003; effect of age F(1, 24874)=89.830, p<0.000, η^2= 0.004; effect of gender F<1, ns.; effect of disability and age interaction F(3, 24874)=14.497, p<0.000, η^2= 0.002.

Figure 5.6.3. Percentage of respondents who felt they had been discriminated against by status of disability with control for age and gender

The limitation of various different abilities should influence self-esteem, and more specifically on judgement of one's own influence on events and feeling of adequacy. Do the handicapped really, in answering the question whether the last year was successful or not, more often indicate fate (providence)

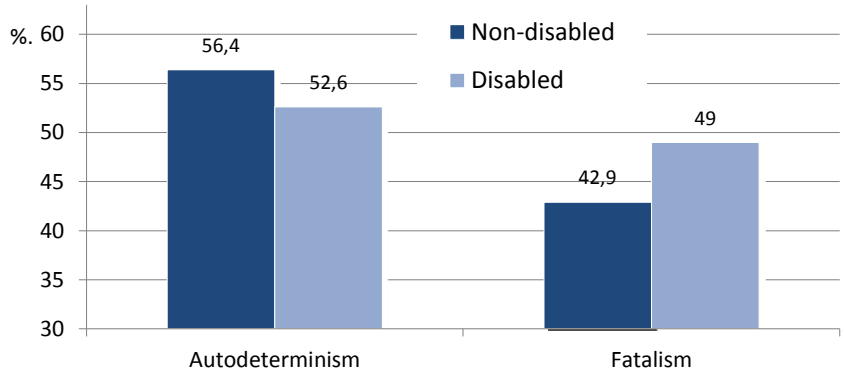
than the able-bodied? Do they indicate lesser auto-determination and greater fatalism? The data support this in full (figure 5.6.4).

Table 5.6.3. Percentage of disabled and percentage with various degrees of disability among the disabled

Socio-demographic group	Percentage of disabled*	Percentage of disabled with different degrees of disability **		
		Severe	Moderate	Slight
Total	9.7	29.8	43.2	27.0
Gender				
Men	9.8	28.0	44.4	27.6
Women	9.6	31.5	42.1	26.5
Age				
18-24	2.0	23.4	54.3	22.3
25-34	4.8	32.4	43.8	23.8
35-44	4.8	26.9	35.5	37.6
45-59	13.1	19.1	46.4	34.5
60-64	22.4	18.9	47.3	33.8
over 65	24.4	44.1	38.6	17.3
Place of residence				
Towns over 500k residents	8.1	31.8	45.8	22.3
Towns 200k – 500k	10.0	29.1	46.3	24.5
Towns 100 k– 200k	10.1	21.7	47.0	31.3
Towns 20kk – 100k	11.8	27.4	44.9	27.7
Towns up to 20k	11.3	30.3	43.2	26.5
Rural areas	8.5	32.6	39.7	27.7
Voivodeship				
Dolnośląskie	11.1	25.0	45.9	29.1
Kujawsko-pomorskie	10.0	32.7	43.2	24.1
Lubelskie	11.0	35.7	38.1	26.2
Lubuskie	16.2	23.0	54.6	22.4
Łódzkie	8.2	29.0	32.8	38.2
Małopolskie	11.4	41.6	39.0	19.4
Mazowieckie	7.1	22.4	49.7	27.9
Opolskie	7.8	37.0	35.6	27.4
Podkarpackie	10.1	25.5	40.0	34.5
Podlaskie	7.0	36.3	43.8	20.0
Pomorskie	10.6	35.9	40.5	23.6
Śląskie	8.1	25.2	45.7	29.0
Świętokrzyskie	11.0	26.2	49.2	24.6
Warmińsko-mazurskie	9.9	39.2	36.2	24.6
Wielkopolskie	11.5	27.2	44.3	28.6
Zachodniopomorskie	9.0	24.3	46.4	29.3
Educational attainment				
Primary and lower	18.9	40.6	36.7	22.6
Basic vocational	12.2	25.3	44.4	30.3
Secondary	9.5	25.3	46.0	28.8
Higher and post-secondary	5.4	23.2	51.9	24.9
Social and professional status				
Public sector	3.2	14.6	50.4	35.0
Private sector	3.6	9.4	43.4	47.2
Private entrepreneurs	1.9	19.2	46.2	34.6
Farmers	1.2	38.9	16.7	44.4
Pensioners	66.3	29.4	44.2	26.4
Retirees	19.0	39.5	39.9	20.6
School and university students	2.0	21.2	53.1	25.7
Unemployed persons	6.0	8.4	43.5	48.1
Other inactive labour	5.4	34.2	47.1	18.7

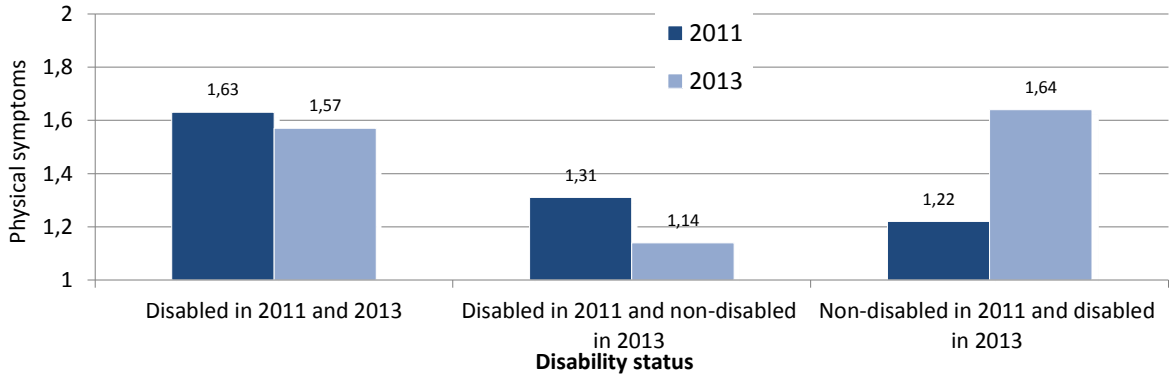
* The disabled with a ruling, and disabled children
** The disabled with a ruling only

We have already mentioned the suspected changes in the status of the disabled between 2011 and 2013, which may have had an influence on the falling share of those with a light in favour of those moderate disability. We examined these changes in a panel sample, and it transpired that 69.7% of the disabled were disabled in both years, 17.3% changed from being able-bodied to disabled and 12.9% ceased to be disabled. The larger percent of those entering than leaving the disabled group is a simple effect of aging, which is correlated with disability (r=26). If change in category was dictated by change in state of health we can expect change in the intensity of physical symptoms in those who exited or entered the disabled group between 2011 and 2013. Analysis results confirm this assumption. Among those who lost the disability status, there was a significant fall in the intensity of physical impairment, and in those who entered there was a marked rise (figure 5.6.5). It is also clear that those who ceased being disabled were in much better physical condition already prior to the change to those permanently disabled. The hypothesis of the health aspect of change in disability status is also confirmed by the subjective personal state-of-health satisfaction indicator (figure 5.6.6). In the group of newly disabled there was a fall in happiness and in that who exited disability there was a marked rise in satisfaction with health. So, these results prove the high accuracy of disability declarations and their change with the appropriate commission. Also, serious illness is linked to disability status in the last year. Those with status changes from able-bodied to disabled fell seriously ill almost twice as often (41% compared to 22%) compared to those who emerged from the disabled group.



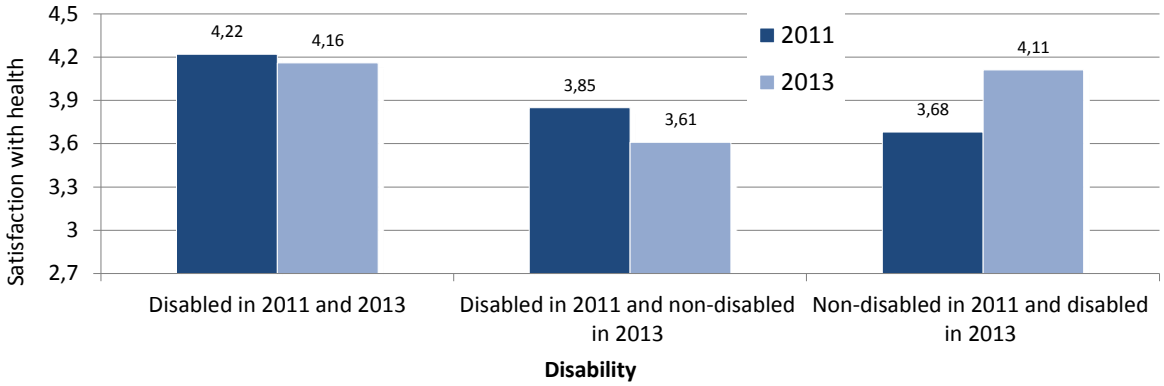
NOTE: in terms of self sufficiency -- main effect of disability F(1,24059)=15.891, p<0.000, η^2= 0.001; main effect of gender F(1,24059)=22.406, p<0.000, η^2=0.001; main effect of last year's assessment F(1, 24059)=2907.807, p<0.000, η^2= 0.108; effect of age F(1,24059)=300.051, p<0.000, η^2= 0.012; in terms of fatalism -- main effect of disability F(1, 24056)=30.419, p<0.000, η^2= 0.001; main effect of gender F(1,24056)=97.028, p<0.000, η^2=0.004; main effect of last year's assessment F(1,24056)=249.957, p<0.000, η^2= 0.010; effect of age F(1,24056)=423.220, p<0.000, η^2= 0.017.

Figure 5.6.4. Percentage of autodeterminists and fatalists among the non-disabled and disabled with control for age, gender and assessment of the last year



NOTE: main effect of disability status F(2, 2443)=5.489, p<0.005, η^2= 0.004; main effect of the year of study ns.; effect of year and disability status interaction F(2.2443)=6.320, p<0.005, η^2= 0.005

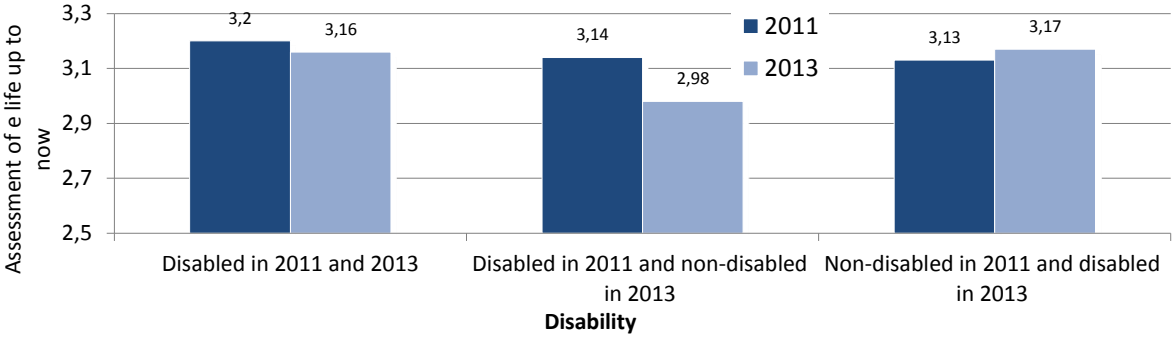
Figure 5.6.5. Number of serious physical symptoms in 2011 and 2013 among those of various disability status with control for age and gender in a panel sample



NOTE: inverted scale of satisfaction with health (1-very pleased, 6-very unhappy); main effect of disability status F(2, 2412)=28.779, p<0.000, η^2= 0.023; not significant main effect of study year; effect of interaction of study year and disability status F(2,2412)=26.725, p<0,000, η^2= 0.022.

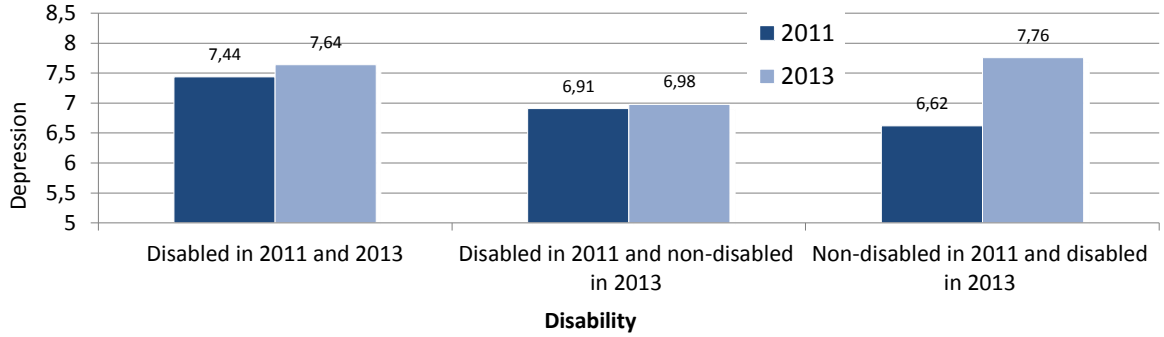
Figure 5.6.6. Satisfaction with health in 2011 and 2013 for those of various disability status with control for age and gender in the panel sample

Indicators of psychological well-being also changed in a similarly symmetrical fashion. Exit from disability caused a rise in assessment of one's whole life up to now (figure 5.6.7) and a fall on psychological depression (figure 5.6.8) with the opposite effect occurring among the newly disabled. In the case of symptoms of depression, there is a relative fall in relation to the able-bodied and long-term disabled, as in general the intensity of depression rises in a linear manner together with age and in our test of 2013 all persons were older by 2 years.



NOTE: inversely directed life-assessment scale (1-excellent, 7-terrible), main effect of disability status, ns.; main effect of year of study ns.; effect of year of study and disability status interaction F(2,2436)=3.486, p<0,05, η^2= 0,003

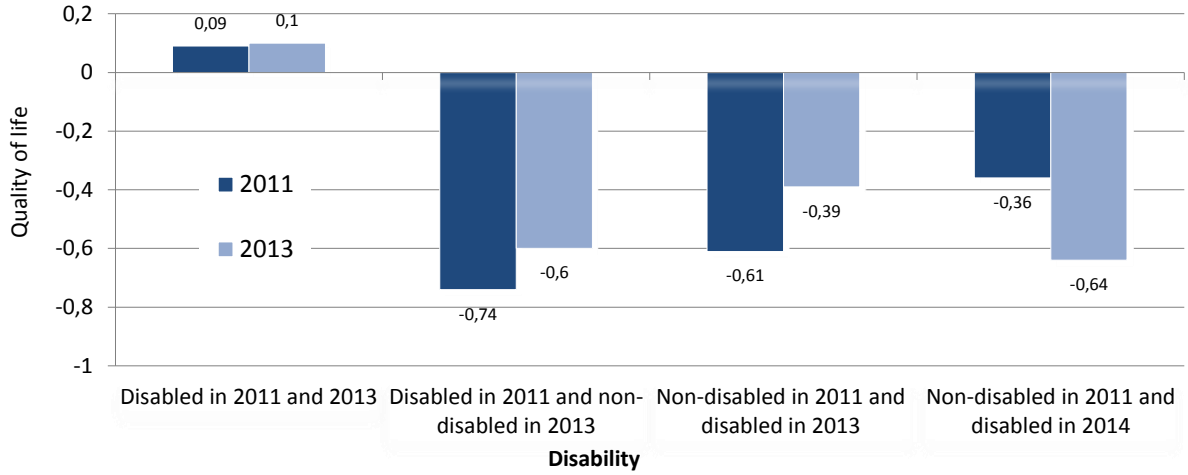
Figure 5.6.7. Assessment of whole life up to now in 2011 and 2013 among those of various disability status with control for age and gender in the panel sample



NOTE: main effect of disability status F(2, 2361)=5.079, p<0.01, η^2= 0.004; main effect of year of study not significant; effect of year of study and disability status interaction F(2,2361)=10.377, p<0.000, η^2= 0.009

Figure 5.6.8. Incidence of depression symptoms in 2011 and 2013 for those of various disability status with control for age and gender in the panel sample

A change in disability status changes general life situation, which is confirmed by the life quality test[68] (figure 5.6.9). The quality of life of the former disabled is clearly close to the level of the permanently able-bodied, and the quality of life of the newly disabled equally departs from that level.



NOTE: main effect of disability F(3, 11099)=304.767, p<0.000, η^2= 0.076; main effect of year of study not significant; effect of year of study and disability status interaction F(3,11099)=31.779, p<0.000, η^2= 0.009

Figure 5.6.9. Quality of life in 2011 and 2013 for those of various disability status with control for age and gender in the panel sample

5.6.3. Lifestyle and health-risk factors

One of the risk factors for obesity related health disorders which can be easily estimated in surveys, is the proportion between weight and height (the *Body Mass Index*, BMI). It is calculated by dividing body mass expressed in kilograms by the second power of height expressed in metres. In this year's edition of the *Diagnosis*, like two years earlier we asked about weight and height, and we calculated the BMI for each respondent. Table 5.6.4 shows the distribution of that indicator, divided into eight categories adopted for white people. Less than half of respondents aged 16 and above had the appropriate body mass and there are one-third more women than men in this group. Furthermore, more women are underweight, while more men are overweight and have the first degree of obesity. In general, men in Poland – similarly as in other countries (Figure 5.6.10) – are obese more often than women.

The value of that indicator for Poland does not look very bad as compared to several other countries (figure 5.6.10), though compared to 2011, we have move from 10th to 8th place according to the *Diagnosis* indicator. The greatest numbers of people are overweight in the U.S. and Germany, the smallest in Switzerland and Romania. As compared to our region, in the Czech Republic there are more, and in Slovakia fewer overweight people than in Poland, while Poles do not differ from Hungarians or Lithuanians in this respect.

If the BMI were indeed an indicator of health risk (even if not a very precise one, as many researchers claim), we could expect it to be related with other health condition indicators. Table 5.6.5 presents the results of the analysis of variance for 18 health indicators (15 detailed symptoms, the general incidence of symptoms, satisfaction with health condition and a serious disease in the past year). Within the scope of those indicators we checked the main effects of the categorised BMI and gender and the effect of interaction of the BMI and gender controlled for age (df 3, 24889).

As expected, the strongest BMI effect concerns circulation problems (sudden changes of blood pressure). Also the effect of the interaction of the BMI and gender is one of the greatest in respect of that indicator. Figure 5.6.11 illustrates the form of this interaction effect. In the underweight group, this ailment affects men insignificantly more often. In all other groups with BMI beyond normal, women suffer from pressure changes more often. In general, the greater is the obesity, the more frequent the changes in blood pressure.

The dependence is similar in the case of the general indicator of serious (lasting at least 2 weeks in a month) somatic disorders, although the overweight group does not differ from the group with normal weight among men, and among overweight women the indicator is even lower than that for women of

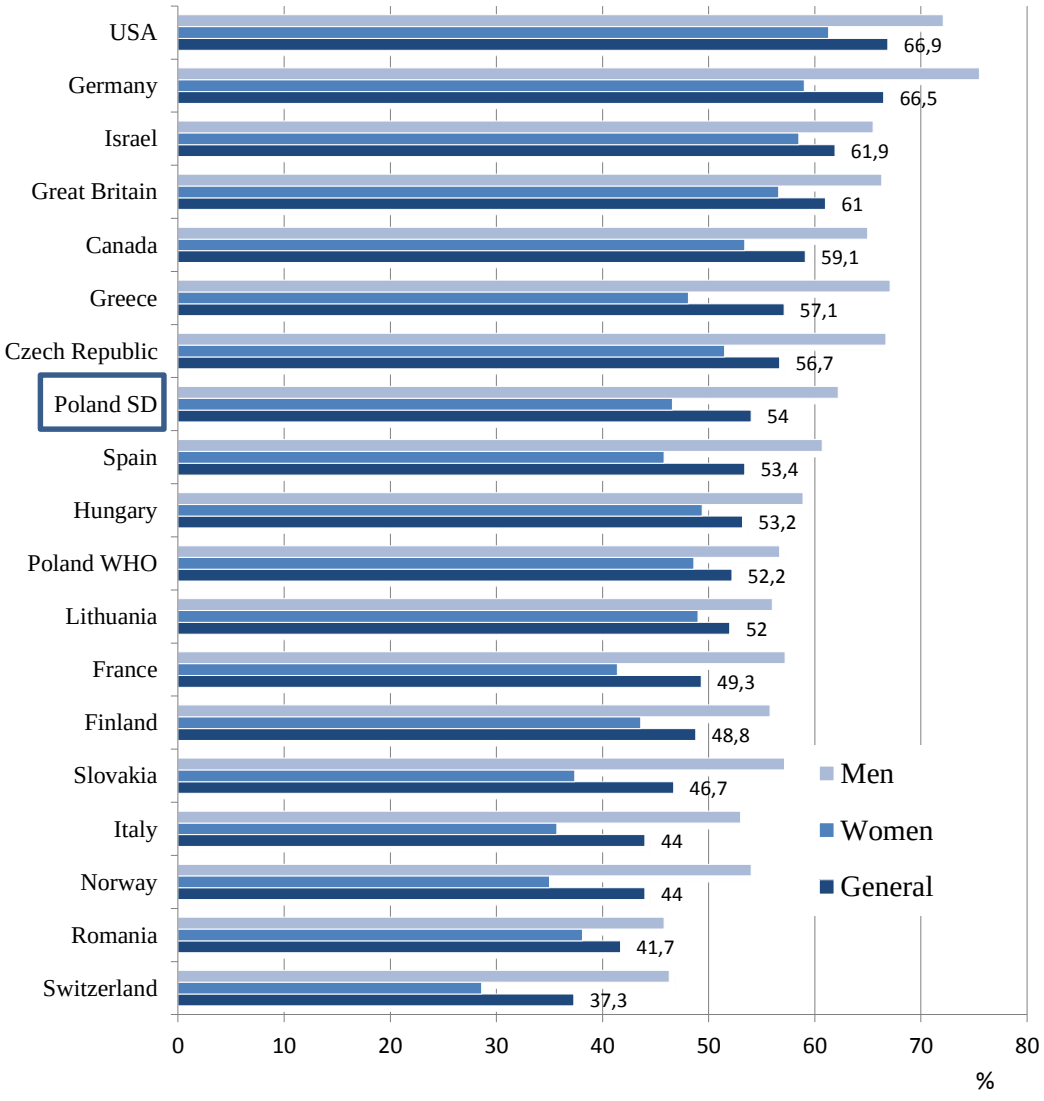
[68] The make-up of the quality of life indicator is discussed in chapter 9.

normal weight: only obesity and a lack of weight significantly increase the serious health risk of disorders (figure 5.6.12).

The relation between BMI and satisfaction between the state of one's health and serious illness is also complex (figure 5.6.12-5.6.14). In the case of a serious illness, a lack of weight is a more serious risk than overweight. This may result from a reversed relation: illnesses may cause physical exhaustion, as a result reducing BMI below the norm.

Table 5.6.4. Percentage distribution by gender and in general for eight BMI categories

Category by BMI value	2011			2013		
	Gender		General	Gender		General
	Men	Women		Men	Women	
Starvation (<16.0)	0.1	0.2	0.2	0.1	0.2	0.2
Emaciation (16.0-17.0)	0.1	0.7	0.4	0.2	0.6	0.4
Underweight (17.00-18.5)	0.8	3.7	2.3	0.7	3.6	2.2
Normal, correct weight (18.5-25.0)	39.0	52.0	45.8	37.8	49.7	44.0
Overweight (25.0-30.0)	43.5	29.0	35.9	43.1	30.6	36.6
1st degree obesity (30.0-35.0)	13.9	11.1	12.5	14.8	11.9	13.2
2nd degree obesity (clinical obesity) (35.0-40.0)	1.9	2.7	2.3	2.5	2.8	2.6
3rd degree obesity (extreme obesity) (>=40.0)	0.7	0.7	0.7	0.8	0.7	0.8



Source of data: WHO Global Database on Body Mass Index (*2013 Social Diagnosis* for Poland)

Figure 5.6.10. Percentage of the overweight (BMI >= 25) by gender and residents of particular countries in general aged 18 and above

Table 5.6.5. Results of variance multi-factor analysis for 18 condition of health indicators with control for age and gender

Independent variable	Dependent variable	F	p	Partial eta-square
BMI	Severe headaches	7.075	0.000	0.001
	Stomach pains or flatulence	19.149	0.000	0.002
	Neck or shoulder pains or tension	8.599	0.000	0.001
	Chest or heart pains	31.994	0.000	0.004
	Dryness in mouth or throat	32.794	0.000	0.004
	Excessive sweating	63.273	0.000	0.008
	Feeling of breathlessness	40.738	0.000	0.005
	Pain in bones and in the entire body	42.472	0.000	0.005
	Accelerated heartbeat (palpitations)	23.411	0.000	0.003
	Shivers or convulsions	7.857	0.000	0.001
	Pressure on the bladder and more frequent urination	23.808	0.000	0.003
	Sense of fatigue unrelated to work	12.979	0.000	0.002
	Constipation	1.650	0.175	0.000
	Nosebleeds	4.832	0.002	0.001
	Sudden changes of blood pressure	111.185	0.000	0.013
	General indicator of somatic disorders	30.970	0.000	0.004
	Satisfaction with condition of health	57.283	0.000	0.007
	Serious disease	38.373	0.000	0.005
BMI and gender interaction	Severe headaches	0.265	0.850	0.000
	Stomach pains or flatulence	2.738	0.042	0.000
	Neck or shoulder pains or tension	5.791	0.001	0.001
	Chest or heart pains	3.788	0.010	0.000
	Dryness in mouth or throat	8.075	0.000	0.001
	Excessive sweating	12.863	0.000	0.002
	Feeling of breathlessness	6.151	0.000	0.001
	Pain in bones and in the entire body	7.762	0.000	0.001
	Accelerated heartbeat (palpitations)	5.034	0.002	0.001
	Shivers or convulsions	1.334	0.261	0.000
	Pressure on the bladder and more frequent urination	3.754	0.010	0.000
	Sense of fatigue unrelated to work	3.666	0.012	0.000
	Constipation	5.571	0.001	0.001
	Nosebleeds	1.324	0.265	0.000
	Sudden changes of blood pressure	6.194	0.000	0.001
	General indicator of somatic disorders	4.127	0.006	0.000
	Satisfaction with condition of health	10.940	0.000	0.001
	Serious disease	7.666	0.000	0.001

* sum of symptoms lasting at least half a month

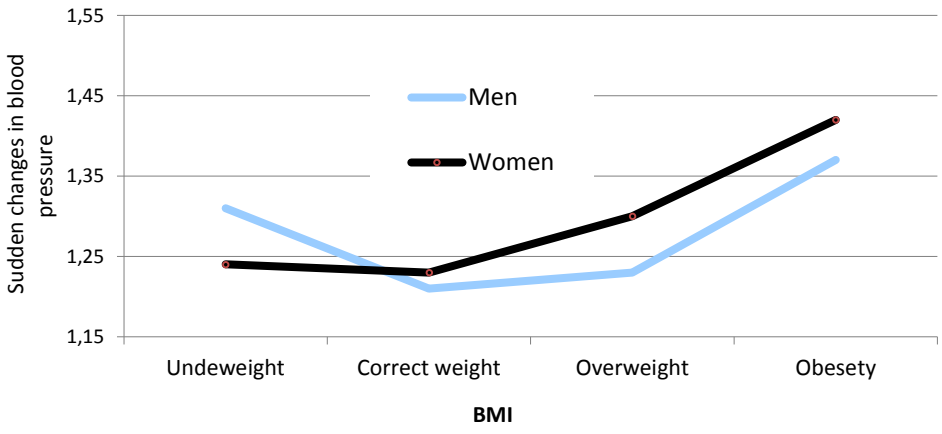


Figure 5.6.11. Incidence of sudden changes in blood pressure by BMI and gender with control for age

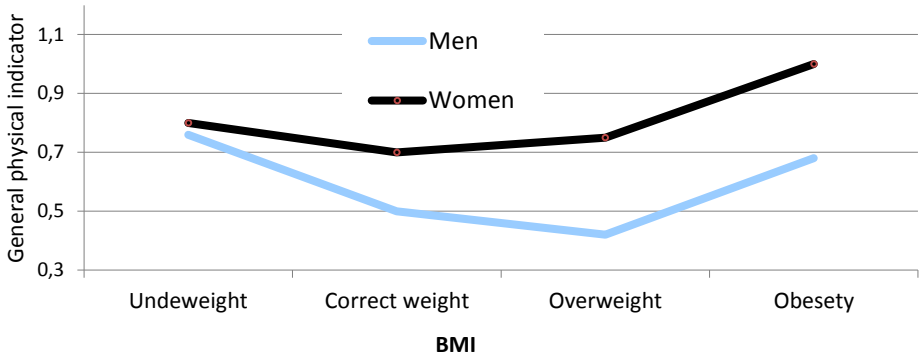
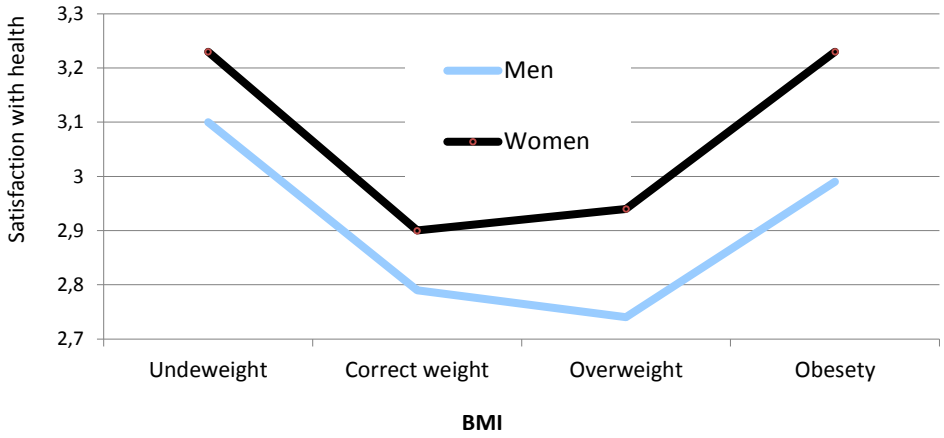


Figure 5.6.12. General indicator of serious physical symptoms by BMI and gender with control for age



NOTE: inverse scale for satisfaction with health (1–very satisfied, 6–very dissatisfied)

Figure 5.6.13. Satisfaction with health by BMI and gender with control for age

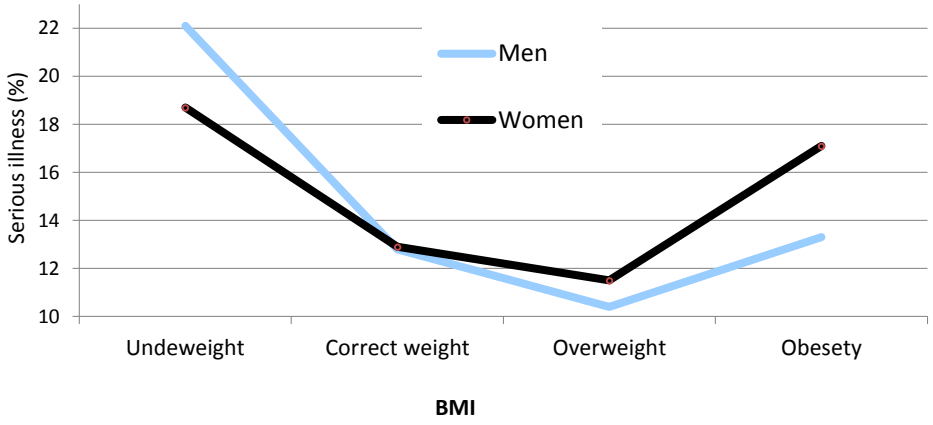
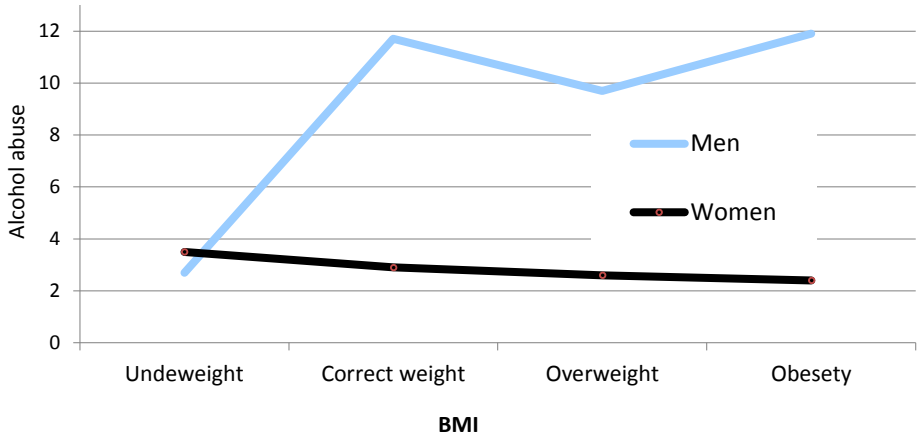


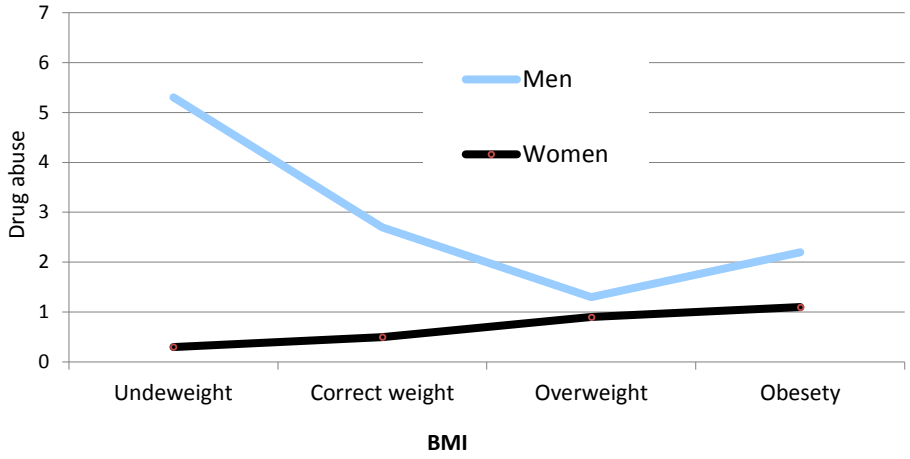
Figure 5.6.14. Serious illness by BMI and gender by control for age

BMI is linked to the use of alcohol, narcotics (designer drugs) and cigarettes. However, this dependency does not have the same form in every case. Abuse of alcohol among men is rarest with a lack of weight, with the opposite in women where it is rarest with overweight and most common with a lack of weight (figure 5.6.15). In the case of narcotics there is a reversed asymmetry: underweight men take drugs the most, and BMI rises with drugs use among women (figure 5.6.16). Cigarette smoking falls with rising BMI, though among men only above the correct weight as in the case of underweight smoking is as equally rare as with overweight and nearly as rare as among underweight women (figure 5.6.17). The daily number of cigarettes is the greatest with a serious lack of weight and 2nd class (clinical) obesity (figure 5.6.18).



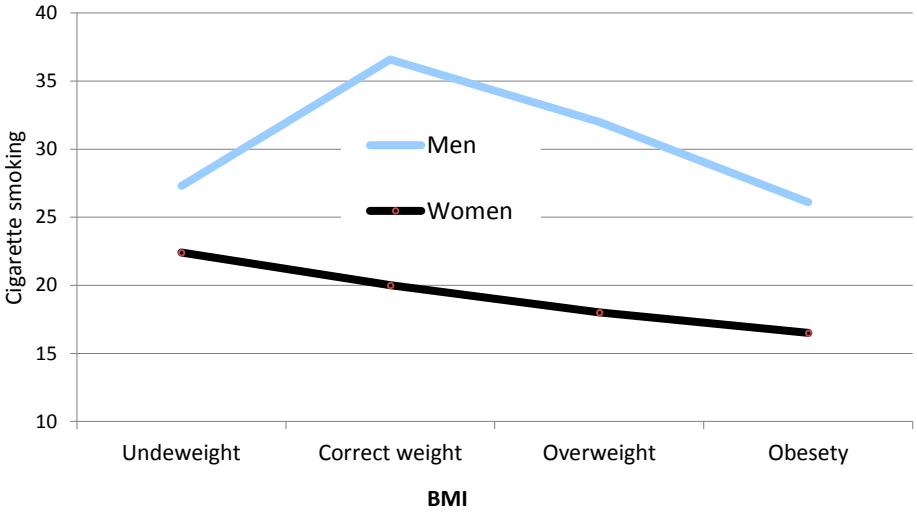
NOTE: main BMI effect F(3, 25357)=7.072, p<0.000, η^2= 0.001; effect of BMI and gender interaction F(3,25357)=7.899, p<0.000, η^2= 0.001

Figure 5.6.15. Percentage abusing alcohol by BMI and gender with control for age



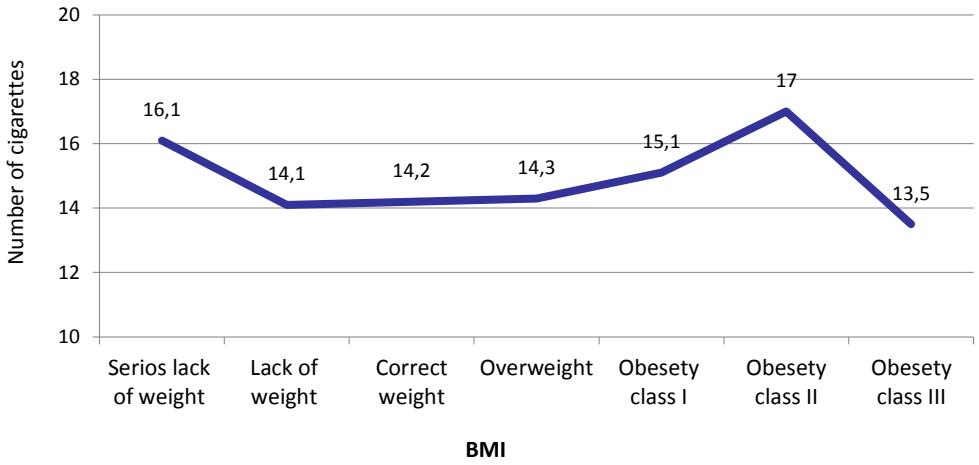
NOTE: main BMI effect F(3, 25357)=5.584, p<0.005, η^2= 0.001; effect of BMI and gender interaction F(3,25357)=14.551, p<0.000, η^2= 0.002

Figure 5.6.16. Percentage abusing drugs by BMI and gender with control for age



NOTE: main BMI effect F(3, 25374)=25.072, p<0.000, η^2= 0.003; effect of BMI and gender interaction F(3,25374)=9.059, p<0.000, η^2= 0.001.

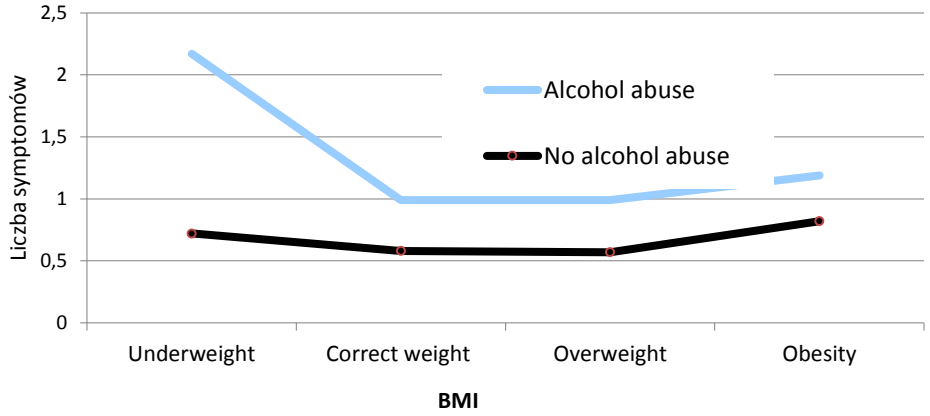
Figure 5.6.17. Percentage of cigarette smokers by BMI and gender with control for age



NOTE: main BMI effect F(6, 6449)=4.296, p<0.000, η^2= 0.004

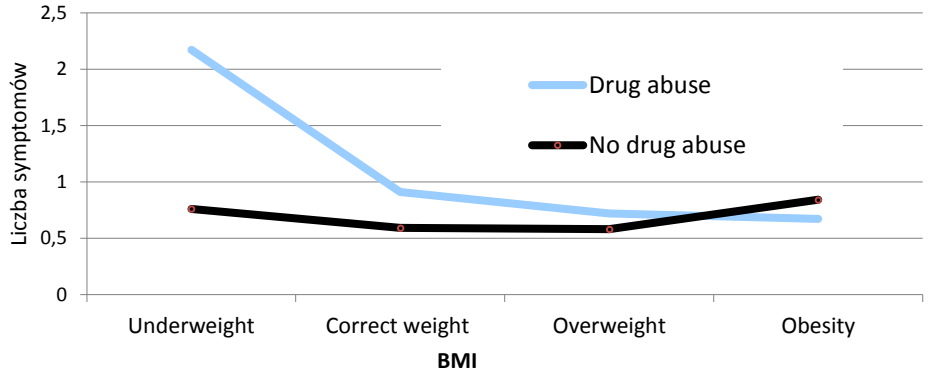
Figure 5.6.18. Number of cigarettes smoked daily by BMI with control for age and gender

Substances may enhance the negative effect of incorrect body weight. Abuse of alcohol and drugs amplifies, for example, the negative effect of lack of weight in terms of serious illness, though they do not favour health with correct body weight either (figure 5.6.19 and 5.6.20).



NOTE: main BMI effect F(3,25245)=6.171, p<0.000, η^2= 0.001; effect of BMI and alcohol abuse interaction F(3,25245)=2.417, p<0.10, η^2= 0.000

Figure 5.6.19. Number of serious physical symptoms by BMI and alcohol abuse with control for age and gender



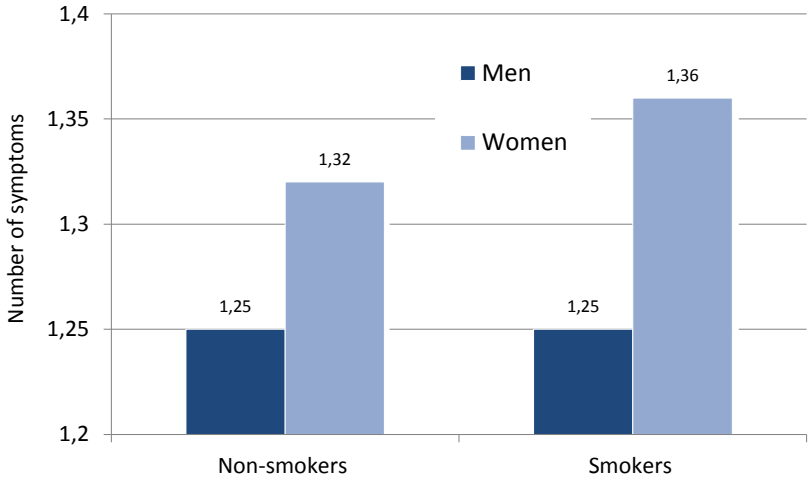
NOTE: main BMI effect F(3,25229)=4.336, p<0.000, η^2= 0.001; effect of BMI and drug use interaction F(3, 25229)=3.344, p<0.05, η^2= 0.000

Figure 5.6.20. Number of serious psychological symptoms by BMI and drug abuse with control for age and gender

Substances can threaten health independent of weight imbalance. Cigarettes are associated, though less strongly than obesity, with many symptoms of health disruption (table 5.6.6 (df 1,25584). Smokers are less happy with their health and suffer bouts of sweating (especially women), dry mouth or throat, pains of shoulders, arms and all over their body, fatigue not linked to effort and shaking and shivering. Smokers are less happy with their health, but as opposed to the effect of obesity, smoking does not increase the risk of serious illness over one year and does not generally influence serious illness, though it does have a marked effect on women (figure 5.6.21).

Table 5.6.6. Results of variance multi-factor analysis for 18 health condition indicators with control for age and gender

Independent variable	Dependent variable	F	p	Partial eta-square
Smoking	Severe headaches	4.081	0.043	0.000
	Stomach pains or flatulence	1.224	0.269	0.000
	Neck or shoulder pains or tension	22.401	0.000	0.001
	Chest or heart pains	0.580	0.446	0.000
	Dryness in mouth or throat	30.240	0.000	0.001
	Excessive sweating	55.359	0.000	0.002
	Feeling of breathlessness	7.424	0.006	0.000
	Pain in bones and in the entire body	23.184	0.000	0.001
	Accelerated heartbeat (palpitations)	0.319	0.572	0.000
	Shivers or convulsions	10.536	0.001	0.000
	Pressure on the bladder and more frequent urination	1.571	0.210	0.000
	Sense of fatigue unrelated to work	12.206	0.000	0.000
	Constipation	0.324	0.569	0.000
	Nosebleeds	1.282	0.258	0.000
	Sudden changes of blood pressure	0.013	0.910	0.000
	General indicator of somatic disorders	1.697	0.193	0.000
	Satisfaction with condition of health	25.320	0.000	0.001
	Serious disease	0.363	0.547	0.000
Interaction of smoking and gender	Severe headaches	1.392	0.238	0.000
	Stomach pains or flatulence	4.860	0.027	0.000
	Neck or shoulder pains or tension	1.016	0.313	0.000
	Chest or heart pains	0.373	0.541	0.000
	Dryness in mouth or throat	5.529	0.019	0.000
	Excessive sweating	46.025	0.000	0.002
	Feeling of breathlessness	2.834	0.092	0.000
	Pain in bones and in the entire body	3.308	0.069	0.000
	Accelerated heartbeat (palpitations)	9.860	0.002	0.000
	Shivers or convulsions	0.029	0.866	0.000
	Pressure on the bladder and more frequent urination	5.514	0.019	0.000
	Sense of fatigue unrelated to work	8.123	0.004	0.000
	Constipation	5.275	0.022	0.000
	Nosebleeds	2.542	0.111	0.000
	Sudden changes of blood pressure	2.206	0.137	0.000
	General indicator of somatic disorders	7.424	0.006	0.000
	Satisfaction with condition of health	0.019	0.891	0.000
	Serious disease	3.062	0.080	0.000



NOTE: main effect of smoking (1,25188)=18.336, p<0.000, η^2= 0.001; effect of gender and smoking interaction F(1,25188)=14.544, p<0.000, η^2= 0.001

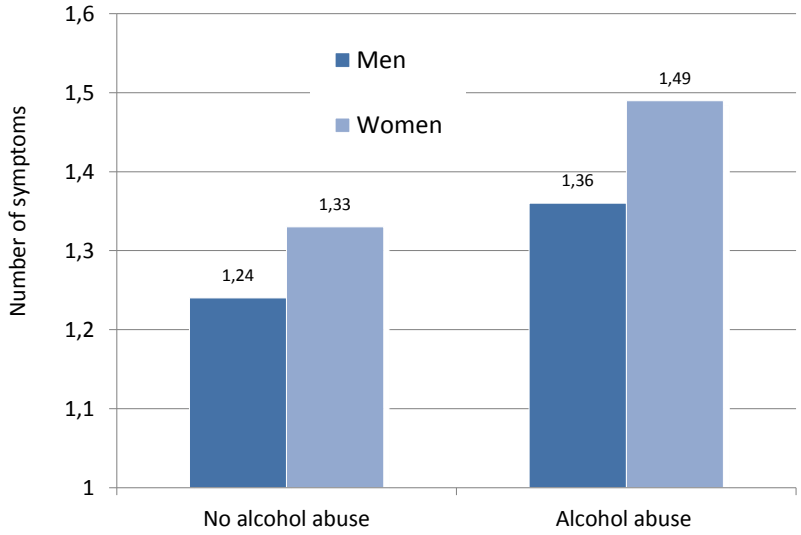
Figure 5.6.21. Number of serious symptoms of illness by cigarette smoking and gender with control for age

Table 5.6.7. Results of variance multi-factor analysis for 18 health condition indicators with control for age and gender

Independent variable	Dependent variable	F	p	Partial eta-square
Alcohol abuse	Severe headaches	36.896	0.000	0.001
	Stomach pains or flatulence	103.070	0.000	0.004
	Neck or shoulder pains or tension	79.357	0.000	0.003
	Chest or heart pains	75.151	0.000	0.003
	Dryness in mouth or throat	172.696	0.000	0.007
	Excessive sweating	114.335	0.000	0.005
	Feeling of breathlessness	67.017	0.000	0.003
	Pain in bones and in the entire body	42.111	0.000	0.002
	Accelerated heartbeat (palpitations)	129.951	0.000	0.005
	Shivers or convulsions	82.447	0.000	0.003
	Pressure on the bladder and more frequent urination	101.682	0.000	0.004
	Sense of fatigue unrelated to work	115.193	0.000	0.005
	Constipation	38.745	0.000	0.002
	Nosebleeds	73.128	0.000	0.003
	Sudden changes of blood pressure	29.139	0.000	0.001
	General indicator of somatic disorders	73.237	0.000	0.003
	Satisfaction with condition of health	89.996	0.000	0.004
	Serious disease	18.546	0.000	0.001
Interaction of alcohol abuse and gender	Severe headaches	5.301	0.021	0.000
	Stomach pains or flatulence	3.892	0.049	0.000
	Neck or shoulder pains or tension	6.291	0.012	0.000
	Chest or heart pains	8.894	0.003	0.000
	Dryness in mouth or throat	1.486	0.223	0.000
	Excessive sweating	0.220	0.639	0.000
	Feeling of breathlessness	0.060	0.807	0.000
	Pain in bones and in the entire body	3.499	0.061	0.000
	Accelerated heartbeat (palpitations)	12.718	0.000	0.001
	Shivers or convulsions	0.002	0.968	0.000
	Pressure on the bladder and more frequent urination	20.152	0.000	0.001
	Sense of fatigue unrelated to work	7.124	0.008	0.000
	Constipation	3.653	0.056	0.000
	Nosebleeds	0.124	0.724	0.000
	Sudden changes of blood pressure	0.324	0.569	0.000
	General indicator of somatic disorders	8.883	0.003	0.000
	Satisfaction with condition of health	0.626	0.429	0.000
	Serious disease	0.031	0.861	0.000

Alcohol abuse is a risk factor in terms of all 18 measures of health condition (Table 5.6.7, *df*1, 25074). It affects the dryness of the mouth or throat, heart palpitations, sweating, feelings of pressure on the bladder, fatigue not linked to effort, nose bleeds, lowering of self-assessment of health and a rise in the number of serious physical symptoms, and the likelihood of a serious disease. Some of these effects depend on gender, with the general number of serious physical symptoms being dependant on alcohol abuse much more strongly in Women (figure 5.6.22).

The three risk factors listed above appear to be rather separable. Obesity does not correlate with alcohol abuse, and although it does correlate with smoking, it is only a very subtle, negative correlation (*r*=-0.039, *p*<0.000) and drug use (r=0.030, p<000). Only the correlation with number of cigarettes smoked is positive (r=0.099, p<0,000).



NOTE: main effect of alcohol (1,25197)=254.336, p<0.000, η^2= 0.010; effect of gender and alcohol interaction F(1,25197)=6.044, p<0.05, η^2= 0.001

Figure 5.6.22. Number of serious symptoms of illness by alcohol abuse and gender

While risk factors affect health negatively, a suitable life style should serve it well. A healthy lifestyle is understood to be sports-intensive. A great number of studies prove the health advantages that follow from physical exercise (Penedo, Dahn, 2005; Ross, Hayes, 1988). The influence of an active lifestyle may be multifaceted. One of the aspects may be the improvement of physical fitness and prevention of obesity. Indeed, the BMI negatively correlates with an active lifestyle (*r*=-0.143, *p*<0.000).

Table 5.6.8. Percentage physical activity distribution by gender and the general population

Type of physical activity	2011			2013		
	Gender		General	Gender		General
	Men	Women		Men	Women	
No physical activity	57.6	64.6	61.3	57.2	64.0	60.8
Aerobics	0.5	7.1	4.0	0.6	8.0	4.5
Running/jogging/Nordic walking	6.2	6.8	6.5	6.9	7.9	7.4
Gym	9.9	2.5	6.1	10.4	3.1	6.6
Cycling	22.8	20.1	21.4	22.8	19.1	20.9
Skiing/other winter sports	5.4	3.4	4.3	5.1	3.6	4.3
Swimming	8.8	6.7	7.7	8.9	6.9	7.9
Football/other team sports	13.6	2.3	7.7	12.2	2.1	7.0
Yoga	0.3	1.2	0.8	0.4	1.1	0.8
Martial arts	1.9	0.4	1.2	1.8	0.4	1.0
Other forms	8.7	7.8	8.2	8.7	8.0	8.3

Table 5.6.9. Results of variance multi-factor analysis for 18 health condition indicators with control for age and gender

Independent variable	Dependent variable	F	p	Partial eta-square
Alcohol abuse	Severe headaches	61.386	0.000	0.002
	Stomach pains or flatulence	0.001	0.975	0.000
	Neck or shoulder pains or tension	3.047	0.081	0.000
	Chest or heart pains	23.820	0.000	0.001
	Dryness in mouth or throat	14.496	0.000	0.001
	Excessive sweating	0.063	0.802	0.000
	Feeling of breathlessness	43.941	0.000	0.002
	Pain in bones and in the entire body	72.496	0.000	0.003
	Accelerated heartbeat (palpitations)	13.197	0.000	0.001
	Shivers or convulsions	12.104	0.001	0.000
	Pressure on the bladder and more frequent urination	4.273	0.039	0.000
	Sense of fatigue unrelated to work	26.384	0.000	0.001
	Constipation	0.017	0.897	0.000
	Nosebleeds	3.570	0.059	0.000
	Sudden changes of blood pressure	22.201	0.000	0.001
	General indicator of somatic disorders	5.470	0.019	0.000
	Satisfaction with condition of health	207.453	0.000	0.008
	Serious disease	1.612	0.204	0.000
Interaction of alcohol abuse and gender	Severe headaches	5.635	0.018	0.000
	Stomach pains or flatulence	3.438	0.064	0.000
	Neck or shoulder pains or tension	10.640	0.001	0.000
	Chest or heart pains	0.069	0.792	0.000
	Dryness in mouth or throat	0.962	0.327	0.000
	Excessive sweating	1.187	0.276	0.000
	Feeling of breathlessness	4.012	0.045	0.000
	Pain in bones and in the entire body	0.189	0.664	0.000
	Accelerated heartbeat (palpitations)	1.700	0.192	0.000
	Shivers or convulsions	0.997	0.318	0.000
	Pressure on the bladder and more frequent urination	0.299	0.584	0.000
	Sense of fatigue unrelated to work	2.055	0.152	0.000
	Constipation	2.296	0.130	0.000
	Nosebleeds	1.090	0.296	0.000
	Sudden changes of blood pressure	4.931	0.026	0.000
	General indicator of somatic disorders	0.113	0.737	0.000
	Satisfaction with condition of health	0.934	0.334	0.000
	Serious disease	1.250	0.263	0.000

Let us see whether those who practise some form of sports or physical activity in general are indeed healthier. Six out of ten Poles do not practice any physical activity (Table 5.6.8.). The greatest proportion of people ride a bicycle (20.9%), with the second rank being football or other team sports in the case of men (12.2%); women prefer aerobics (8%). The changes in forms of physical activity between 2011 and 2013 are insignificant, with the greatest rise in the share of joggers (from 6.5 to 7.4%). and a fall in those, especially men, playing football or other team sports (oh that lack of a spirit of cooperation, see chapter 6.3).

Physical activity serves people's health in significant way (Table 5.6.9). It is most strongly connected with the subjective indicator (satisfaction with health). Both men and women, when they actively practise some kind of sport, see their health as better.

Not without a bearing on health is also the number of physical activities. If there are too many, they cease to serve well. People who do more than three different sports suffer from greater number of serious conditions compared to those who stick to the optimal number of two disciplines.

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5.7. Life stress

Eight categories of stress in life have been established: marital stress (Annex 1, individual questionnaire, questions 4-6), parental stress due to problems with children (question 7-10), carer (question 11-12), financial stress (questions 14-15), work-related stress (questions 15-17), environmental stress related to housing conditions, neighbours and safety in the vicinity of the place of residence (questions 18-21), health-related stress (questions 22-23) and administrative („Kafkaesque") stress (questions 24-27).

The intensity of stress in life is treated in the quality-of-life literature as the major, or at least the most direct, factor that differentiates psychological well-being. In our study, each of the eight specific categories of stress in life covered several different types of events or life experiences, with the category of general stress making up the total intensity of all the eight categories. Obviously, not each specific type of stress is common; that is it concerns the entire population. Some of the categories (e.g. marital, parental, or work-related stress) are typical of specific groups of people (married persons, those that have children, those that work).

The overall level of stress in life was 2013[69] higher than two years before (Figure 5.7.1). As shown by the data panel sample rise from 2011 and the lower level than in 2009 were statistically significant also on the panel sample in relation to the year (Table 5.7.1).

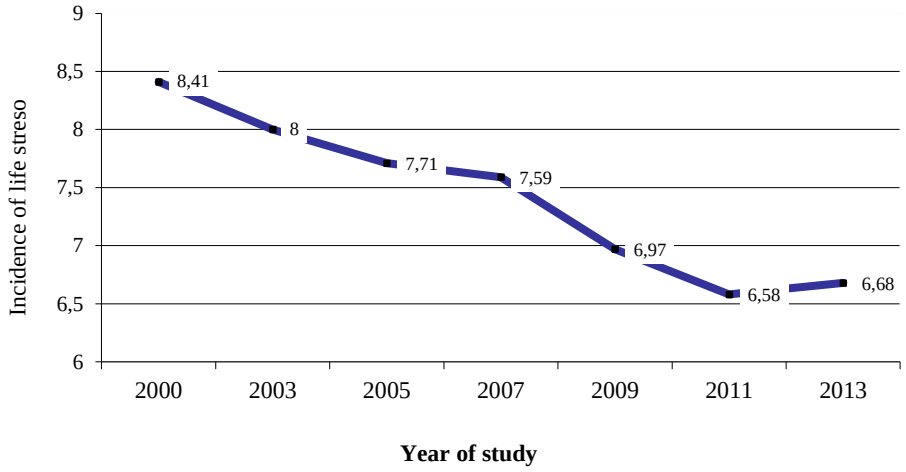


Figure 5.7.1. Average intensity of life stress in entire samples for 2000-2013

Table 5.7.1. Comparison of incidence of general life stress from two waves in 2009 and 2011with the result of the last measurement in 2013 in panel samples (the same respondents in the years under comparison)

Variable	Study year	Average	Standard deviation	Average difference	T test	Degrees of freedom	Statistical significance	Correlation
Intensity of life stress	2009	7.11	4.74	0.104	2.380	11179	0.000	0.520*
	2013	7.00	4.71					
	2011	6.62	4.73	-0.154	-4.896	16913	0.000	0.625*
	2013	6.77	4.71					

* $p < 0.000$

We measured carer stress five times between 2000 and 2013 (Annex 1, individual questionnaire, questions 11-12) linked to care for parents or older relatives. The highest concentration of this stress was noted in 2000, which remained at the same level in the following three readings, with a marked fall recorded in 2013. These changes resulted from others in the structure of households as the elderly in need of care passed away (parents, in-laws and relatives). In 2000, 19% of households were without elderly in need, while in 2013 that had risen to 32% (figure 5.7.2).

[69] Carer stress has been left out for comparison with previous editions

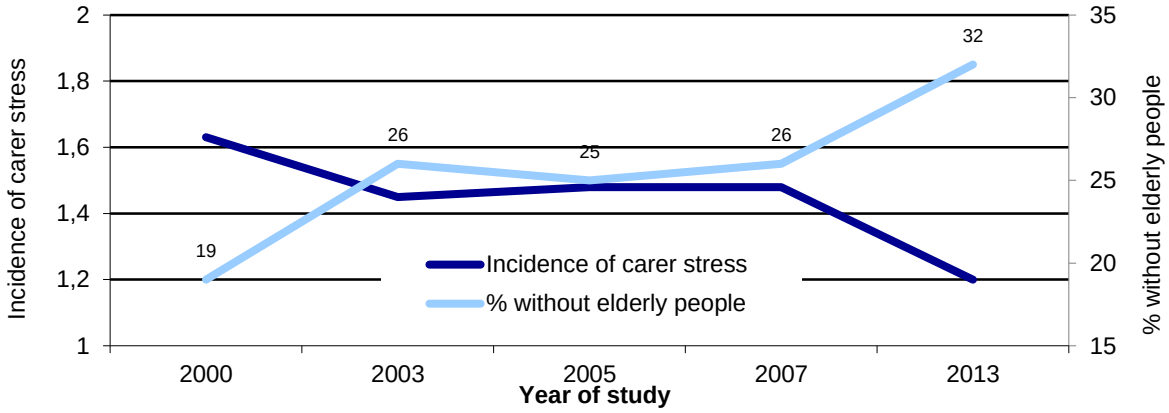
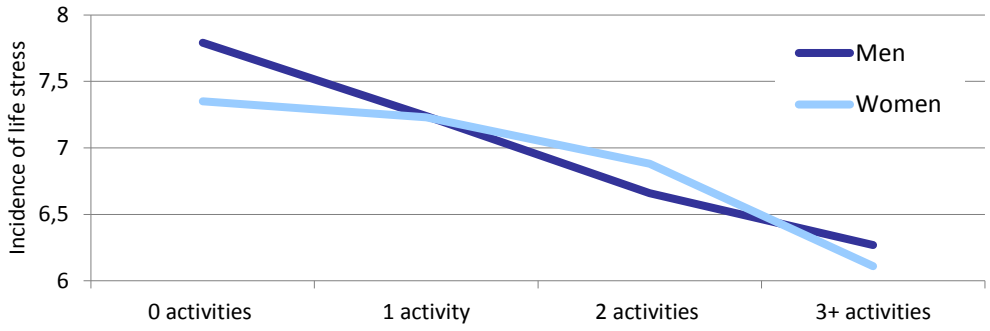


Figure 5.7.2. Average intensity of carer stress and percentage of households without elderly members requiring care an subsequent years of study

Earlier in the text we stated that physical activity positively influenced physical and psychological well-being. Since stress is connected with either of these types of well-being, we may expect to find a connection between physical activity and stress as well. Indeed, those who practise some type of sport or exercise demonstrate a lower level of stress in life (Figure 5.7.2). This, of course, does not determine the direction of the dependence.



NOTE: the main effect of physical activity $F(3, 25050)$)=40.368, $p<0.000$, $\eta^{2,}=0.7005$; the gender effect $F<$, ns; effect of interaction of physical activity and gender $F(3, 25050)$)=4.611, p<0.005, η^2,=0, 001

Figure 5.7.3. Average intensity of life stress by number of physical activity types with control for age

Multiple regression analysis was performed in order to define the importance of various forms of stress on psychological well-being to check what factors could be responsible for concentrations of stress. The results are presented in tables 5.7.2 and 5.7.3.

Stress is most strongly associated with (whether it is a cause or effect is a matter for discussion) with psychological depression, satisfaction with health and, somewhat less strongly, with family financial situation satisfaction, feeling of happiness, satisfaction at work, satisfaction with life achievements and assessment of one's life as a whole up to now. To a small extent stress is linked with suicidal tendencies, satisfaction with children, satisfaction with the situation in the country and satisfaction with sex-life. Financial and health stress has absolutely the greatest effect on psychological well-being, and parental and Kafkaesque have the smallest (table 5.7.2). The importance ranking of the seven categories of stress (without carer-stress) is this year the same as two years ago.

Certain categories of stress have a favourable effect on well-being indicators. Work-stress is experienced by the employed and therefore the younger, who achieve better well-being indicators. Younger people also tend to experience carer stress.

In the first place, supporting children tends to "favour" high concentrations of life stress, as do hired work, age, being an entrepreneur and a farmer. Factors that make life stress less strong are higher income and better living conditions, living in the country and being a retirees (table 5.7.3).

All factors considered in the regression equation together explain a large portion of variation (from 5% in the case of Kafkaesque stress to 36.4% in the case of work stress).

Table 5.7.2. Range of specific life-stress categories explaining different aspects of well-being and degree of well-being indicator variation explained by 7 categories of stress (a lack of range value signifies that the given category of stress does not independently explain, with the exclusion of all other stress categories, a statistically significant of a given well-being indicator portion)[*]

Stress type	Assessment of whole life up to now	Well-being	Lack of suicidal tendencies	Will to live	Lack of depression symptoms	Assessment of the last year	Satisfaction with relations with closest persons	Satisfaction with family's financial situation	Satisfaction with leisure	Satisfaction with one's state of health	Satisfaction with one's life achievements	Satisfaction with the situation in the country	Satisfaction with place of residence	Satisfaction with future perspectives	Satisfaction with sex-life	Satisfaction with one's education	Satisfaction with work	Satisfaction with children	Satisfaction with marriage	Satisfaction with security	General rank of predictior 2013	General rank of predictior 2011
Financial	-1	-1	-1	-2	-4	-1	-1	-1	-1	-2	-1	-1	-2	-1	-2	-1	-1	-4	-2	-3	1	1
Health	-2	-2	-2	-1	-1	-2	-5	-3	-2	-1	-2	-3	3	-2	-1	-2		-2	-4	-2	2	2
Work	4	3	5	6	3	3		2		3	5		-5	5	5	4	-2	5	6		4	3
Ecological	-5	-4	-4	-4		-4	-2	-5	-3	-6	-3	-2	-1	-3	-6	-6	-5			-1	5	4
Marital		-6			-5		-4		-4	-5	-6				-3	-7		-6	-1	5	6	5
Kafka			-3		6	-5	6	6	6	-7	7	-5	-4		5	5	4		7		7	6
Parental				-5			-3		-5		-8	4	-6			-8		-1	-5		8	7
Carer	3	5		3	2	4	6	4	7	4	4	6	7	4	4	3	3	3	3	4	3	
Percentage of variance explained by 8 categories of stress (corrected R^2 x 100)	13,1	17,0	5,5	8,2	39,9	9,5	6,7	24,8	10,7	37,1	13,5	8,3	7,7	14,8	7,4	8,8	16,4	5,1	11,2	14,7		

* Predictor ranking is a result of the degree of semi-partial correlation in the regression equation; a positive rank means a rise in stress is coupled with a rise in well-being, and a negative rank a rise in stress is coupled with a fall in well-being.

Table 5.7.3. The significance of selected socio-demographic indicators as predictors of various categories of life stress measured by standardised beta coefficient in linear regression analysis

Stress predictor	Marital	Parental	Financial	Work	Ecological	Health	Kafka	Carer	General
Gender (1 man, 2 women)	0.004	0.068**	0.012	-0.042**	0.027**	0.073**	-0.011	0.050**	0.041**
Age	0.230**	0.108**	0.116**	0.004	0.021	0.412**	-0.027*	-0.061**	0.150**
Education	0.052**	0.037**	-0.025**	-0.007	0.034**	-0.080**	0.090**	0.127**	0.032**
Place of residence (1-large city, 6-rural areas)	0.024**	-0.015*	-0.041**	-0.009	-0.168**	-0.010	-0.007	-0.037**	-0.074**
Marriage		0.214**	-0.024**	0.015*	0.034**	0.027**	0.018*	0.082**	0.126**
Supported children	0.269**		0.088**	0.054**	0.057**	0.022**	0.094**	0.058**	0.209**
Disability	0.016*	0.007	0.052**	-0.010	0.021**	0.169**	0.028**	0.009	0.069**
Alcohol	0.070**	0.076**	0.104**	0.060**	0.075**	0.072**	0.050**	0.035**	0.126**
Hired labour	0.043**	0.102**	0.148**	0.569**	0.025*	-0.007	0.068**	0.067**	0.226**
Farmer	0.031**	0.041**	0.111**	0.232**	-0.021**	0.004	0.048**	0.046**	0.103**
Entrepreneur	0.025**	0.054**	0.118**	0.195**	0.006	-0.007	0.097**	0.022**	0.104**
Retirees	-0.043**	-0.158**	-0.154**		-0.023	0.008	0.019	-0.149**	-0.097**
Unemployed	0.016*	0.038**	0.174**		0.022**	-0.008	0.087**	0.037**	0.081**
Pensioners	-0.040**	-0.024**	-0.002		-0.014	0.032**	0.010	-0.023**	-0.007
Income per capita	0.030**	-0.053**	-0.203**	-0.027**	-0.043**	-0.053**	-0.032**	0.019**	-0.085**
Living standards	-0.093**	-0.091**	-0.027**	-0.008	-0.098**	-0.010	-0.005	-0.012	-0.057**
General percentage of explained variance (corrected R^2 x 100)	12.9	12.6	15.3	36.4	6.6	30.1	5.0	13.5	24.4

** $p < 0.01$
* $p < 0.05$
NOTE: a lack of beta value signifies that a given predictor does not enter the regression equation.

5.8. Coping strategies for problems and difficulties

Nobody is a completely passive victim of life-stress. We are not only the authors of a lot of our troubles, but we are also able to defend ourselves against their emotional, social and material consequences. There are many different means of warding off stress and its effects. Their classification is diverse, arising not only from theories of coping, but also to a large extent from the kind of stress itself.

Most popular in the psychological literature of the concept of individual strategies for coping with stress was the theory proposed by Lazarus and Folkman (1984), which distinguishes strategies in terms of task-orientation and emotions. Of course, within each of these general strategies, more specific forms of reaction are possible.

The scale we used specifies two forms of task-orientated reaction to difficult life situations: *I turn to others for help and advice* and *I mobilise and get on with it*. The emotional strategy is more differentiated: *I hit the bottle, I take comfort in the thought that it could be even worse, I take something the doctor prescribed to calm me down, I pray to God for help, I busy myself with other things that distract my attention and improve my mood*. The respondent could also answer that in the face of trouble they do nothing and capitulate, which may be treated a very specific coping strategy. Indeed, helplessness may be an escape from the responsibility and effort that solving problems demands, though of course in may also only mean the failure of all forms of dealing with stress available to that person.

As opposed to the dominant passive coping strategy among households in the face of financial difficulties, the lion's share of respondents have for years declared an active strategy orientated to real problem-solving in the face of life-stress. Mobilisation and getting on with it accompanied by the seeking of information and advice from others are chosen by over half of Poles. However, as table 5.8.1 shows, attempts at psychological adaptation to existing problems are frequent, so taking comfort in the thought that things could be worse, or that others have it even worse, or attempts to cause favourable change by invoking supernatural forces (praying to God) and doing something that takes attention away from the real problem figure large. Rarely, given the estimated alcohol consumption in Poland and the number of people dependent on it, does escape by hitting the bottle appear as a form of dealing with problems, as 3 p.p. fewer respondents admitted they abused alcohol (chapter 5.10.4.2). Also, the use of prescription drugs to calm down is not a frequent form of reacting to difficult situations.

Comparing the results of whole samples we see that from 2005 the frequency of task-orientated strategy application in the last reading compared previous years is growing and the use of emotional strategies is falling, especially the taking comfort in the thought that it could be even worse and the praying to God (table 5.8.1).

Table 5.8.1. Percentage of respondents indicating specific ways of reacting to problems or difficult situations in 1995-1997 and 2000-2013

Coping Strategies	1995 N=3020	1996 N=2333	1997 N=2094	2000 N=6403	2003 N=9188	2005 N=8593	2007 N=12672	2009 N=24171	2011 N=26106	2013 N=25990
I turn to others for help and advice	35.6	36.2	36.7	38.2	37.6	39.8	41.3	43.7	41.5	43.8
I mobilise myself and get on with it	48.4	49.1	55.1	49.4	47.2	50.6	52.0	54.6	54.9	56.0
I drink more alcohol	4.3	3.9	3.9	4.0	3.5	4.0	3.4	4.4	3.4	3.8
I take comfort in the thought it could be a lot worse	39.9	40.8	39.1	39.3	41.9	40.4	38.2	35.1	33.2	31.5
I give up and I don't know what to do	3.1	3.0	2.6	2.9	3.4	3.4	2.9	3.5	2.8	3.1
I take tranquilizers	5.5	5.5	4.8	4.1	4.4	4.8	4.2	4.4	3.7	3.6
I pray to God for help	27.4	30.9	30.4	31.8	32.5	33.7	30.1	28.1	25.3	25.0
I get on with other things that distract my attention	20.6	24.1	19.9	17.9	21.8	24.8	24.0	24.2	24.2	22.6

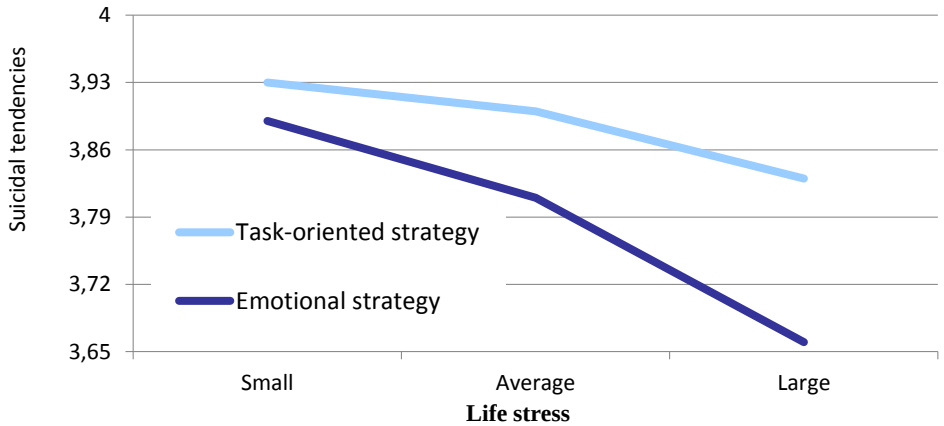
Data source: 1995-1997 — Czapiński, 1998; 2000-2013 — *Social Diagnosis.*

Comparison of panel samples also proves a rise in the frequency of task-orientated strategy use and a fall in emotional strategy (table 5.8.2). This means that Poles are getting better at coping with difficult life situations.

This begs the question which of these coping strategies are psychologically effective in the face of life-stress, allowing us to keep our spirits up or preventing them from falling when problems start piling up. In order to answer this, we verified whether each coping strategy weakens the influence of stress on psychological well-being and to what extent. It turned out that coping strategies determine the level of psychological well-being whatever the intensity of life-stress, as those who apply task-orientated strategy gain better indicators of well-being then those using emotional strategies or those who just give up in the face of trouble, also independent of the degree of life-stress. The advantage of task-orientated strategy however does rise with the intensity of life-stress in the case of suicidal tendencies (figure 5.8.1).

Table 5.8.2. Comparison of frequency of declared use of task-based and emotional strategies for dealing with problems in 2003-2013

Variable	Year of reading	Average	Standard deviation	Average difference	T-test	Degree of freedom	Level of significance	Correlation
Task-oriented strategy	2003	0.807	0.669	-0.152	-7.743	1756	0.000	0.245**
	2013	0.959	0.670					
	2005	0.877	0.679	-0.086	-4.733	2004	0.000	0.268*
	2013	0.963	0.662					
	2007	0.902	0.674	-0.050	-3.896	3953	0.000	0.273*
	2013	0.952	0.666					
	2009	0.920	0.673	-0.032	-4.363	11609	0.000	0.290*
	2013	0.952	0.670					
	2011	0.919	0.669	-0.038	-6.616	17781	0.000	0.329*
	2013	0.957	0.669					
Emotional strategy	2003	1.042	0.798	0.098	4.125	1756	0.000	0.196*
	2013	0.944	0.780					
	2005	1.128	0.830	0.190	8.222	2004	0.000	0.180*
	2013	0.939	0.779					
	2007	1.052	0.790	0.120	7.903	3953	0.000	0.256*
	2013	0.932	0.777					
	2009	0.954	0.792	0.044	4.983	11609	0.000	0.264*
	2013	0.910	0.780					
	2011	0.930	0.800	0.030	4.325	17781	0.000	0.308*
	2013	0.899	0.780					



NOTE: inverted suicidal tendency scale - the lower the value the higher the frequency of suicidal thoughts. Main intensity of stress F(2, 24665)=251.080, p<0.000, η^2=0.021, main effect of coping strategy F(1, 24665)=280.275, p<0.000, η^2=0.011, effect of stress and coping strategy interaction F(2, 24665)=34.296, p < 0.000, η^2 =0.003

Figure 5.8.1. Suicidal tendencies in conditions of various intensity of life stress for those with either mainly task-oriented or emotional coping strategies with control for gender and age

The advantage of task-orientated strategies over the emotional correlates with personal income level (r=0.13). In order to verify whether task-orientation indeed favours higher income, we carried out a regression analysis in which the explanatory factor was change in personal income over three periods: 2007-2013, 2009-2013 and 2011-2013, with the predictors being task-orientation and the amount of entry-year personal income. As the results presented in table 5.8.3 show, task-orientated strategy may actually be considered a factor favouring the gaining of personal wealth.

Table 5.8.3. Results of linear regression of change in personal income between year of predictor measurement and 2013

Predictor	Year of reading								
	2007			2009			2011		
	Beta	t	p	Beta	t	p	Beta	t	p
Personal income	-0.236	-13.334	0.000						
Task-oriented strategy	0.082	4.615	0.000						
Personal income				-0,205	-18,842	0,000			
Task-oriented strategy				0,056	5,144	0,000			
Personal income							-0,333	-28,198	0,000
Task-oriented strategy							0,055	6,262	0,000
N	3071			8237			12059		
Adjusted R^2	0.057			0.042			0.108		

5.9. Social Support

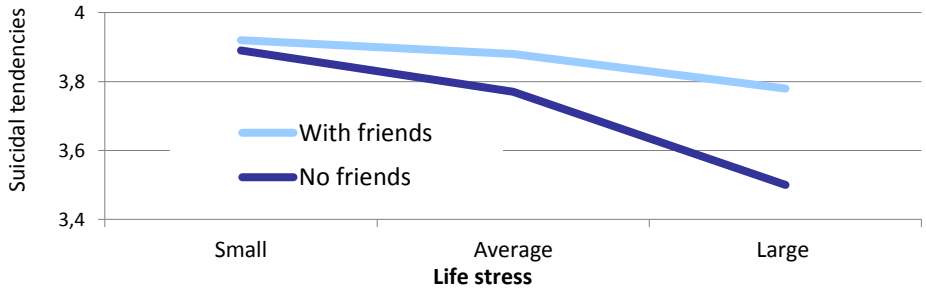
Since the start of the transformation, the feeling of social support declared (*I feel loved and trusted)* by over 90% of respondents has not changed. Only 20% feel abandoned against their own will (see table 5.9.1). Social support is an important category in the psychology of stress and coping with stress. Most theorists are inclined towards the "buffer" hypothesis, which assumes that social support is a factor that weakens or prevents the negative psychological effects of stress (friends in need are friends indeed). However, also popular is the main effect hypothesis, which states that support always acts positively on the psyche, and not only in conditions of rising life stress. Though these hypotheses do not rule each other out entirely, we checked which is more accurate in relation to Poles. Do respondents who feel loved and trusted have more friends and do not feel lonely and better cope with life stress. Does support prevent the negative psychological effects of stress or is it that, independently of life events, people who enjoy greater support are in better shape psychologically.

It turns out that support of the measured number of friends generally positively influences various aspects of psychological well-being as well as also easing the influence of life-stress. Suicidal tendencies grow and the feeling of happiness falls with life-stress more among people who are lonely than among those surrounded by friends (figure 5.9.1). Similarly, psychological depression is increased by life-stress among those without friends (figure 5.9.2). The number of friends is fifth most important factor explaining well-being after age, marriage, alcohol abuse and income per head (see table 5.3.1). To a similar extent, friends favour psychological well-being in both men and women, so it is better to have friends both in good times and especially in bad. Unfortunately, their number has once again begun to fall to the level at the turn of the century (tables 5.9.2 and 5.9.3).

Table 5.9.1. Percentage of respondents declaring different forms of social support in 1991/1992 and 2000-2013

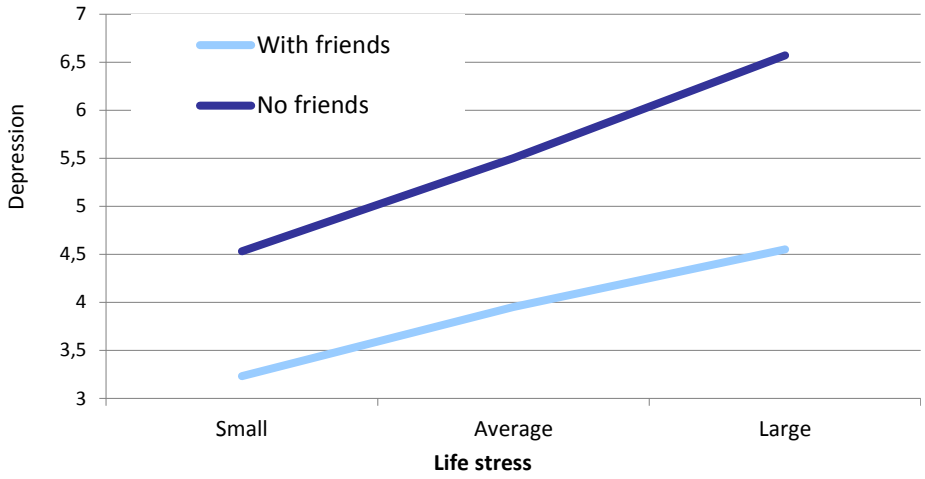
Examples of social support	1991/1992 N=4187/3402	2000 N=6403	2003 r. N=9037	2005 N=8593	2007 N=12211	2009 N=25729	2011 N=26176	2013 N=26088
Trusted and loved	90	90	91	91	92	91	92	91
Lonely	21	22	19	22	21	21	21	20

Data source: 1991/1992 — Czapiński, 1998; 2000-2013 — *Social Diagnosis*.



NOTE: inverted suicidal tendency scale - the lower the value the higher the frequency of suicidal thoughts.; main effects: friends F(1, 24715)=117.592, p<0.000, η^2=0.005, stress F(2, 24715)=151.823, p<0.000, η^2=0.012, effect of stress and friends interaction F(2, 24919)=34.507, p<0.000, η^2= 0.003 with control for age and gender

Figure 5.9.1. Level of suicidal tendency by intensity of life stress and friends



NOTE: main effects: friends F(1, 24429)=341.592, p<0.000, η^2=0.014, stress F(2, 24429)=117.823, p<0.000, η^2=0.010, effect of stress and friend interaction F(2, 24429)=5.575, p<0.005, η^2= 0.000 with control for age and gender

Figure 5.9.2. Intensity of psychological depression symptoms by intensity of life stress and friends

Table 5.9.2. Average number of friends over 18 in the following years

1991 N=4187	1993 N=2306	1995 N=3020	1996 N=2333	1997 N=2094	2000 N=6403	2003 N=9037	2005 N=8457	2007 N=12514	2009 N=25729	2011 N=26176	2013 N=25510
7	7	8	7	7	5	6	7	7	7	7	6

Data source 1991-1997 — Czapiński, 1998; 2000-2013 — *Social Diagnosis*.

Table 5.9.3. Percentage of respondents over 18 declaring a lack of friends or more than 5 friends in the following years

Number of friends	1991 N=4187	1993 N=2306	1995 N=3020	1997 N=2094	2000 N=6403	2003 N=9037	2005 N=8457	2007 N=12514	2009 N=25729	2011 N=26176	2013 N= 25510
Lack of friends	3.0	4.0	3.2	3.3	5.7	4.1	3.1	3.6	4.0	4.9	5.6
Over 5 friends	45.0	49.0	50.0	47.0	30.0	40.1	44.0	45.5	43.4	43.4	39.1

Data source 1991-1997 — Czapiński, 1998; 2000-2013 — *Social Diagnosis*.

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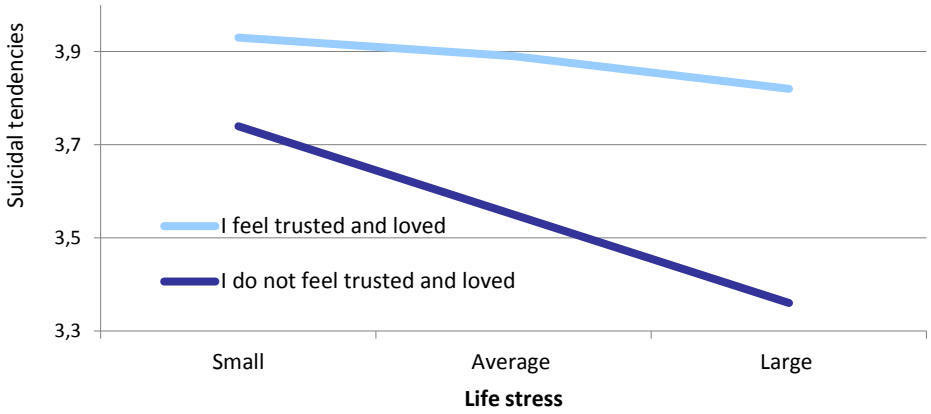
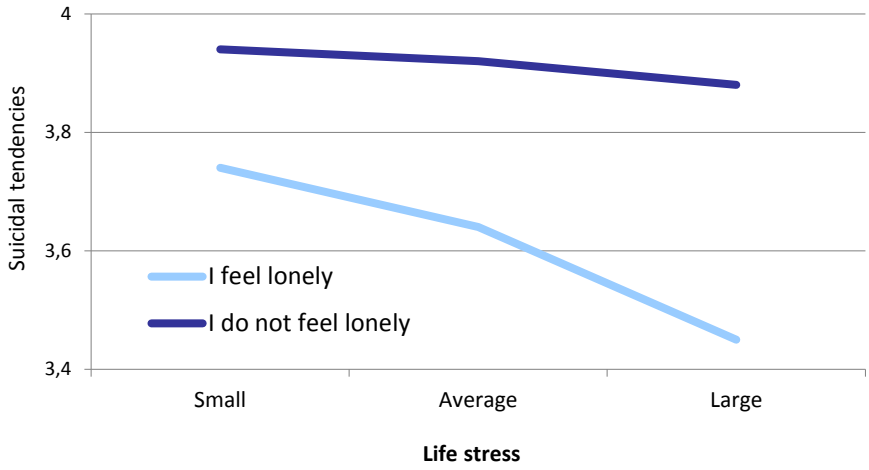
For suicidal tendencies, two other indicators of support also have a marked buffer effect - the feeling of being loved and trusted as well as the feeling of loneliness (figures 5.9.3 and 5.9.4).



NOTE: inverted suicidal tendency scale - the lower the value the higher the frequency of suicidal thoughts; main effects: support F(1, 24777)=1341.664, p<0.000, η^2=0.051, stress F(2, 24777)=156.464, p<0.000, η^2=0.012, effect of stress and social support interaction F(2, 24777)=43.825, p<0.000, η^2= 0.004 with control for age

Figure 5.9.3. Level of suicidal tendencies by intensity of life stress and feeling of being trusted and loved



NOTE: inverted suicidal tendency scale - the lower the value the higher the frequency of suicidal thoughts; main effects: main effects: loneliness F(1, 24674)=1575.399, p<0.000, η^2=0.060, stress F(2, 24674)=188.894, p< 0.000, η^2=0.015, effect of stress and support interaction F(2, 24674)=84.449, p<0.000, η^2= 0.007 with control for age

Figure 5.9.4. Level of suicidal tendencies by intensity of life stress and feeling of loneliness

5.10. Personality traits and lifestyle

5.10.1. The system of values

Studying the system of personal values is one of the most difficult tasks of the psychology of the quality of life. Although there are several measures that are better or worse standardised and verified for accuracy and reliability (the scale of Rokeach or Schwartz), none of them has been used in large surveys where what counts is brevity, simplicity of questions and ease of providing answers. Based on these criteria, we used the *scale of conditions for a happy life* (Annex 1, individual questionnaire, question 2), which lists 13 specific values and one non-specific value. Since all of the 13 values are commonly accepted, we limited respondents' choices to three that are the most important for them.

Table 5.8.1 proves that the value system of the Poles is quite stable. However, it is worth emphasising the significant increase in the importance of friends (a percentage of indications more than double the amount of 2000). The importance of education also increased as compared with the 1990s, although still both friends and education seem to be undervalued, given their real impact on the quality of life.

The quick increase in the Poles' affluence is also reflected in the decline of the frequency of the choice of money as one of the three most important values (by 10% as compared to 2000). The importance of God (providence) is also declining, which corresponds to the decline in the frequency of religious practices and prayer (cf. section 5.8.3).

Similarly to all the previous years, the following are indicated as values: health (64.1% of respondents), then a successful marriage (a slight decline in the number of indications), children (also a fall in the number of indications, which already started in 2011) and work. The values that are indicated the least often are freedom, strong personality, education and kindness and being respected.

A system of personal values depends on many cultural factors, social environment, life conditions and what adventures meet a person in the course of their life. We selected seven such factors potentially determining the probability of respondents including particular values to three basic conditions of a successful (happy) life. The results of regressive logistical analysis with these factors as predictors are presented in table 5.10.2.

Table 5.10.1. Percentage of respondents over 18 who in the following years indicated particular values as the most three important conditions for a happy, successful life

Value	1992 N=3402	1995 N=3020	1997 N=2094	2000 N=6632	2003 N=9397	2005 N=8560	2007 N=12365	2009 N=23784	2011 N=26221	2013 N=26248
Money	37.2	36.1	39.3	39.2	33.3	32.9	30.7	30.3	28.2	29.0
Children	52.3	51.0	50.3	43.4	43.3	45.1	45.9	48.8	47.6	46.1
Happy marriage	56.3	55.9	58.8	58.0	53.7	55.6	55.8	56.6	53.4	50.3
Work	26.6	29.6	28.9	30.8	35.5	34.7	30.2	31.9	30.7	32.1
Friends	4.7	5.6	5.0	4.6	5.9	8.0	8.6	10.4	10.4	10.6
Providence, God	16.7	16.4	15.6	16.0	15.4	15.6	15.1	15.4	13.3	12.9
Cheerful disposition, optimism	8.5	9.0	7.9	7.8	8.2	9.1	9.5	10.7	10.2	9.2
Honesty	12.3	10.	9.0	8.8	9.0	10.2	9.7	11.1	9.9	9.4
Kindness and being respected	9.0	7.4	6.0	7.8	5.9	6.7	6.9	8.4	7.1	6.7
Freedom and liberty	3.6	3.8	1.9	3.0	3.3	3.5	4.1	4.7	4.4	4.9
Health	59.6	59.6	60.2	62.9	63.7	64.9	65.1	67.8	64.1	65.3
Education	1.9	3.7	4.2	4.6	5.1	6.0	6.2	6.3	5.6	5.8
Strong personality	4.0	4.1	5.5	3.4	4.5	4.9	5.0	5.8	5.3	5.8
Other	0.5	0.7	0.4	0.6	0.7	1.2	1.0	1.0	0.9	0.9

Data source 1992-1997 — Czapiński, 1998; 2000-2013 — *Social Diagnosis.*

The chosen values the predictors best reveal are: children, a happy marriage, friends, work and education. This means that the weight of these values in an individual's value system depends above all on his or her socio-demographic characteristics. The importance of children in a value system depends above all on whether someone is in a relationship, is a woman and is between 25-44 years of age. Those who value marriage above all are themselves married, are relatively young, better off and better educated, while those choosing friendship more often than others are wealthy, unmarried and better educated. Work is of particular value for hired workers and the unemployed, singles, less well educated and for men. Education is appreciated by the better educated, the youngest who are at school or university, those receiving welfare benefits, the unemployed, the most well-off and the singles.

Women appreciate family values, health and religion as well as kindness and peer respect, while men value work, money freedom and a strong character. Younger people more than the elderly value a successful marriage (one may suppose out of a desire for lasting love), friends, education and freedom.

Residents of rural areas more often than those of towns (500+ thousand residents) tend to appreciate education, honesty and respect and are also less attached to money. Richer Poles more than the poor stand by a happy marriage, friends, good spirits, education and freedom. On the other hand, the poor find money and work more important. The better educated more often than the worse indicated marriage, good spirits, God, freedom and education from among the three main values, and money and children were less often chosen. People living as singles more often indicate money, work, friends, good spirits, kindness, honesty and peer respect, freedom, education and a strong character. They attach much less importance, especially in comparison to married couples, to children and marriage.

Generally, this differentiation partially confirms the deficit hypothesis in so much as we value most what we find ourselves lacking. There are however exceptions to this rule: hired workers are employed, but even so value it more from the passive professional, with the exception of the unemployed. Another example breaking away from the deficit hypothesis is education, which is appreciated more by those better educated and students.

If a value system has an influence on lifestyle depending on the individual, that is on the decisions that they take, we can expect it allows us to predict important and not random life events to a significant degree such as getting married, childbirth or divorce. We verified whether this was actually the case and whether the probability of getting married and the chance of divorce depend on the happy marriage value and the probability of having a first child on the child value. Respondents from 2011 who indicated marriage as one of the three cardinal values increases the chances of marriage threefold and reduces the probability of divorce twofold in the next two years (figures 5.10.1 and 5.10.2). In the case of the chances of getting married, the choice of the marriage value is a significant predictor even two years in advance. In the case of divorce however, only among women does it depend on the position of marriage in the value system. Also, it occurs that counting children as one of the three cardinal values is a significant predictor of childbirth within the next two years (figure 5.10.3).

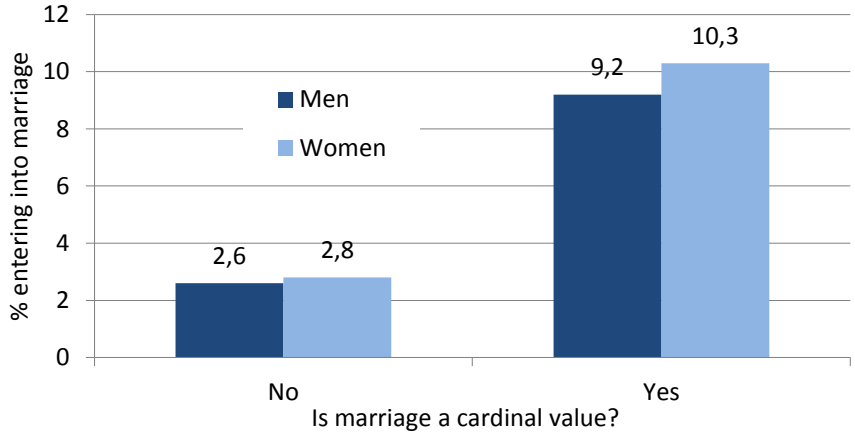
Table 5.10.2. Significance of selected socio-demographic factors as predictors of the probability of including a given value as one of the three conditions of a successful (happy) life in a regression analysis

Predictor	Money		Children		Happy marriage		Work		Friends		Providence, God		Cheerful disposition, optimism	
	p	Exp(ß)	p	Exp(ß)	p	Exp(ß)	p	Exp(ß)	p	Exp(ß)	p	Exp(ß)	p	Exp(ß)
Man	ref.													
Woman	0.000	0.569	0.000	1.885	0.082	1.056	0.000	0,731	0,155	1,071	0,000	1,583	0,031	1,111
Age 16-24	ref.													
25-34	0.095	1.120	0.004	1.292	0.062	0.871	0.962	0,997	0,000	0,688	0,710	0,956	0,096	1,207
35-44	0.365	0.934	0.018	1.249	0.000	0.594	0.632	0,965	0,000	0,477	0,033	1,313	0,000	1,795
45-59	0.057	0.867	0.001	0.737	0.000	0.540	0.486	1,053	0,000	0,475	0,003	1,453	0,000	2,019
60-64	0.108	0.856	0.007	0.747	0.000	0.477	0.077	0,841	0,000	0,570	0,000	1,694	0,000	1,937
65+	0.000	0.602	0.014	0.755	0.000	0.504	0.000	0,556	0,000	0,457	0,000	2,814	0,000	2,347
Per capita income below lower quartile	ref.													
Above lower quartile	0.008	0.896	0.848	1.008	0.002	1.143	0.003	0,884	0,332	1,068	0,713	1,021	0,560	1,044
Below upper quartile	0.000	0.802	0.926	0.996	0.000	1.259	0.000	0,836	0,001	1,270	0,891	0,992	0,001	1,280
Above upper quartile	0.000	0.693	0.001	0.853	0.000	1.424	0.000	0,771	0,000	1,552	0,079	0,889	0,000	1,437
Towns over 500k residents	ref.													
Towns 200k – 500k	0.000	1.271	0.754	1.020	0.848	1.012	0.102	0,901	0,121	0,876	0,000	1,521	0,014	0,812
Towns 100 k– 200k	0.000	1.383	0.686	1.028	0.000	0.715	0.917	0,993	0,000	0,662	0,037	1,232	0,632	0,957
Towns 20kk – 100k	0.000	1.348	0.297	1.060	0.002	0.844	0.570	0,969	0,000	0,583	0,000	1,404	0,000	0,728
Towns up to 20k	0.000	1.374	0.985	1.001	0.004	0.838	0.137	1,096	0,000	0,640	0,000	1,370	0,001	0,755
Rural areas	0.000	1.258	0.822	1.012	0.047	0.900	0.243	1,063	0,000	0,559	0,000	1,636	0,000	0,601
Primary and lower education	ref.													
Vocational/lower secondary school	0.001	0.843	0.766	1.015	0.000	1.269	0.384	1,047	0,847	0,984	0,004	0,830	0,191	1,124
General secondary	0.000	0.706	0.881	0.992	0.000	1.432	0.597	0,972	0,578	0,953	0,553	1,039	0,000	1,594
Higher and post-secondary	0.000	0.505	0.025	0.876	0.000	1.484	0.001	0,809	0,660	0,958	0,012	1,211	0,000	2,201
Public sector workers	ref.													
Private sector workers	0.900	1.007	0.006	0.870	0.000	1.205	0.673	0,980	0,202	0,898	0,003	0,795	0,408	1,069
Self-employed	0.993	0.999	0.823	1.018	0.069	1.162	0.000	0,718	0,175	1,197	0,712	1,045	0,011	1,359
Farmers	0.938	1.006	0.434	1.065	0.738	1.027	0.000	0,531	0,608	0,924	0,965	0,995	0,564	0,910
Pensioners	0.160	0.894	0.039	0.855	0.663	0.966	0.000	0,324	0,869	1,021	0,062	1,211	0,042	1,288
Retirees	0.325	0.921	0.018	0.839	0.236	1.097	0.000	0,408	0,865	0,976	0,451	1,080	0,027	1,314
School and university students	0.000	0.661	0.000	0.501	0.117	1.152	0.000	0,369	0,014	1,310	0,719	1,052	0,000	1,957
Unemployed	0.172	1.100	0.017	0.843	0.030	0.856	0.657	1,029	0,001	0,686	0,001	0,700	0,668	1,051
Other passive labour	0.078	1.135	0.008	0.830	0.903	1.009	0.000	0,465	0,542	0,931	0,828	0,979	0,111	1,205
Unmarried	ref.													
Married	0.000	0.493	0.000	10.057	0.000	9.844	0.000	0,585	0,000	0,169	0,831	1,015	0,000	0,390
Widowed	0.000	0.551	0.000	8.675	0.000	2.293	0.000	0,647	0,000	0,369	0,001	1,333	0,000	0,556
Divorced	0.000	0.743	0.000	6.848	0.188	1.124	0.359	0,933	0,000	0,584	0,004	0,710	0,000	0,659
Percentage of explained variance Cox & Snell R^2 x 100		6.8		20.2		19.5		8.4		10.2		4.6		2.9
Percentage of explained variance Nagelkerke R^2 x 100		9.7		26.9		26.1		11.7		20.7		8.5		6.4

Table 5.10.2. cont.

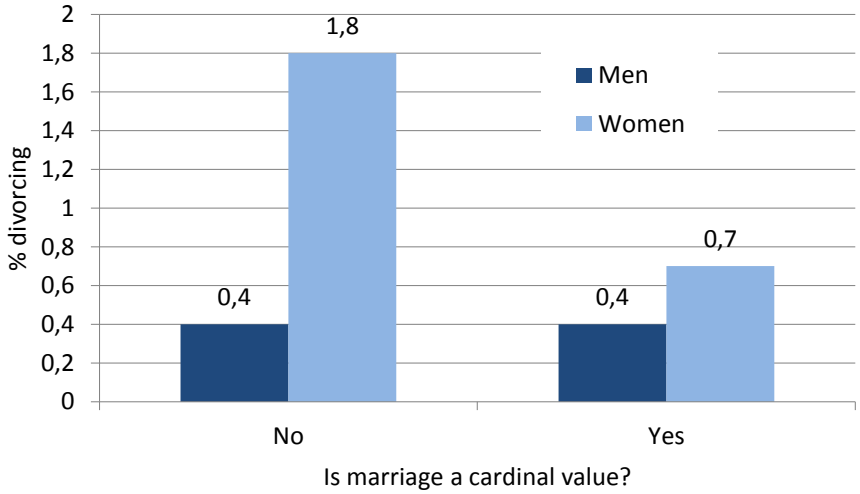
Predictor	Honesty		Kindness and being respected		Freedom and liberty		Health		Education		Strong character	
	p	Exp(ß)	p	Exp(ß)	p	Exp(ß)	p	Exp(ß)	p	Exp(ß)	p	Exp(ß)
Man	ref.											
Woman	0.597	0.975	0.000	1.329	0.000	0.411	0,000	1,381	0,105	0,904	0,000	0,578
Age 16-24	ref.											
25-34	0.189	0.860	0.535	1.083	0.072	0.811	0,052	1,138	0,000	0,507	0,018	0,771
35-44	0.037	1.294	0.070	1.294	0.223	0.844	0,000	1,333	0,000	0,393	0,009	0,714
45-59	0.000	1.782	0.013	1.411	0.023	0.724	0,000	1,777	0,000	0,465	0,002	0,675
60-64	0.000	1.917	0.013	1.545	0.041	0.649	0,000	2,062	0,000	0,310	0,007	0,620
65+	0.000	2.105	0.004	1.692	0.000	0.394	0,000	1,917	0,000	0,306	0,000	0,401
Per capita income below lower quartile	ref.											
Above lower quartile	0.902	1.008	0.621	1.038	0.053	1.210	0,552	0,976	0,223	1,112	0,430	0,938
Below upper quartile	0.442	0.949	0.811	1.019	0.083	1.193	0,903	1,005	0,081	1,169	0,587	1,046
Above upper quartile	0.511	1.049	0.187	1.120	0.000	1.883	0,810	1,011	0,011	1,274	0,977	0,997
Towns over 500k residents	0.021											
Towns 200k – 500k	0.143	1.145	0.004	0.727	0.335	0.897	0,175	0,922	0,000	0,510	0,925	1,011
Towns 100 k– 200k	0.370	1.094	0.059	0.803	0.030	0.755	0,572	1,037	0,514	0,917	0,043	0,769
Towns 20kk – 100k	0.752	1.027	0.010	0.787	0.000	0.574	0,328	1,053	0,828	0,977	0,028	0,799
Towns up to 20k	0.656	0.959	0.043	0.809	0.000	0.605	0,151	1,089	0,002	0,675	0,054	0,800
Rural areas	0.142	0.888	0.004	0.772	0.000	0.602	0,160	1,073	0,371	1,094	0,003	0,748
Primary and lower education	ref.											
Vocational/lower secondary school	0.000	1.449	0.329	1.088	0.589	0.935	0,011	0,882	0,446	1,100	0,510	1,070
General secondary	0.047	1.170	0.439	0.933	0.930	1.011	0,068	0,911	0,000	1,674	0,037	1,245
Higher and post-secondary	0.003	1.306	0.980	1.003	0.061	1.299	0,133	1,093	0,000	3,095	0,727	0,958
Public sector workers	ref.											
Private sector workers	0.996	1.000	0.563	0.944	0.378	1.106	0,415	1,040	0,113	0,829	0,219	0,879
Self-employed	0.335	0.874	0.756	0.950	0.000	1.880	0,130	0,892	0,168	0,746	0,719	1,059
Farmers	0.974	0.996	0.993	0.999	0.575	0.882	0,000	1,410	0,901	1,026	0,995	1,001
Pensioners	0.433	1.096	0.265	1.166	0.286	1.221	0,000	1,635	0,000	1,920	0,240	1,193
Retirees	0.013	1.333	0.215	1.190	0.757	1.070	0,000	1,334	0,029	1,576	0,147	1,272
School and university students	0.835	0.971	0.195	1.225	0.000	1.884	0,024	0,830	0,000	3,602	0,737	1,050
Unemployed	0.553	1.068	0.385	1.117	0.125	1.263	0,094	0,896	0,016	1,416	0,002	1,471
Other passive labour	0.466	0.918	0.155	0.818	0.004	1.577	0,104	1,115	0,961	0,992	0,161	0,808
Unmarried	ref.											
Married	0.000	0.483	0.000	0.451	0.000	0.274	0,000	0,742	0,000	0,336	0,000	0,461
Widowed	0.000	0.621	0.015	0.759	0.000	0.380	0,010	0,829	0,000	0,370	0,045	0,746
Divorced	0.011	0.760	0.371	0.896	0.981	1.004	0,739	0,974	0,000	0,314	0,330	1,137
Separated	0.597	0.975	0.000	1.329	0.000	0.411	0,000	1,381	0,105	0,904	0,000	0,578
Percentage of explained variance Cox & Snell R^2 x 100	1.4		1.2		4.8		3.6		7.6		2.2	
Percentage of explained variance Nagelkerke R^2 x 100	3.1		3.1		14.9		5.0		21.2		6.0	

Not only does a value system allow the prediction of certain life events resulting from individual decisions, it also permits the opposite as important life decisions can change value systems. The happy marriage value increases in the years following marriage (figure 5.10.4). Before getting married, 59% counted a happy marriage as a cardinal value and 2-3 years after 64%. Furthermore, divorce reduces the happy marriage value for a period of at least two years (figure 5.10.5). Prior to divorce, 61% counted marriage as a cardinal value (slightly more than the group whose marriage had not broken up in a given time). After divorce, the percent of former spouses counting a happy marriage as a cardinal value fell twice over and remained at that level for the next 2-3 years. Then the birth of a first child raises the position of children in an individual's value system (figure 5.10.6). As far as before the birth of a child only 39% of future parents included children as one of three cardinal values, straight after birth that was 65% and after a few years over half of parents saw children as a cardinal value, and this was no less statistically significant than immediately after the birth of a child.



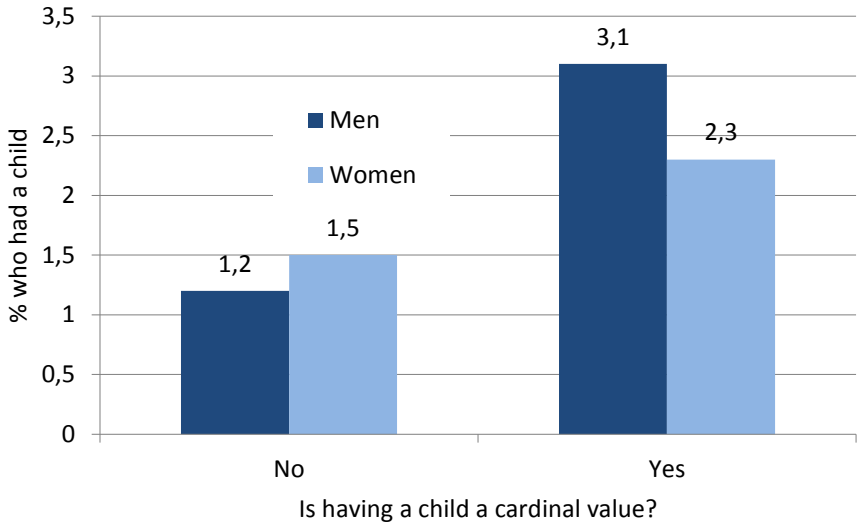
NOTE: main effect of including marriage as a cardinal value F(1,4458)=96.937, p<0.000, η^2= 0.021; main effect of gender not significant; effect of value and gender interaction not significant

Figure 5.10.1. Percentage of unmarried women and men who included or did not include marriage as one of the three cardinal values in 2011 and who married within the next two years



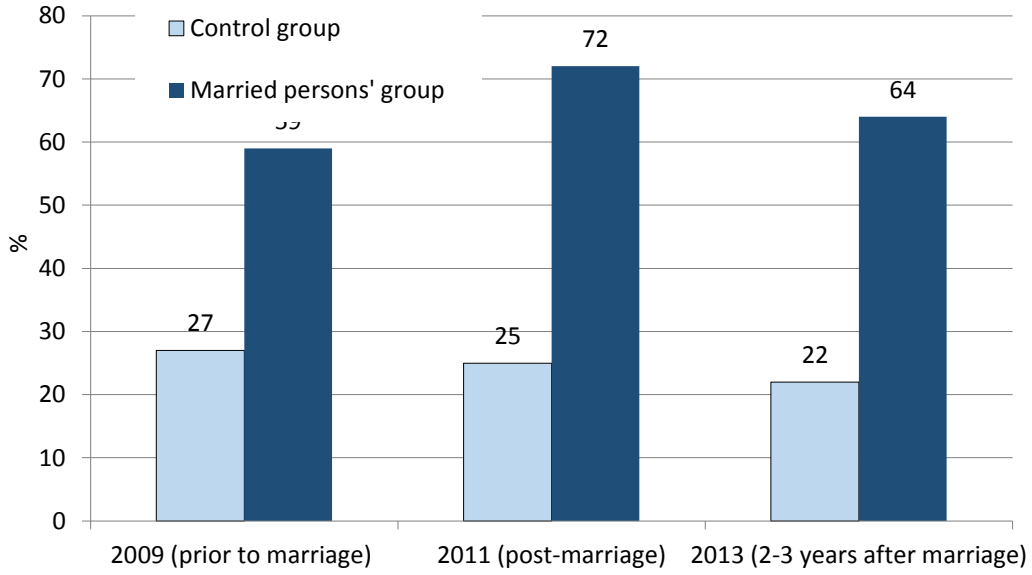
NOTE: the main effect of including marriage as a cardinal value F(1,11657)=9.987, p<0.005, η^2= 0.001; main gender effect F(1,11657)=23.357, p<0.000, η^2= 0.002; effect of value and gender interaction F(1,11657)=9.637, p<0.005, η^2= 0.001

Figure 5.10.2. Percentage of married women and men who included or did not include marriage as one of the three cardinal values in 2011 and who divorced within the next two years



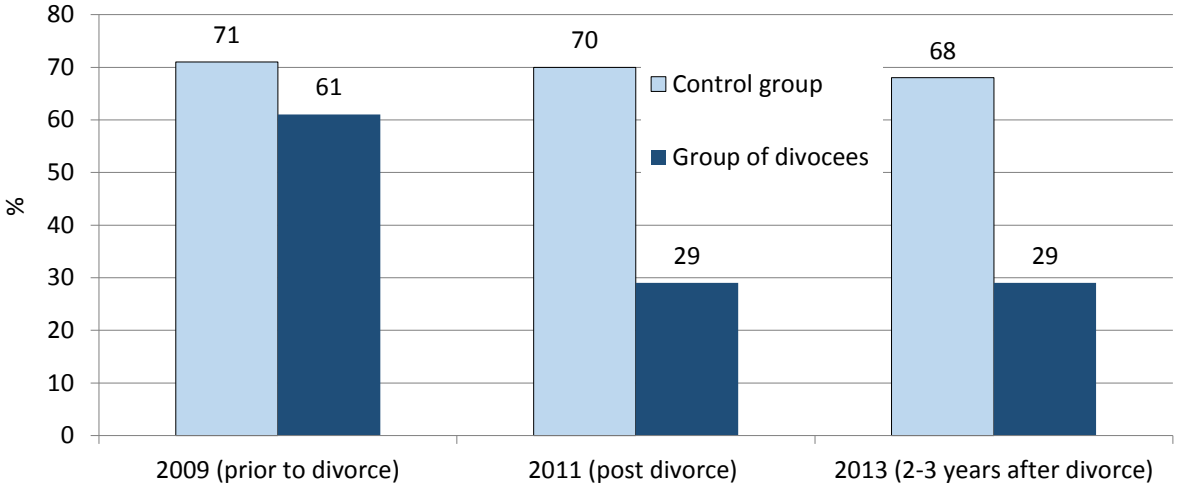
NOTE: main effect of including children as a cardinal value F(1,2112)=4.587, p<0.05, η^2= 0.002; main effect of gender and effect of values and gender interaction not significant

Figure 5.10.3. Percentage of married women and men who included or did not include having children as a cardinal value in 2011 who had a child in the next two years



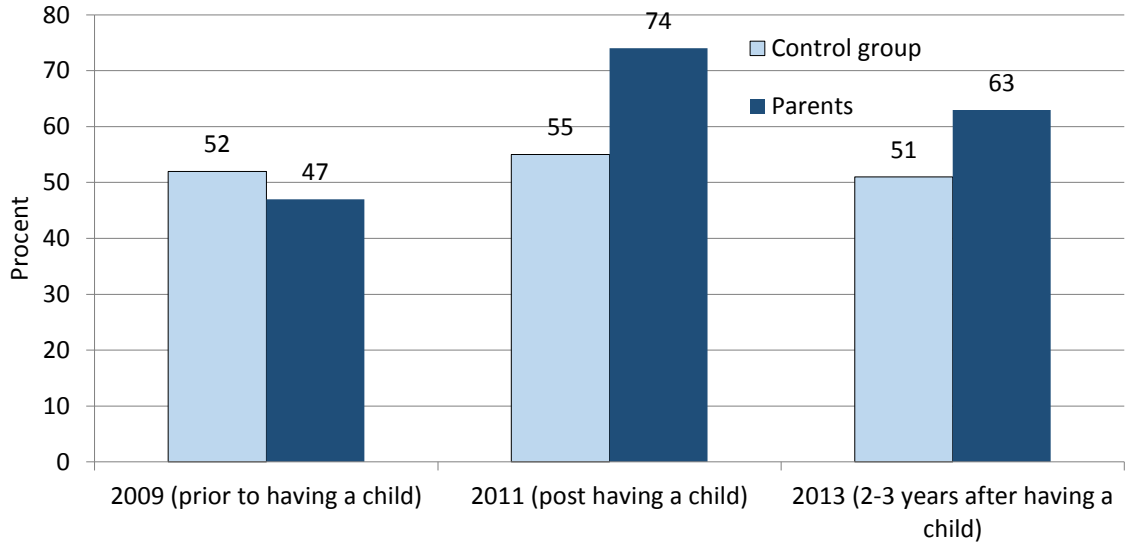
NOTE: main effect of time measure not significant.; effect of time of reading and group interaction F(2,3964)=4.641, p<0.01, η^2=0,002; internal objective contrast tests for time of measure and group interaction: 1 measure vs 2 measure F(1,1942)=8.352, p<0.005, η^2=0.004, measure 1 vs measure 3 F(1,942)=3.886, p<0.05, η^2=0.002, measure 2 vs measure 3 not significant; co-variables were age and gender

Figure 5.10.4. Percentage of persons who married between 2009 and 2011 who indicated a successful marriage as one of three cardinal values in 2009 (prior to marrying), in 2011 (post marriage) and in 2013 (2-3 years after marriage) and the percentage of unmarried persons in 2009-2013 (control group) who indicated marriage as one of the cardinal values in 2009, 2011 and 2013



NOTE: main effect of time of measure F(2,14900)=12.016, p<0.000, η^2= 0,002; time of measure and group interaction effect F(2,14900)=9.650, p<0.000, η^2=0.001; internal objective contrast tests for time of measure and group interaction: measure 1 vs measure 2 F(1,7450)=15.489, p<0.000, η^2=0.002, measure 1 vs measure 3 F(1,7450)=13.458, p<0.000, η^2=0.002, measure 2 vs measure 3 not significant; co-variables were age and gender

Figure 5.10.5. Percentage of persons who divorced between 2009 and 2011 who indicated a successful marriage as one of three cardinal values in 2009 (prior to divorce), in 2011 (post-divorce) and in 2013 (2-3 years after divorce) and percentage of those married in 2009-2013 (control group) who indicated marriage as one of three cardinal values in 2009,2011 and 2013

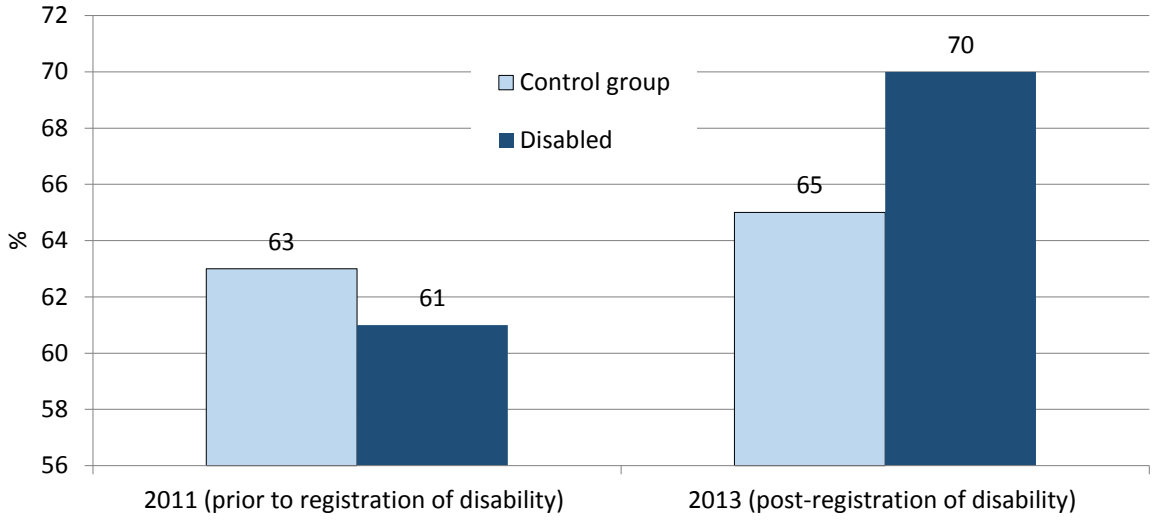


NOTE: main effect of measure of time F(2,4158)=3.456, p<0.05, η^2= 0.002; effect of time of measure and group interaction F(2,4158)=7.688, p<0.000, η^2=0.004; internal objective contrast tests for time of measure and group interaction: measure 1 vs measure 2 F(1,2079)=14.535, p<0.000, η^2=0.007, measure 1 vs measure 3 F(1,2079)=6.902, p<0.01, η^2=0.003, measure 2 vs measure 3 not significant; co-variables were age and gender

Figure 5.10.6. Percentage of married persons who had their first child between 2009 and 2011 who indicated having children as one of three cardinal values in 2009 (prior to birth), in 2011 (post-birth) and in 2013 (2-3 years after birth) and the percentage of the married who remained childless in 2009-2013 (control group) who indicated having children as one of three cardinal values in 2009, 2011 and 2013

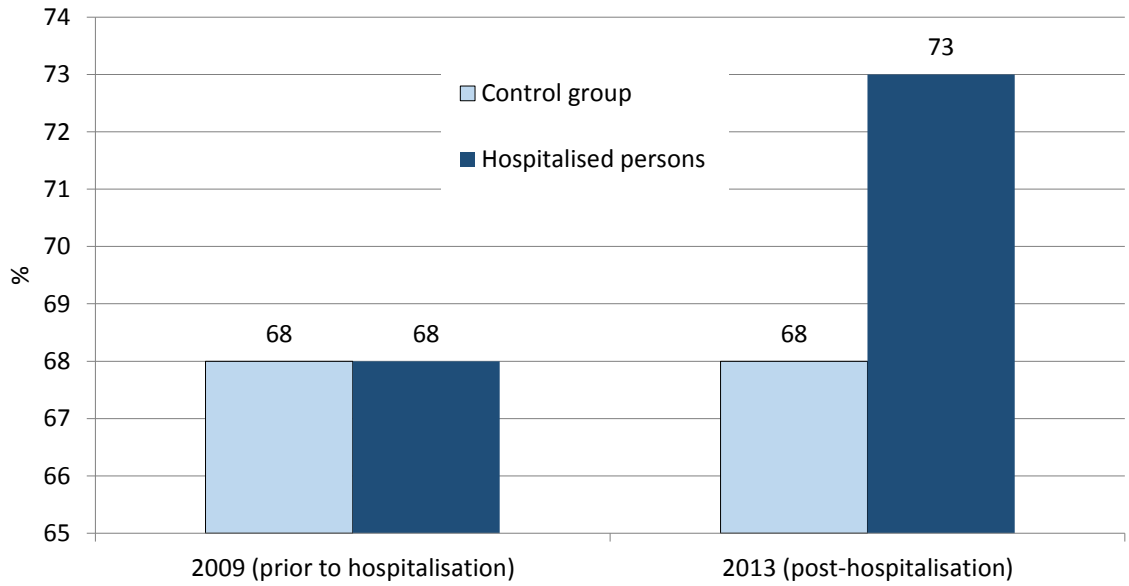
The mechanism of value system change after life events resulting from the individual's choices can be explained in categories of cognitive dissonance theory (Fetinger, 1957) as the justification of the rationality of a decision (to marry, divorce or have children) once taken. This is not however the only possible explanation as all three of the events analysed here have a marked influence on most aspects of an individual's life and may force a modification in the sense of life and its aims in a direction compatible with the character of the event. You do not know if something is really important until you have not

experienced it. This is borne out by the statistically significant change in the health value of people who have become disabled, or were treated in hospital and thus experienced something that was not an effect of their free choice (figures 5.107 and 5.10.8). You only know how much to value your health until it is gone.



NOTE: main effect of time of measure not significant.; effect of group and time measure interaction F(1,14190)=5.912, p<0.05, η^2=0.000; covariates were age and gender

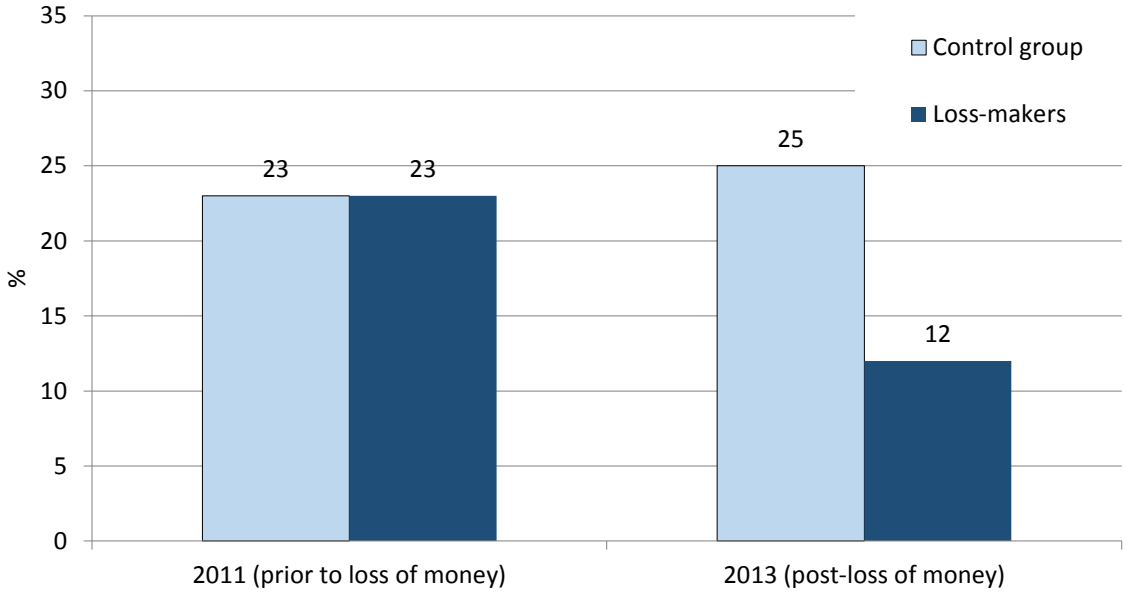
Figure 5.10.7. Percentage of persons who became disabled between 2011 and 2013 who indicated health as one of three cardinal values in 2011 (prior to registration of disability) and in 2013 (after registration) and percentage of non-disabled persons in 2011-2013 (control group) who indicated health as one of three cardinal values in 2011 and 2013



NOTE: main effect of time of measure not significant; effect of group and time measure interaction F(1,11926)=6.386, p<0.05, η^2=0.001; covariates were age and gender

Figure 5.10.8. Percentage of persons hospitalised between 2009 and 2013 who indicated health as one of three cardinal values in 2009 (prior to hospitalisation) and in 2013 (post-hospitalisation) and the percentage of persons not hospitalised between 2009-2013 (control group) who indicated health as one of three cardinal values in 2009 and 2013

However, not always does a lack associated with some value result in a rise in its meaning. Sometimes the mechanism of adaptation lowers the subjective meaning of the lost value and as a result negative emotions like sadness, frustration or anger are diluted. An example of this inverse relation between life experience and value system is the loss of money. Those who have lost a lot of money in business start to be less attached to money as a value (figure 5.10.9).



NOTE: main effect of time of measure not significant; effect of group and time of measure interaction $F(1,2287)=4.472$, $p<0.05$, $\eta^2=0.002$; covariates were age, gender and equivalent income for the last year

Figure 5.10.9. Percentage of persons who between 2011 and 2013 lost large sums of money who indicated money as one of three cardinal values in 2011 (prior to loss of money) and in 2013 (post-loss) and percentage of those who did not make losses in 2011-2013 (control group) who indicated money as one of three cardinal values in 2011 and 2013

5.10.2. Causal attribution

The style of causal attribution is the tendency to search for the causes of one's own condition, behaviours and the effects of actions or condition and other people's behaviours in particular factors. Here we were interested in whether the ways of attributing the causes responsible for the respondent's life were the same as in the past year. The scale of causal attribution used in the study (Annex 1, individual questionnaire, questions 57-58) was meant to provide an answer to the question of who (or what) the Poles see as responsible for the quality of their own lives: themselves, the authorities, other people or fate/providence. The question is connected with a self-serving attribution bias, confirmed in many studies ("the good things are me, the bad things are not me"), and with the theory of social ingratitude (Czapiński, 2000, 2002a), which says that the social perception of changes at the macro level is non-symmetrical; those who gain on the changes from the very beginning, demonstrate gratitude to their authors only to a limited extent, seeing themselves as the main causes of improvement in their living conditions, and the change for good is not felt very strongly itself, while those who consider themselves victims of the implementation of reforms put the blame for their worsening living conditions on the authors of reforms, and feel the change for the worse much more strongly.

The number of people who consider the past year as good has been increasing systematically up to 2011, recently there was a slight fall of 1p.p. (figure 5.10.10). This does not mean however that the self-serving attribution bias is weakening, although the main recipients of the blame for failure are changing to a great extent.

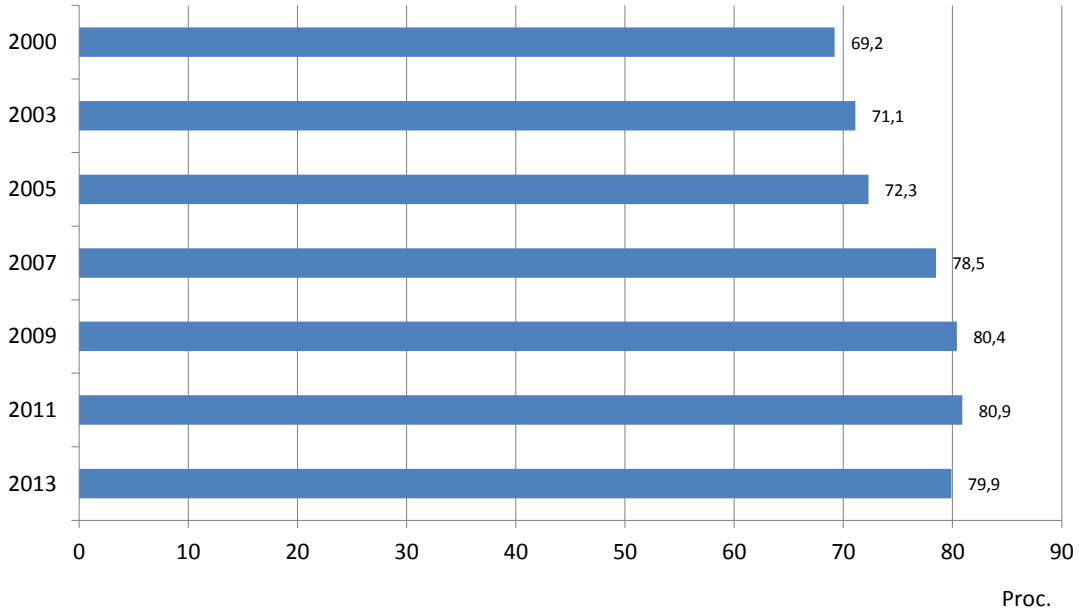


Figure 5.10.10. The percentage of respondents who considered the past year a good year between 2000-2013

Table 5.10.3 shows the distribution of responsibility for the past year between four entities: the respondent themselves, other people, authorities (i.e. the State) and fate (providence). A significant (over triple) decline in a panel sample 2000 and 2009 concerns the frequency of pointing to the authorities (t=13.960, p<0.000). This means that the Poles see the connection between their quality of life and the actions of politicians as weaker and weaker.

The choice of factor depends on the direction the perceived change in the quality of one's own life. Similarly as in the previous years, one can notice a clear effect of the self-serving attribution bias and the effect of social ingratitude (cf. the frequency of attribution to "oneself" and to authorities depending on whether the past year was seen as good or not - Figure 5.8.2). Respondents attribute a good year mainly to themselves (81 %), at an insignificant rate (3.2%) to authorities, while an unsuccessful year is more often attributed to authorities (26%), and less often to themselves (30%).The contribution of other people and providence to one's own fate is also acknowledged more often when the year was unsuccessful than when it was successful. Although the system of dependencies has been preserved, some changes have occurred within it since the year 2000. The frequency of attribution to authorities declined, especially in respect of responsibility for an unsuccessful year (by 26 percentage points)[70], while the frequency of attribution to other people for an unsuccessful year increased.

Table 5.10.3. Percentage of responses in six studies on who or what was responsible for the past year being successful or unsuccessful (in samples of adults)

What had the greatest effect on your past year?	1997 N=2094	2000 N=6635	2003 N=9420	2007 N=12365	2009 N=24531	2011 N=25408	2013 N=25995
I did	69.0	67.3	61.3	65.8	70.0	71.6	70.9
Other people	17.2	24.9	23.4	26.5	25.7	25.7	26.7
The authorities	19.6	24.3	15.2	9.0	7.4	7.9	8.0
Fate or providence	33.0	44.5	42.0	39.0	40.8	41.8	39.6

Source of data: Czapiński, 1998 for the year 1997; *Social Diagnosis* for the years 2000-2013.

[70] The responsibility of the authorities was already so small in the previous years that the "floor" effect made it impossible for that value to drop.

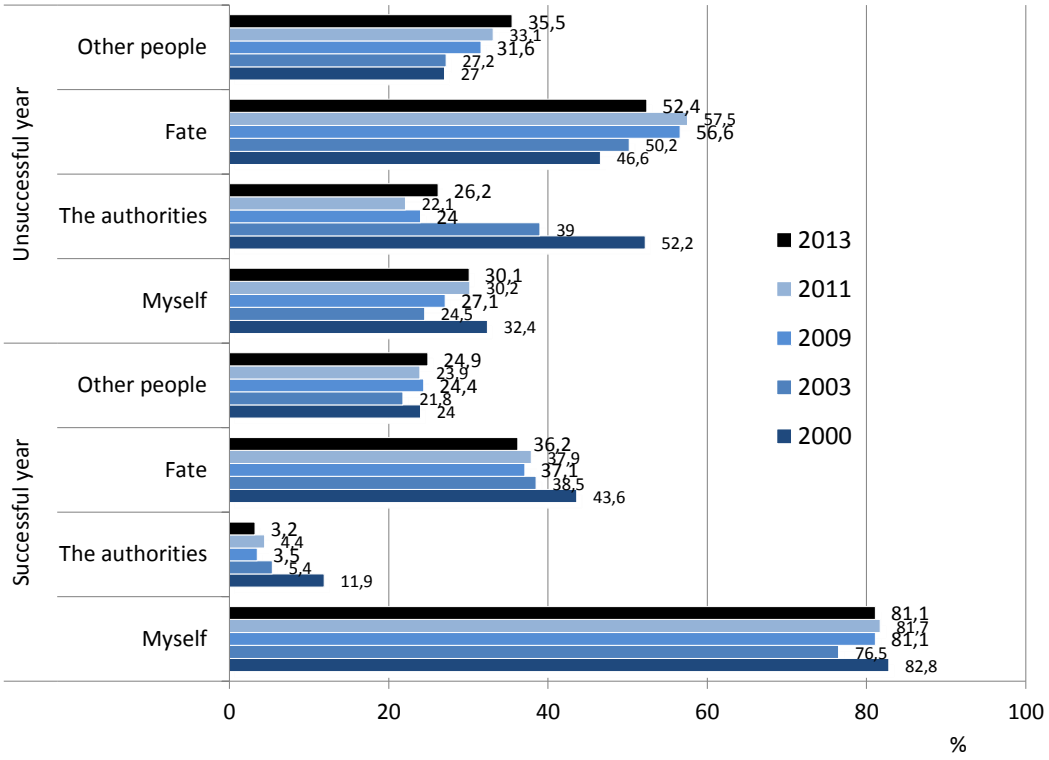


Figure 5.10.11. Who or what made the past year a good or a bad year? (percentage of responses for oneself, the authorities, fate and other people among those who considered the past year either successful or unsuccessful in 2000, 2003, 2009 and 2013)

Causal attributions to the ego independent of the assessment of events they refer to (internal control over one's own life), may be treated as indicators of auto-determination (internal control over one's own life). Analogically, attributions to luck independent of event assessment may be treated as an indicator of fatalism. Now, while fatalism does not have to be a total opposite of auto-determination (people may in their own view divide the responsibility for the course of events between themselves and luck), these two attributes remain in a certain opposition to each other. This is borne out by the negative partial correlation between causal attribution of events to self and luck in the past year with control of the assessment of these events (r=-0.37, N=25293). A certain test of the accuracy of auto-determination and fatalism indicators are their correlation with problem-solving strategies (see chapter 5.8). Task-orientated strategy correlates has a significant positive correlation with the auto-determination indicator (r=0.196) and a negative with fatalism (r=-0.072). The emotional strategy is the opposite at r=-0.084 and r=0.172.

The level of auto-determinism and fatalism is differentiated in relation to socio-demographic features (table 5.10.4). Auto-determinism is 1/5th less common among women and fatalism is more frequent by half than it is among me. Autodeterminism falls and fatalism rises with age until among the over 65s it is almost half as rare and fatalism over twice as common than in the 16-24 year-old respondent group. The higher the income, the more frequent the auto-determinism and the rarer the fatalism. Residents of rural areas have a lower auto-determinism and higher indicators, especially compared to residents of large aglomerations. The higher the education, the higher the auto-determinism and the lower the fatalism. In socio-professional terms, fatalists are most often likely to be receivers of welfare benefits and farmers, who together with pensioners have the lowest indicator of auto-determinism. Marital status differentiates levels of auto-determinism and fatalism, with lowest levels of the former among those whose spouse has died, and the latter among the divorced. This suggests that divorce or separation decisions are taken most easily by those who have not surrendered to fate. Last year's assessment most strongly differentiates the levels of the variables analysed. There are five times less auto-determinists and 80% more fatalists among those who considered the last year to be unsuccessful.

Table 5.10.4. Results of logistic regressive analysis for autodeterminism and fatalism

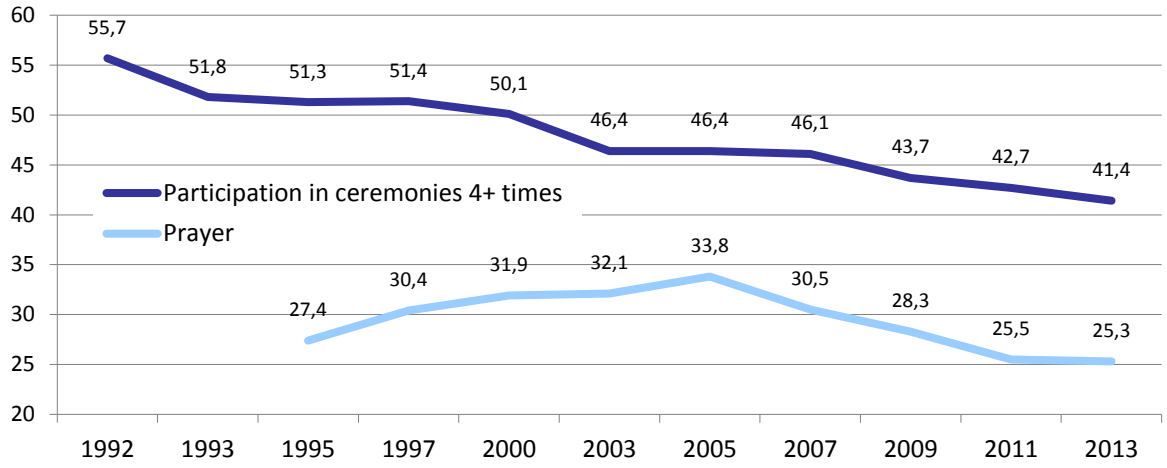
Predictor	Autodeterminism		Fatalism	
	p	Exp(ß)	p	Exp(ß)
Man	ref.			
Woman	0.000	0.788	0,000	1,472
Age 16-24	ref.			
25-34	0.713	0.968	0,000	1,309
35-44	0.026	0.810	0,000	1,388
45-59	0.001	0.736	0,000	1,399
60-64	0.000	0.671	0,000	1,665
65+	0.000	0.548	0,000	2,098
Per capita income below lower quartile	ref.			
Above lower quartile	0.485	0.968	0,786	1,011
Below upper quartile	0.069	1.095	0,617	1,021
Above upper quartile	0.000	1.362	0,004	0,875
Towns over 500k residents	ref.			
Towns 200k – 500k	0.680	0.969	0,579	1,034
Towns 100 k– 200k	0.513	0.948	0,001	0,802
Towns 20kk – 100k	0.285	0.932	0,536	0,968
Towns up to 20k	0.295	0.927	0,826	1,013
Rural areas	0.000	0.768	0,000	1,194
Primary and lower education	ref.			
Vocational/lower secondary school	0.000	1.268	0,000	0,833
General secondary	0.000	1.466	0,001	0,849
Higher and post-secondary	0.000	1.663	0,000	0,795
Public sector workers	ref.			
Private sector workers	0.166	1.091	0,042	0,904
Self-employed	0.112	1.177	0,166	0,895
Farmers	0.671	0.962	0,023	1,189
Pensioners	0.065	0.851	0,003	1,246
Retirees	0.228	0.898	0,172	1,108
School and university students	0.915	0.988	0,021	0,814
Unemployed	0.291	0.919	0,002	0,806
Other passive labour	0.851	1.015	0,145	0,907
Unmarried	ref.			
Married	0.094	0.913	0,683	0,982
Widowed	0.020	0.833	0,704	0,975
Divorced	0.924	1.009	0,000	0,720
The last year was unsuccessful	ref.			
The last year was successful	0.000	0.107	0,000	1,874
General percentage of explained variance Cox & Snell R^2 x 100	19.8		5.8	
General percentage of explained variance Nagelkerke R^2 x 100	28.3		7.9	

* Ref. – group of reference

5.10.3. Religious practices

In 2013, 41.6% of adults declared that they systematically participated in services and other religious ceremonies (Figure 5.10.12). This is 1.3 percentage point less than in 2011 and one fourth less than in 1992, and the least in the entire period since 1992. However, the average share of those taking part in services actually increased slightly in the last two years as a result of a rise in irregular participants in religious ceremonies (1-3 times per month) (table 5.10.5).

Until 2005, the diminishing participation in services and other religious ceremonies was accompanied by an increase in the percentage of people who prayed in difficult situations in life (Figure 5.10.3). In other words, Poles went to church less often, but prayed increasingly more often. This suggested a de-institutionalisation (privatisation) of faith and was consistent with the process observed in western countries, where religious behaviours were becoming more private and institutional forms in the relations between man and God were losing in significance. However, since 2007 the downward trend in institutional religious behaviours was joined by a decline in the frequency of prayer in difficult situations in life, and the decline was ever deeper in subsequent waves in 2009 and 2011 or insignificantly only in 2013. This may mean that after a period when faith was becoming more private, the process of Polish society becoming atheistic has begun.



Data source: 1992-1997 - Czapiński, 1998, *Social Diagnosis* 2000-2013.

Figure 5.10.12. Percentage of adults who participate in services and other religious ceremonies at least 4 times a month and pray in difficult circumstances between 1992 and 2013

The groups of people that are the most religious in terms of institutional forms are women, the elderly (aged 60 and above), residents of rural areas (including farmers), retirees and pensioners, and those with primary education, while the lowest behavioural indicators of religious activity concern men, people up to 44 years of age, residents of the largest cities, those with the highest education and highest income, unemployed persons, private sector employees and private entrepreneurs (Table 5.10.5).

In regional terms, the most "religious" are the Podkarpackie, Małopolskie, Opolskie and Lubelskie Voivodeships, which are dominated, with the exception of the Opolskie, by people who have lived there for many generations. The least "religious" are the Zachodniopomorskie, Łódzkie, Warmińsko-Mazurskie and Lubuskie; i.e. the north-western regained territories dominated by an immigrant population. The Podkarpackie Voivodeship varies the most from the national average as hardly 13% of its residents do not go to church at all, and nearly three-thirds participate in services at least 4 times a month. At the other extreme there is the Zachodniopomorskie Voivodeship, where nearly a half (49%) do not go to church at all, and every third only participates in religious ceremonies at least 4 times a month (with double difference in the average frequency of participation in services between these two voivodeships). The largest cities (more than 500,000 residents) are the least religious as 50% do not go to church at all, compared with 20% of residents of rural areas.

In comparison with 2011, increase in the percentage of those who do not participate in religious services at all was among the people of lowest education, residents of medium-sized towns, poorest private sector workers and other passive professionals. In terms of Voivodeships, this was among the residents of the Lubelskie, Warmińsko-Mazurskie and Wielkopolskie. However, in most groups – farmers, other professionally inactive and residents of Wielkopolska and of the Lubuskie voivodeship – the percentage of those who do not participate in religious services slightly decreased.

The average frequency of participation in religious services increased among retirees and among the residents of the Śląski and Opolski regions, the more elderly people and men... In the majority of other groups it did not change or diminished.

The frequency of institutional religious practices, recourse to prayer in difficult situations in life and perceiving God (providence) as one of the three major conditions for a good, successful life (see section 5.8.1) may all be treated as different manifestations of religiousness. Such an assumption is justified by the high correlation coefficients of those indicators (Table 5.10.6.).

Therefore we created a synthetic indicator of religious attitude made up of the sum of standard values of three partial indicators. Table 5.10.7 presents the breakdown of this indicator by Voivodeship and larger town in the panel sample for 2011-2013. According to this indicator, most religious were residents of Podkarpackie, Małopolskie, Lubelskie, Opolskie and Podlaskie and the least were from Łódzkie, Zachodniopomorskie, Świętokrzyskie and Warmińsko-Mazurskie. This ranking did not change much since 2011. In terms of town, most religious were the residents of Rzeszów, Lublin, Toruń and Częstochowa, and the least were in Wałbrzych, Łódź, Gliwice and Włocławek, where the ranking also stayed much the same since 2011.

Table 5.10.5. Percentage of participation of various frequency in services and other religious gatherings and the average frequency of monthly participation in services in various social and demographic cross-sections in 2011 and 2013

Socio-demographic group	Percentage of those who participate in services, per month:								Frequency of participation in services per month	
	0 times		1-3 times		4 times		More than 4 times			
	2013	2011	2013	2011	2013	2011	2013	2011	2013	2011
Total	32.5	32.6	26.0	24.7	29.9	31.9	11.6	10.8	2.63	2.61
Gender										
Men	38.7	38.7	26.4	25.6	26.1	28.3	8.8	7.4	2.21	2.15
Women	26.9	27.1	25.6	24.0	33.3	35.0	14.2	13.9	3.02	3.02
Age										
Under 24	36.3	34.9	28.3	27.8	24.3	26.8	11.1	10.4	2.31	2.43
25-34	41.1	41.6	29.6	28.1	22.2	24.4	7.1	6.0	1.96	1.92
35-44	35.5	33.4	28.1	26.5	26.1	29.9	10.3	10.1	2.33	2.35
45-59	29.3	31.1	26.3	23.8	33.0	33.8	11.4	11.2	2.67	2.66
60-64	26.6	27.2	23.0	21.4	36.7	38.7	13.6	12.8	3.05	2.98
65 and above	24.0	23.1	18.8	18.8	39.0	41.7	18.1	16.4	3.72	3.64
Place of residence										
Towns over 500k residents	50.1	49.4	22.8	21.3	19.1	22.0	8.0	7.2	1.82	1.87
Towns 200k – 500k	43.8	43.9	21.8	20.3	21.3	23.9	13.1	11.9	2.41	2.42
Towns 100 k– 200k	46.0	43.1	19.4	19.8	25.3	28.7	9.3	8.5	2.17	2.18
Towns 20kk – 100k	34.9	35.1	26.2	25.5	27.3	29.0	11.6	10.4	2.56	2.51
Towns up to 20k	33.3	32.5	24.2	24.2	30.1	32.4	12.4	10.9	2.66	2.58
Rural areas	20.3	20.8	29.6	27.8	37.4	39.0	12.7	12.4	3.05	3.04
Voivodeship										
Dolnośląskie	44.1	44.9	22.3	22.2	23.9	25.9	9.7	7.0	2.23	2.02
Kujawsko-pomorskie	35.8	36.3	30.6	25.5	25.7	28.9	8.0	9.2	2.25	2.31
Lubelskie	22.8	20.7	31.4	32.9	33.8	35.6	12.0	10.8	3.06	3.06
Lubuskie	42.8	42.3	26.0	21.5	24.0	28.7	7.2	7.4	2.03	2.11
Łódzkie	40.2	43.6	33.9	29.6	20.4	21.2	5.5	5.6	1.88	1.93
Małopolskie	15.9	16.4	17.6	17.8	47.9	47.5	18.6	18.3	3.71	3.70
Mazowieckie	36.7	37.3	29.4	28.3	26.1	27.4	7.7	7.0	2.22	2.19
Opolskie	27.1	28.4	12.8	15.9	38.5	32.2	21.6	23.5	3.64	3.46
Podkarpackie	13.0	12.6	17.5	15.5	46.6	51.5	22.9	20.4	4.02	3.94
Podlaskie	25.1	28.3	37.1	33.7	28.8	28.6	8.9	9.4	2.54	2.57
Pomorskie	35.2	35.2	21.1	19.6	28.6	30.4	15.1	14.7	2.93	2.95
Śląskie	33.5	33.2	21.8	23.1	29.7	30.9	15.0	12.8	2.82	2.61
Świętokrzyskie	29.1	29.0	36.9	34.6	27.9	30.0	6.1	6.4	2.17	2.40
Warmińsko-mazurskie	37.9	33.4	32.9	32.0	22.6	29.7	6.6	4.9	1.97	2.12
Wielkopolskie	31.9	29.8	28.1	26.4	28.6	33.0	11.4	10.9	2.53	2.61
Zachodniopomorskie	48.8	48.6	23.8	19.1	21.3	26.2	6.1	6.1	1.82	1.89
Educational attainment										
Primary and lower	29.1	27.5	24.9	23.9	34.0	36.3	12.0	12.3	2.90	3.02
Basic vocational/lower secondary	29.2	30.2	27.6	26.6	31.8	32.6	11.4	10.6	2.65	2.59
Secondary	33.9	34.0	25.4	24.1	29.3	31.3	11.5	10.6	2.64	2.56
Higher and post-secondary	37.3	37.6	25.1	23.4	25.6	28.6	12.0	10.4	2.42	2.41
Income per capita										
Lower quartile	31.9	30.6	27.8	28.7	30.2	30.2	10.1	10.5	2.56	2.58
Middle 50%	29.7	29.8	26.2	24.1	31.5	34.3	12.5	11.8	2.80	2.78
Upper quartile	39.6	40.6	23.7	22.3	26.0	27.8	10.7	9.4	2.35	2.28
Social and professional status										
Public sector	32.2	32.9	25.9	24.6	29.1	31.1	12.8	11.4	2.58	2.52
Private sector	40.6	38.5	27.8	27.4	24.0	27.1	7.6	7.0	2.03	2.07
Private entrepreneurs	36.7	41.3	27.8	23.1	26.7	27.9	8.8	7.6	2.28	2.08
Farmers	12.9	13.3	33.6	33.8	43.3	42.7	10.1	10.2	3.09	3.09
Pensioners	29.9	29.6	24.0	21.3	32.3	34.9	13.8	14.1	3.04	3.18
Retirees	23.7	24.4	19.9	19.6	39.2	40.6	17.1	15.3	3.57	3.40
School and university students	32.4	34.9	27.9	26.3	25.8	27.2	13.9	11.6	2.58	2.51
Unemployed	41.3	41.7	30.0	28.7	21.9	23.2	6.8	6.4	1.92	1.95
Other inactive labour	32.5	30.3	25.3	23.3	29.8	34.7	12.3	11.6	2.65	2.65

Table 5.10.6. Correlations between God in hierarchy of values, frequency of church going, percentage of those who pray in difficult circumstances and the synthetic indicator of religiousness in 2011 and 2013 at the individual level

	2	3	4	5	6	7	8
1. Practices 2013	0.672(**)	0.340(**)	0.296(**)	0.329(**)	0.280(**)	0.736(**)	0.553(**)
2. Practices 2011		0.313(**)	0.342(**)	0.297(**)	0.320(**)	0.565(**)	0.737(**)
3. Prayer 2013			0.492(**)	0.404(**)	0.323(**)	0.769(**)	0.499(**)
4. Prayer 2011				0.312(**)	0.386(**)	0.486(**)	0.765(**)
5. God 2013					0.421(**)	0.764(**)	0.458(**)
6. God 2011						0.451(**)	0.756(**)
7. Religiousness 2013							0.665(**)

** The correlation is significant at the level of 0.01 (two-sided test).

Table 5.10.7. Standardised indicator pf religiousness by Voivodeship in 2011 and 2013 panel samples

Group	Religious	
	2013	2011
Total	0.00	0.00
Voivodeship		
Podkarpackie	0.96	0.86
Małopolskie	0.61	0.63
Lubelskie	0.50	0.44
Opolskie	0.39	0.57
Podlaskie	0.23	0.13
Pomorskie	0.09	0.06
Śląskie	0.09	0.03
Wielkopolskie	-0.08	0.03
Kujawsko-Pomorskie	-0.18	-0.06
Dolnośląskie	-0.21	-0.38
Mazowieckie	-0.21	-0.22
Lubuskie	-0.28	-0.22
Warmińsko-Mazurskie	-0.38	-0.29
Świętokrzyskie	-0.48	-0.39
Zachodniopomorskie	-0.50	-0.58
Łódzkie	-0.51	-0.49
Towns		
Rzeszów	0.96	0.52
Lublin	0.78	0.91
Toruń	0.63	0.42
Częstochowa	0.61	0.43
Gdynia	0.40	0.20
Bielsko-Biała	0.33	-0.19
Białystok	0.25	0.35
Radom	0.23	0.52
Kraków	0.14	0.08
Gdańsk	0.05	-0.12
Wrocław	-0.11	-0.05
Bydgoszcz	-0.19	-0.30
Gorzów Wlk.	-0.28	0.13
Jaworzno	-0.31	-0.17
Katowice	-0.51	-0.34
Opole	-0.55	-0.46
Warszawa	-0.58	-0.59
Włocławek	-0.85	-0.66
Gliwice	-0.93	-0.64
Łódź	-1.06	-0.99
Wałbrzych	-1.08	-1.25

In terms of professional group, the most religious are small subsistence farmers, primary school teachers, personal carers and academic teachers. Tradesmen, auxiliary workers in the mining industry, carpenters and artists are the least (table 5.10.8).

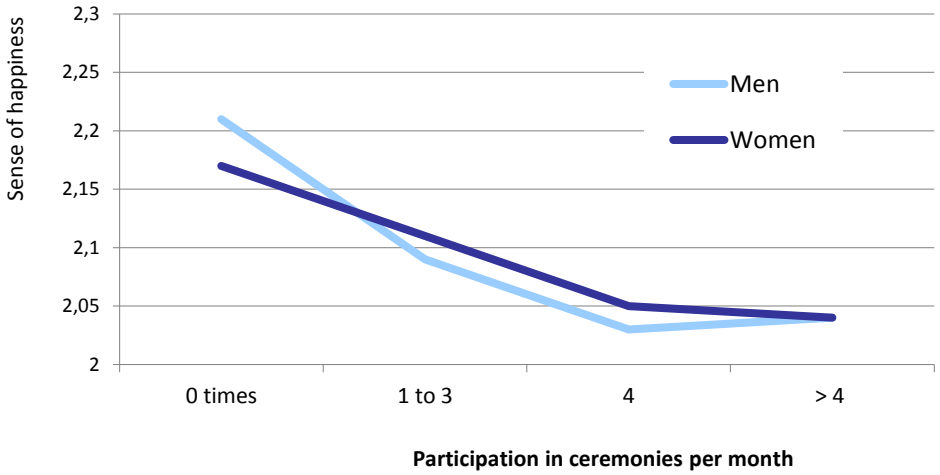
Table 5.10.8. Indicator of religiousness among various professions in the 2011 and 2013 panel samples (from highest to lowest indicator values in 2013

Current profession (2013)	Religion		N
	2013	2011	
Subsistence farmers	0.93	1.04	116
Creatives, artists, writers and journalists	0.64	0.61	256
Farmers of plant crops	0.45	0.22	86
Hairdressers and cosmeticians	0.37	0.46	60
Waiters and bar staff	0.29	0.22	265
Builders and decorators	0.26	0.55	63
Farmers of plant crops and cattle	0.17	-0.05	212
Drivers of personal and delivery vehicles	0.11	-0.01	95
Machinery operators and mechanics	0.09	0.05	53
Tradesmen	0.07	0.03	859
Information technology specialists	-0.01	0.11	184
Other middle personnel	-0.02	-0.03	217
Construction workers	-0.04	-0.05	153
Carpenters and paper/pulp sector workers	-0.09	0.24	159
Other manual labourers	-0.12	-0.22	63
Lawyers	-0.13	0.21	47
Personal care workers	-0.17	0.22	68
Small retailers	-0.29	-0.45	62
Sales and business agents	-0.32	-0.33	227
Other specialists	-0.32	-0.27	415
Otherwise unclassified labour	-0.32	-0.49	167
Smelters and welders	-0.33	-0.31	147
Auxiliary workers in mining and construction	-0.34	-0.56	73
Food-processing workers	-0.38	-0.46	131
Painters and decorators	-0.41	-0.34	663
Textile workers	-0.45	-0.46	368
Marketing specialists	-0.49	-0.61	56
Cooks	-0.49	-0.99	61
Engineers, architects and designers	-0.51	-0.47	96
Electricians and electronics specialists	-0.54	-0.43	146
Managers of various specialisation	-0.56	-0.75	189
Financial specialists	-0.57	-0.79	117
Bus and truck drivers	-0.57	-0.47	281
Office service staff	-0.58	-0.53	133
Civil servants	-0.58	-0.63	150
Technicians	-0.59	-0.48	194
Household cleaners	-0.60	-0.56	74
Other personal service workers	-0.60	-0.53	151
Administration and management specialists	-0.60	-0.71	101
Steel mill workers	-0.66	-0.57	150
Mining machinery operators	-0.67	-0.69	143
Nurses and midwives	-0.67	-0.76	156
Material recording and transport clerks	-0.67	-0.61	57
Middle financial personnel	-0.69	-0.50	141
Assembly workers	-0.70	-0.79	195
Other machinery operators	-0.71	-0.34	130
Blacksmiths and lathe operators	-0.71	-0.28	52
Other health service specialists	-0.80	-0.80	172
Doctors, dentists and vets	-0.81	-0.72	189
Secondary education teachers	-0.81	-0.71	157
Security workers (police and others)	-0.86	-1.07	131
Primary school teachers	-0.88	-1.08	43
Chief executives, senior officials and legislators	-0.93	-0.67	152
Academic teachers	-1.03	-1.01	57
Professional soldiers	-1.18	-1.27	36

American and European studies consistently prove that those who have faith and engage in religious practices report a greater degree of happiness and satisfaction with life than non-believers, and demonstrate a slightly lesser risk of developing depression (Beckman and Houser, 1982; Czapiński, 1992; Myers, 1993). Furthermore, faith also alleviates the effects of traumatic experiences; the so-called buffer effect (Ellison, 1991).

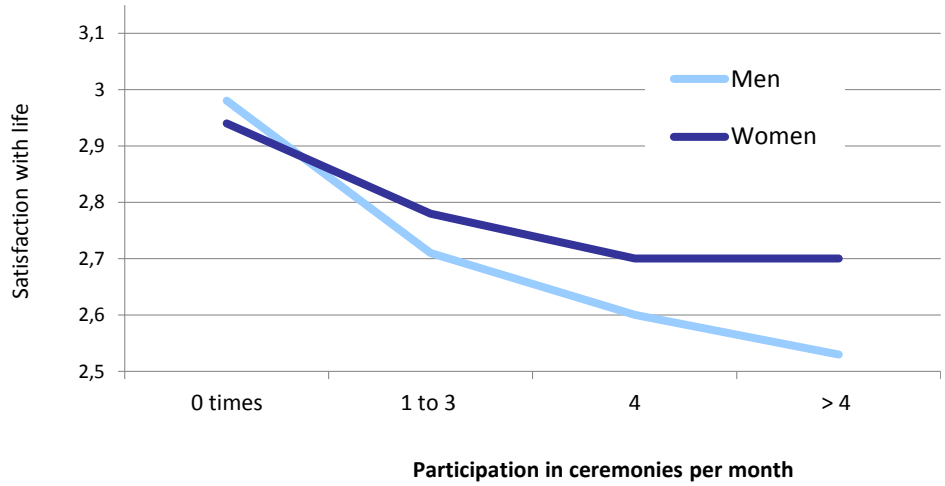
In 2011, religious practice was the sixth predictor of psychological well-being out of 21. In 2011, its predictive value slightly fell and they moved to the seventh position.

Institutional religious practices are connected with a higher level of psychological well-being, regardless of age and gender (Figures 5.10.13-5.10.15). They also alleviate the impact of stress in life on psychological well-being (figure 5.10.16). On the other hand, also prayer as a way of dealing with stress has a positive influence of psychological well-being, though only in women (figure 5.10.17). Similarly, indicating God as one of the cardinal values do not have a beneficial impact on psychological well-being that would be independent of age and gender (figures 5.10.18-5.10.22), In the case of women, the choice of God goes with a lowered feeling of happiness and an assessment of life up to now, while for men it was the reverse, there is a strong positive effect. However, in terms of depression, prayer and indicating God as one of the three most important values have a strong negative effect, independent of gender and age; i.e. factors that differentiate the intensity of the symptoms of depression to the greatest extent (figures 5.10.23-5.10.24).



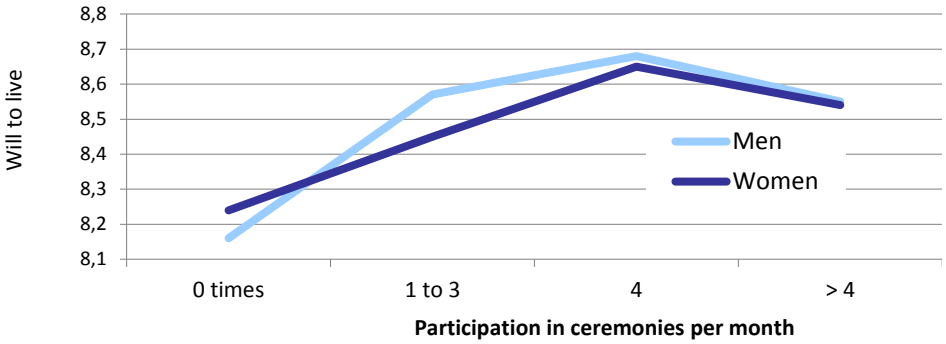
NOTE: inverted scale of the sense of happiness: the lower the scale value, the greater the feeling of happiness. Main effect: participation in ceremonies F(3, 25603)=104.449, p<0.000, η^2= 0.003012, gender, main effect of gender and participation in services interaction not significant F(3, 25603) = 3.696 , p<0.05, η^2= 0.000 with age as the control variable.

Figure 5.10.13. Sense of happiness by gender and frequency of participation in ceremonies



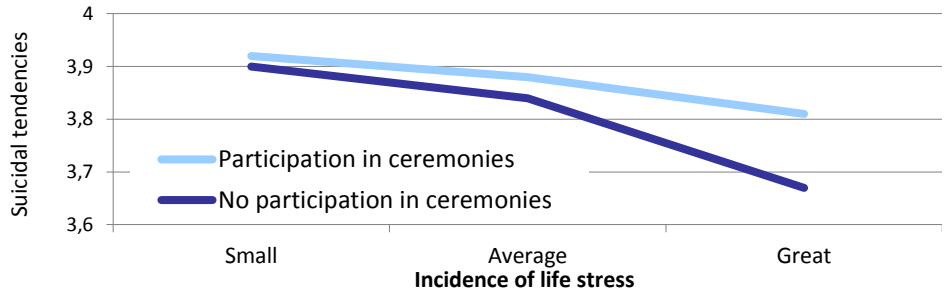
NOTES: inverted scale of life assessment: the lower the scale value, the greater the satisfaction with life: participation in services F(3, 25594)=164.090, p<0.000, η^2= 0.019, gender F(3, 25594)=27.537, p<0.000, η^2=0.001, effect of interaction of gender and participation in ceremonies F(3, 25594)=11.695, p<0.000, η^2= 0.001 with age as the control variable

Figure 5.10.14. Assessment of whole life up to now by gender and frequency of participation in ceremonies



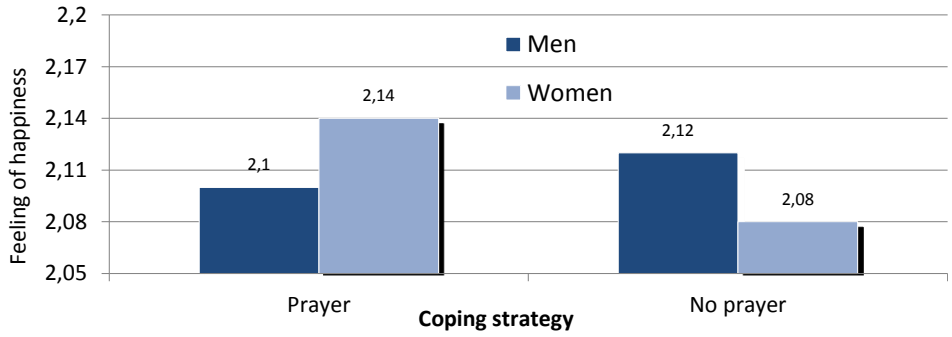
NOTES: main effects: participation in services F(3, 25596)=91.294, p<0.000, η^2= 0.011, gender, effect of gender and participation in services not significant F(3, 25596)=3.801, p<0.01, η^2=0.000 the control variable was age

Figure 5.10.15. Will to live by gender and frequency of participation in ceremonies



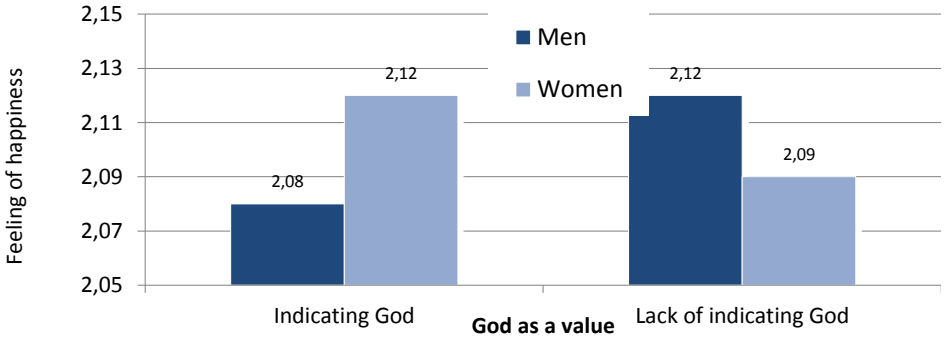
NOTE: inverted scale of suicidal tendencies is inverted: the lower the scale value, the greater the suicidal tendency. Main effect: participation in services F(1, 24808)=111.239, p<0.000, η^2= 0.004, intensity of stress F(2, 24808)=269.736, p<0.000, η^2= 0.021, effect of participation in services and intensity of stress interaction F(2, 24808)=39.710, p<0.000, η^2=0.003 with age and gender as control variables

Figure 5.10.16. Suicidal tendencies by intensity of life stress and participation in ceremonies



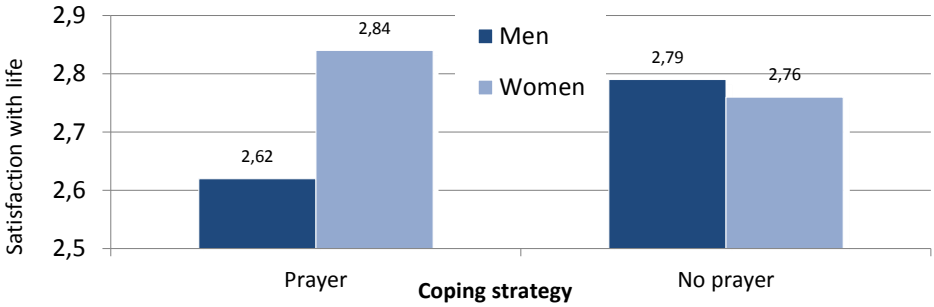
NOTE: inverted scale of feeling of happiness: the lower the scale value, the greater the feeling of happiness. Main effect of prayer F(1, 25652)=6.351, p<0.000, η^2=0.000, gender not significant, effect of prayer and gender interaction F(1, 25652)=21.338, p<0.000, η^2=0.001 with age as the control variable

Figure 5.10.17. Feeling of happiness by gender and prayer in difficult life circumstances



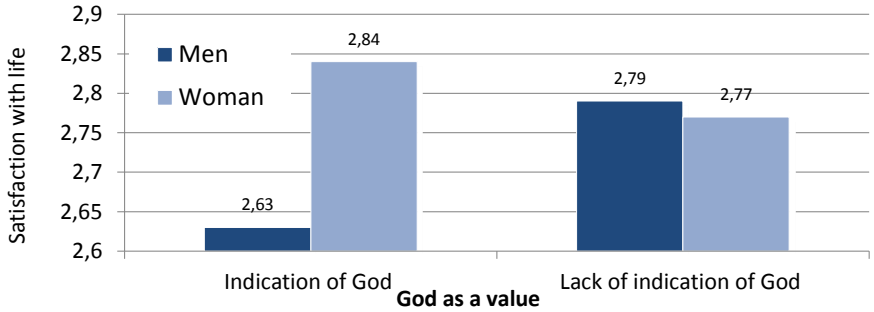
NOTE: inverted scale of feeling of happiness: the lower the scale value, the greater the feeling of happiness. Main effect: God indicator not significant, effect of gender and God interaction F(1, 25723)=10.965, p<0.01, η^2= 0.000

Figure 5.10.18. Feeling of happiness by gender and indicating God as one of the cardinal values



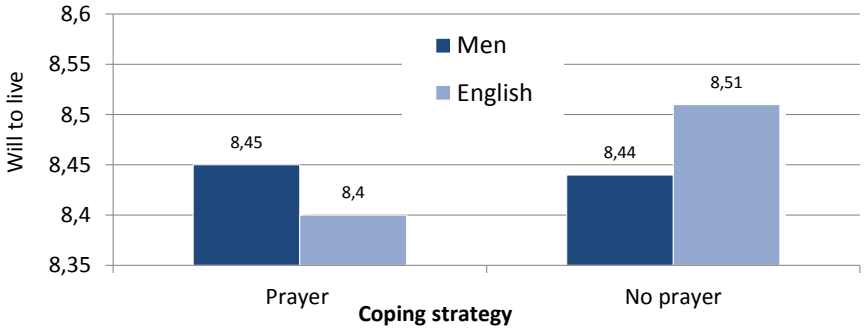
NOTE: inverted scale of life assessment: the lower the value the greater the satisfaction with life. Main effect: prayer F(1, 25642)=3.196, p<0.10, η^2= 0.000, effect of the gender and prayer interaction F(1, 25642)=50.482, p<0.000, η^2= 0.002 with age as the control variable

Figure 5.10.19. Assessment of whole life up to now by gender and prayer in difficult life circumstances



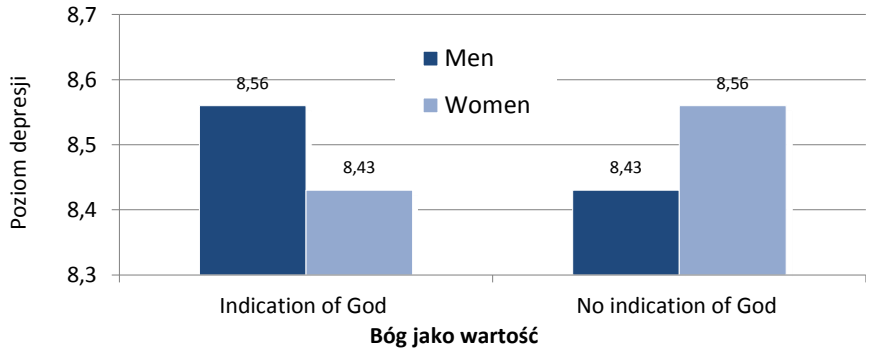
NOTE: : inverted scale of life assessment: the lower the value the greater the satisfaction with life. Main effect: God indications F(1. 25719)=5.295, p<0.05, η^2=0.000, effect of gender and God indication interaction F(1,.25719)=35.649, p<0.000, η^2=0.001 with age as the control variable

Figure 5.10.20. Assessment of whole life up to now by gender and indicating God as one of the cardinal values



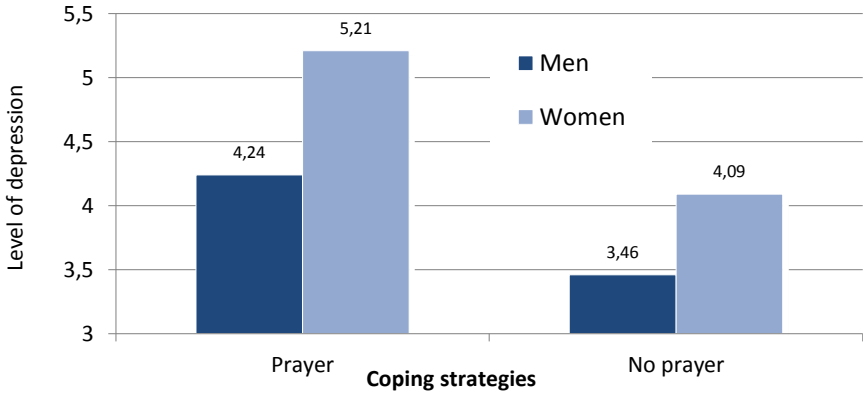
NOTE: main effect: prayer F(1.25638)=3.676, p<0.06, η^2=0.000, effect of gender and prayer interaction F(1, 25638)=4.595, p<0.05, η^2= 0.000 with age as the control variable

Figure 5.10.21. Will to live by gender and prayer in difficult life



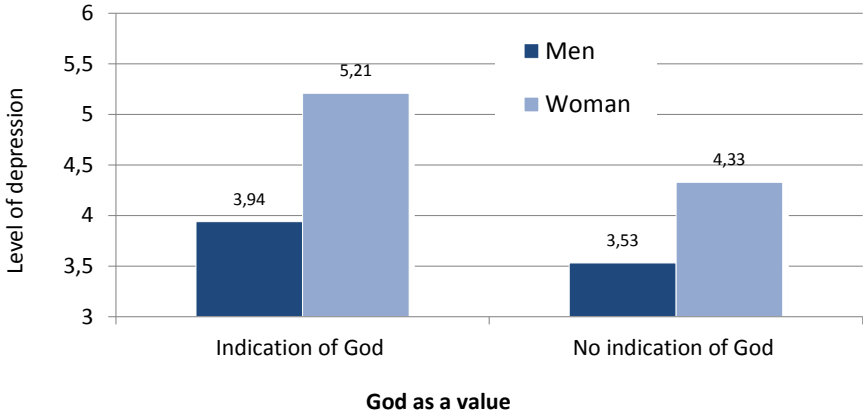
NOTE: main effect: God indicator not significant, effect of gender and God interaction F(1.25707)=6.412, p<0.05, η^2=0.000 with age as the control variable

Figure 5.10.22. Level of depression by gender and indication of God as a cardinal value



NOTE: main effect: prayer F(1,.25297)=348.612, p<0.000, η^2=0.014, gender F(1. 25297)=248.512, p<0.000, η^2=0.010). Effect of gender and prayer interaction F(1.25297)=11.552, p<0.01, η^2=0.000 with age as the control variable

Figure 5.10.23. Symptoms of depression by gender and indication of God as a cardinal value



NOTE: main effect: God indicator F(1. 25368)=104.952, p<0.000, η^2=0.004, gender F(1,.25368)=282.412, p<0.000, η^2=0.011, effect of gender and God indicator interaction F(1.25368)=14.532, p<0.000, η^2=0.001 with age as the control variable

Figure 5.10.24. Symptoms of depression by gender and indication of God as a cardinal value

The lack of a positive main effect of prayer and indication of God as a value for a majority of well-being indicators follows from the fundamentally different role that prayer and faith in general play for women and men; it is positively connected with well-being in men, and is not connected at all or is connected negatively in women. Women who make recourse to prayer in difficult situations in life and treat God as an important condition for a good life, when compared to those women who do not pray and do not include God among the three cardinal values, are less satisfied with life, more unhappy and have less of the desire to live, and the proportion may be statistically significant or not. The reverse is true for men; those who look to God for help and include God among cardinal values, are more satisfied with life, are happier and they have a greater desire to live. This could also be interpreted to mean that misfortunes in life bring women closer to God and men away; i.e. faith has a sort of therapeutic role for women but not for men.

However, psychological depression brings both men and women closer to God, which suggests the institutional functions and private religious practices differ.

The difference between the positive effect of going to church in respect of various well-being indicators and the lack of such a gender-independent effect in the case of prayer and indicating God as a value suggest that going to church plays a fundamentally different role than prayer; it is an activity that enhances the sense of support, not only from God, but also from other people. And social support is of a crucial importance for psychological well-being (see chapter 5.9). It is also presumably not without significance that we asked about praying in difficult situations only, although the similar pattern of dependence in the case of including God as one of the three major values in life proves that we are dealing with a universal dependence between gender and the role of religious faith.

5.10.4. Self-destructive behaviour

5.10.4.1. Smoking

On average, slightly more than every fourth adult Pole smokes less than 15 cigarettes a day. It is comforting that both the percentage of smokers and the number of cigarettes smoked is systematically decreasing (Table 5.10.9). As compared to 1995, the percentage of smokers decreased by as much as 12 percentage points, and in comparison with the beginning of the 1990s by approx. 16 percentage points. The number of cigarettes smoked decreased by over 2 compared with 1996.

Table 5.10.9. Percentage of smokers, former smokers among current non-smokers and average number of cigarettes smoked daily in samples of persons aged 18+ between 1995 and 2013

Variable	1995 N= 3042	1996 N=2350	2000 N=6617	2003 N=9602	2005 N=8788	2007 N=12629	2009 N=26134	2011 N=26378	2013 N=25729
Percentage of smokers	37.9	35.9	32.3	30.7	29.3	29.6	27.8	27.2	25.8
Percentage of former smokers among non-smokers	32.2	Lack of data	34.2	35.6	38.9	36.1	36.1	35.8	36.1
Average number of cigarettes smoked daily	no data	17.27	16.48	16.22	15.88	15.99	15.81	15.43	14.93

Source of data: Czapiński, 1998 for the years 1995-1996; *Social Diagnosis* for the years 2000-2013.

Smokers are mostly men, the middle-aged, people with basic vocational education and poorer individuals (table 5.10.10). Definitely the highest percentage of smokers is found among unemployed persons 45-59 year olds, men and those employed in the private sector. The lowest percentage of smokers is found among school and university students (9.9%), the elderly (65 and above at 12.6%), pensioners (16.4%), those with higher education (16%) and younger persons (16-24 year olds – 18.1%). Between 2000 and 2013, the percentage of smokers declined in all socio-demographic groups. The most spectacular decrease occurred among school and university students (by 43%), entrepreneurs (by 37%), then the youngest (by 36%) public sector employees and those with higher education

In terms of Voivodeships, the greatest proportion of smokers is found in the north-western region, while the smallest in the south-eastern region. The decline in that percentage was the greatest in the Opolskie, Kujawsko-Pomorskie, Lubuskie and Świętokrzyskie Voivodeships.

In terms of professional group, building labourers, lorry drivers, timber and paper industry workers and unqualified labourers smoke most (table 5.10.11)

The degree of nicotine use spread is generally correlated with the extent of addiction (r=0.67 for 56 groups from table 5.10.11). The labourers smoke the most and it is amongst them that there are the most smokers.

There are more „mild" smokers (up to 10 cigarettes a day) among women than men, younger people than middle-aged people (35-44 years); among those aged 45-64 the percentage of addictive smokers (more than 20 cigarettes a day) is very high. In this respect they are only outstripped by farmers (an average of 18 cigarettes, the most among all groups) and entrepreneurs. A relatively large percentage of "mild" smokers is found among those with higher education in comparison with those with primary and basic vocational education and among school and university students as compared especially to farmers.

In order to see which socio-demographic features are significantly related to the chance of being a smoker, with other controlled features, we performed a logistic regression analysis, the results of which are shown in Table 5.10.12. The likelihood of meeting a smoking woman is half as big as that of meeting a smoking man. Regarding the youngest people, the number of smokers is greater in all other age groups in a statistically significant way, with the exception of the eldest people (65 years and above) where smoking is by half less common than in the youngest group. The lower is the class of place of residence, the lower the chances of meeting a smoker, with the lowest in rural areas. Among those with higher education, the chance of meeting a smoker is two-thirds less than among those with the lowest level of educational level all other features being equal (here mostly age is in question). As compared to public sector employees, the chance of meeting a smoker is less among school and university students and greater among private sector employees, other professionally inactive people and especially unemployed persons (by more than 70%). In terms of marital status, divorce and separation determine smoking to

the greatest extent, while marriage to the smallest extent. Obviously, stress in life is conducive to smoking.

Tabela 5.10.10. Average number of cigarettes smoked daily in 2013, percentage of smokers in various socio-demographic groups between 2000 and 2011, and the change in the percentage of smokers between 2000 and 2013 in whole samples

Socio-demographic group	Number of cigarettes	Percentage of smokers							% change 2000-2013
		2013	2011	2009	2007	2005	2003	2000	
Total	14.91	25.4	27.2	28.3	29.6	29.3	30.7	32.4	-21.60
Gender									.
Men	16.36	32.7	33.6	35.5	37.7	38.0	40.5	43.3	-24.48
Women	12.61	18.8	20.5	20.8	22.9	21.7	22.2	22.7	-17.18
Age									.
Under 24	11.92	18.1	19.4	21.6	22.7	21.4	23.3	28.3	-36.04
25-34	13.85	25.7	27.3	28.8	32.0	33.1	35.2	35.6	-27.81
35-44	15.10	29.8	33.0	34.7	39.8	39.5	41.5	46.4	-35.78
45-59	15.91	34.0	36.7	37.7	37.3	37.6	38.5	37.3	-8.85
60-64	15.87	28.3	27.9	27.1	26.8	24.3	21.7	21.7	30.41
65 and above	15.41	12.6	12.1	12.3	12.2	11.4	12.9	12.4	1.61
Place of residence									.
Towns of more than 500k	14.82	24.6	26.4	29.4	31.8	31.7	32.9	31.3	-21.41
Towns of 200k-500k	13.64	27.4	27.4	29.6	31.1	32.0	33.2	37.0	-25.95
Towns of 100k-200k	14.43	26.9	30.8	30.9	32.3	29.2	33.1	35.0	-23.14
Towns of 20k-100k	14.58	27.0	28.5	28.5	29.6	31.0	31.4	31.3	-13.74
Towns of fewer than 20k	14.84	26.8	28.8	30.9	31.6	32.6	32.6	34.7	-22.77
Rural areas	15.60	23.7	24.2	24.8	27.2	25.7	27.9	29.0	-18.28
Voivodeship									.
Dolnośląskie	14.57	30.4	31.1	32.8	30.2	31.2	33.7	33.0	-7.88
Kujawsko-pomorskie	14.22	25.2	29.1	28.4	34.7	37.9	38.8	38.8	-35.05
Lubelskie	14.40	25.0	24.1	24.9	28.7	31.1	30.5	32.4	-22.84
Lubuskie	14.78	26.2	30.7	30.8	32.7	29.2	32.0	38.5	-31.95
Łódzkie	15.18	25.9	25.1	28.3	28.0	29.2	30.0	29.8	-13.09
Małopolskie	14.29	19.7	22.3	22.0	28.1	24.1	24.5	28.2	-30.14
Mazowieckie	15.86	26.1	27.6	28.0	29.6	29.7	29.8	32.2	-18.94
Opolskie	14.46	21.2	24.6	28.4	31.1	33.9	30.1	34.1	-37.83
Podkarpackie	14.12	21.2	20.1	22.1	25.0	22.8	24.4	24.4	-13.11
Podlaskie	14.95	22.0	24.1	27.6	29.2	28.1	31.6	31.3	-29.71
Pomorskie	14.25	26.4	27.4	28.7	30.2	25.6	32.3	32.7	-19.27
Śląskie	14.84	27.9	27.8	28.6	29.5	29.7	32.2	34.8	-19.83
Świętokrzyskie	14.73	21.7	23.6	23.7	21.6	25.6	24.4	31.2	-30.45
Warmińsko-mazurskie	15.59	28.2	29.5	33.6	31.0	30.3	33.3	33.0	-14.55
Wielkopolskie	15.82	24.4	27.3	27.6	29.4	30.5	31.0	32.4	-24.69
Zachodnio-pomorskie	14.63	30.7	32.0	32.9	36.6	31.9	34.8	33.0	-6.97
Educational attainment									.
Primary and lower	15.77	25.1	28.0	27.0	27.5	26.6	25.1	27.0	-7.04
Basic vocational/lower secondary	15.73	32.8	34.5	36.1	36.9	36.3	41.5	44.1	-25.62
Secondary	14.41	25.1	26.5	27.1	28.9	28.1	29.2	30.4	-17.43
Higher and post-secondary	12.80	16.0	17.7	19.1	20.5	21.7	23.1	23.6	-32.20
Household income by equivalent individual									.
Lower quartile	15.10	31.9	32.4	32.3	37.4	39.0	37.0	39.9	-20.05
Above lower quartile	14.96	24.5	27.1	27.1	32.3	27.1	30.9	35.2	-30.40
Below upper quartile	15.00	23.5	24.3	27.1	28.6	26.7	28.2	29.0	-18.97
Upper quartile	14.44	23.3	23.9	25.6	24.5	25.6	27.1	30.3	-23.10
Social and professional status									.
Public sector	13.97	22.8	25.7	27.3	29.1	28.9	31.1	34.4	-33.72
Private sector	14.90	32.6	36.1	36.5	41.9	38.6	39.8	43.7	-25.40
Private entrepreneurs	15.28	26.6	28.3	29.0	33.5	34.0	44.2	42.2	-36.97
Farmers	16.61	26.7	31.4	33.4	30.7	30.2	34.2	33.3	-19.82
Pensioners	16.80	25.1	26.6	26.5	27.4	27.6	28.9	28.8	-12.85
Retirees	15.20	16.4	17.1	17.3	17.2	17.5	16.4	17.1	-4.09
School and university students	9.31	9.9	13.3	13.8	13.9	13.6	15.5	17.4	-43.10
Unemployed	15.12	40.2	43.0	42.6	41.9	46.6	44.2	46.0	-12.61
Other inactive labour	14.78	30.2	29.3	36.0	37.7	36.7	38.6	36.0	-16.11

Table 5.10.11. Percentage of smokers, former smokers and average number of cigarettes smoked daily in a variety of professional groups (in order of percentage of current smokers)

Current profession	% of current smokers	% of former smokers	Average number of cigarettes smoked daily
Auxiliary workers in mining and construction	57.3	45.7	16.98
Steel-mill workers	52.0	44.1	14.03
Construction workers	47.9	39.5	19.61
Machine and mining equipment operators	45.3	41.0	15.09
Otherwise unclassified workers	44.2	51.8	16.44
Builders and decorators	43.7	48.0	16.30
Smelters and welders	43.0	50.0	17.72
Other low-skilled manual labour	42.3	42.1	16.38
Carpenters, paper and pulp workers	41.6	44.1	16.95
Other equipment and machinery operators	40.8	50.0	16.03
Material recording and transport clerks	40.1	46.7	13.65
Craftsmen	40.0	51.5	15.83
Food-processing workers	39.5	46.5	14.71
Painters and similar	38.9	36.0	16.80
Equipment and machinery mechanics	38.2	40.7	16.47
Creatives, artists and journalists	38.0	38.6	16.04
Household help and cleaners	37.0	41.6	14.89
Bus and truck drivers	35.9	51.1	15.99
Waiters barmen and stewards	35.6	23.6	17.39
Hairdressers and cosmeticians	35.4	18.0	14.06
Other personal service workers	35.3	43.2	20.61
Blacksmiths and lathe operators	34.9	55.0	17.81
Personal car and delivery drivers	34.1	51.4	15.96
Technicians	33.9	47.3	14.18
Security service workers (guards, police and similar)	31.0	43.2	16.21
Electricians and electronics technicians	30.6	47.7	16.78
Arible farmers	30.2	45.3	16.09
Assembly workers	29.9	49.5	15.30
Shop assistants	29.3	37.4	13.12
Sales persons in trade and business	29.2	45.3	14.49
Chefs	28.3	43.9	13.63
Textile production workers	27.5	35.9	14.21
Nurses and midwives	27.1	35.9	12.15
Arible and cattle farmers	26.2	28.5	16.77
Railway workers	26.2	61.2	16.07
Civil servants	25.7	32.4	13.91
Personal care workers	25.4	26.8	12.26
Doctors, vets and dentists	25.0	36.8	12.20
Other middle personnel	24.0	29.8	10.62
Managers of various specialisations	23.4	40.7	13.16
Chief executives, senior officials and legislators	23.0	36.5	15.76
Subsistence farmers	21.9	33.3	15.75
Middle financial personnel	21.4	37.9	12.19
Office service staff	19.5	34.2	12.42
IT specialists and similar	19.4	37.4	12.02
Specialists in administration and management	18.0	53.8	11.03
Marketing specialists	17.9	49.0	12.30
Other healthcare specialists	17.6	34.8	11.44
Financial specialists	17.4	39.2	12.10
Teachers other than primary school	16.1	32.9	13.80
Professional soldiers	14.0	46.7	15.88
Engineers, architects, designers and similar	11.8	43.6	11.55
Primary school teachers	11.6	25.8	10.96
Other specialists	10.2	26.5	14.15
Academic teachers	8.4	51.9	12.87
Lawyers	6.3	35.3	8.22

Table 5.10.12. Results of logistic regression analysis of smokers

Predictor	p	Exp(B)
Man	Ref.	
Woman	0.000	0.514
16-24 years of age	Ref.	
25-34	0.026	1.175
35-44	0.000	1.331
45-59	0.000	1.491
60-64	0.017	1.266
65+	0.000	0.536
Towns of more than 500k	Ref.	
Towns of 200k-500k	0.222	1.084
Towns of 100k-200k	0.895	0.991
Towns of 20k-100k	0.424	0.955
Towns of fewer than 20k	0.065	0.888
Rural areas	0.000	0.687
Primary and lower education	Ref.	
Basic vocational/lower secondary	0.379	0.956
Secondary	0.000	0.629
Higher and post-secondary	0.000	0.323
Public sector	Ref.	
Private sector	0.000	1.284
Private entrepreneurs	0.629	0.961
Farmers	0.125	0.882
Pensioners	0.315	0.923
Retirees	0.666	0.965
School and university students	0.000	0.314
Unemployed	0.000	1.727
Other inactive labour	0.002	1.244
Unmarried	Ref.	
Married	0.000	0.747
Widowed	0.022	0.833
Divorced	0.000	1.654
Life stress - low	Ref.	
Average	0.000	1.300
High	0.000	1.584
Total percentage of explained variance Cox & Snell R^2 x 100	10.5	
Total percentage of explained variance Nagelkerke R^2 x 100	15.4	

* Ref. stands for the reference group

5.8.4.2. Alcohol abuse

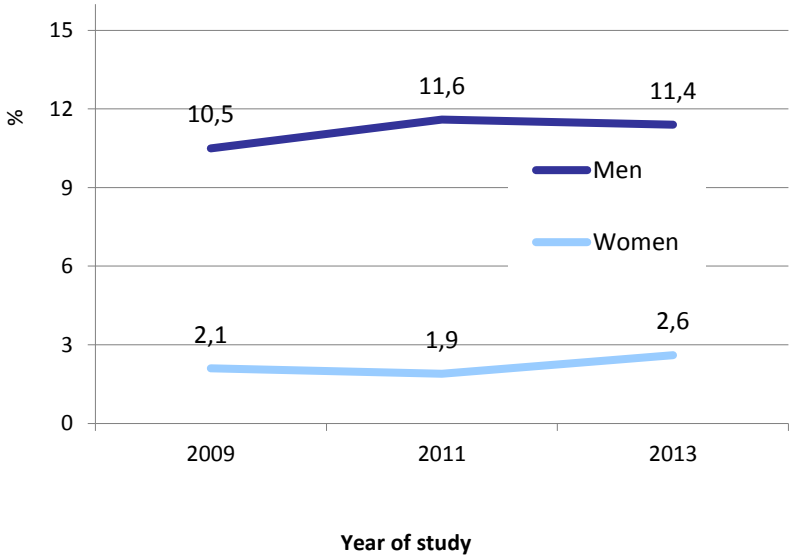
Two questions in the individual questionnaire concerned alcohol. One was related to the usual reaction to problems or difficult situations in life and included the statement "*I drink alcohol"* as one of the options, the other one made a straightforward reference to alcohol abuse "*In the last year I drank too much alcohol*". The percentage of persons who react to problems by drinking alcohol is lower (3.9%, against 3.4% two years earlier) than the percentage of persons who admit to abusing alcohol (6.7%, against 6.5% two years earlier) (Table 5.10.13). The percentage of those who abuse alcohol is similar to 1991, and much greater than 13 years ago (5.3%).

Table 5.10.13. Percentage declaring alcohol abuse and drinking in difficult life circumstance between 1991 and 2011 in the adult population of Poles

Variables	1991 N=3989	1993 N=2238	1995 N=3045	1997 N=2350	2000 N=6615	2003 N=9420	2005 N=8543	2007 N=12365	2009 N=23076	2011 N=23076	2013 N=25729
Alcohol abuse	6.6	6.4	6.3	5.4	5.3	4.4	6.0	5.8	6.5	6.8	6.7
Alcohol as a solution to problems in life	ND	ND	4.3	3.9	3.9	3.4	3.9	3.5	4.4	3.4	3.9

Source of data: Czapiński, 1998 for the years 1991-1997; *Social Diagnosis* for the years 2000-2013.

In the 2009-2013 panel sample, the percentage of men who abuse alcohol increased from 10.5% to 11.4%, while among women it grew from 2.1% to 2.6% (figure 5.10.25). This increased the difference between women and men from 8.4 to 8.8 percentage points.



NOTE: main effects: of study year F(1. 11478)=25.647, p<0.000, η^2=0.002, of gender F(1.111478)=703.992, p<0.000, η^2=0.058, effect of the interaction of study year and gender F(1.11478)=7.995, p<0.000, η^2=0.001, age was the control variable F(1.11478)=66.040, p<0,000, η^2=0,006.

Figure 5.10.25. Percentage of men and women who abused alcohol in five panel sample waves (persons who participated in the survey in all five waves)

Men admit that in the past year they drank too much alcohol 4 times more often than women (nearly six times more often six years ago). The inhabitants of large towns drink too much alcohol more often than the residents of small towns and rural areas, middle-aged persons more often than older and younger persons, the rich and poor more often than the middle well-off; private entrepreneurs slightly more often than employees hired by them (earlier that difference had been much greater), unemployed persons more than twice as often as public sector employees, school and university students only in relation to retirees and pensioners (table 5.10.14).

The distribution of those who drink alcohol in difficult situations in life in terms of socio-demographic groups is similar to the distribution of the percentage of those who abuse alcohol (table 5.10.14).

In terms of professional group, the most effected by the problem of alcoholism are builders (17% admitted to abusing alcohol in the last year), miners, salespeople, workers in the food processing industry, other workers and machinery operators (table 5.10.15), which are typically male professions. The smallest share of alcohol abuse is among nurses and other health service professionals (though with the exception of doctors, who to a marked extent more often than average admit to abusing alcohol (11%).

Table 5.10.14. Percentage aged 16+ who declared they drank too much in the past year and who drink in difficult life situations in socio-demographic cross-sections

Group	Drink too much				Drink in difficult life situations			
	2013	2011	2009	2007	2013	2011	2009	2007
Total	6.62	6.84	6.45	5.78	3.84	3.42	4.38	3.45
Gender								
Men	10.98	11.80	10.91	10.37	6.71	5.88	7.55	6.34
Women	2.64	2.35	2.38	1.80	1.22	1.19	1.49	1.06
Age								
Under 24	6.50	7.11	7.25	5.38	2.75	2.14	3.45	2.32
25-34	9.00	7.56	6.61	5.62	4.04	3.20	4.33	2.77
35-44	8.05	9.59	8.39	7.97	5.04	4.28	4.87	5.30
45-59	7.35	7.82	7.78	6.93	5.11	4.91	6.29	4.65
60-64	5.38	5.61	5.11	4.86	3.76	3.51	3.63	3.96
65 and above	2.06	1.97	1.80	1.96	1.43	1.60	1.95	1.51
Place of residence								
Towns of more than 500k	7.62	7.67	8.41	7.07	3.48	2.63	4.92	4.00
Towns of 200k-500k	8.97	8.10	8.45	6.91	2.70	3.44	4.80	3.46
Towns of 100k-200k	8.28	8.14	7.67	5.58	6.06	3.85	4.06	2.79
Towns of 20k-100k	6.29	6.85	5.39	4.69	3.87	3.28	3.81	3.07
Towns of fewer than 20k	5.86	6.75	5.78	5.77	3.91	3.36	3.97	3.74
Rural areas	5.82	6.00	5.75	5.39	3.74	3.67	4.59	3.53
Voivodeship								
Dolnośląskie	7.66	8.31	5.92	4.94	5.19	3.09	3.51	3.18
Kujawsko-pomorskie	6.11	5.16	6.54	5.43	4.16	2.84	5.72	3.31
Lubelskie	6.34	7.28	6.02	6.06	3.56	3.92	4.86	3.57
Lubuskie	6.74	8.57	9.18	5.89	2.73	4.06	4.38	4.23
Łódzkie	5.40	4.50	5.68	5.61	2.74	2.72	3.69	2.32
Małopolskie	4.45	6.23	4.90	5.38	2.73	2.78	3.17	3.24
Mazowieckie	6.99	6.76	7.82	6.01	4.01	3.64	5.63	4.19
Opolskie	6.21	6.13	6.36	4.24	2.31	3.72	4.99	1.88
Podkarpackie	5.67	5.39	4.64	6.07	2.15	2.36	3.14	3.50
Podlaskie	6.49	7.63	7.58	7.81	3.90	2.72	4.49	4.44
Pomorskie	9.19	8.14	6.00	5.96	2.38	3.67	3.57	3.34
Śląskie	7.25	6.95	7.02	5.16	4.68	3.67	4.33	3.26
Świętokrzyskie	5.11	7.88	5.24	3.88	4.10	5.45	4.94	3.47
Warmińsko-mazurskie	6.75	7.73	5.56	9.23	7.35	5.70	6.78	6.82
Wielkopolskie	6.78	7.29	6.36	4.66	4.60	2.67	3.18	1.89
Zachodnio-pomorskie	7.82	6.85	8.28	6.48	3.43	3.78	6.50	4.22
Level of education								
Primary and lower	5.80	6.36	5.14	4.79	5.02	4.03	4.88	4.00
Basic vocational/lower secondary	7.67	8.33	7.61	6.97	4.81	4.33	5.42	3.46
Secondary	6.06	6.31	6.18	5.18	3.22	2.83	3.79	2.79
Higher and post-secondary	6.34	5.74	6.00	5.18	2.42	2.49	3.15	3.07
Per capita income								
Lower quartile	7.62	8.08	6.81	6.96	5.87	4.64	5.99	4.75
Middle 50%.	5.82	6.32	5.78	5.20	3.42	3.25	3.93	3.29
Upper quartile	7.50	6.96	7.66	5.59	2.70	2.64	4.21	2.80
Social and professional status								
Public sector	6.25	5.18	5.48	5.00	3.11	2.59	3.59	3.02
Private sector	9.15	9.79	8.36	8.83	4.40	4.26	5.08	5.23
Private entrepreneurs	7.73	11.33	9.69	9.79	4.89	5.10	5.42	5.23
Farmers	6.27	7.28	8.89	6.34	4.59	4.74	6.87	3.97
Pensioners	4.54	5.05	5.23	5.09	4.03	2.75	4.45	3.02
Retirees	2.55	2.60	2.67	2.24	1.71	1.99	2.28	1.80
School and university students	5.09	6.27	6.35	3.78	1.46	2.00	3.04	1.50
Unemployed	11.41	12.19	11.24	8.54	7.77	6.95	7.87	5.35
Other inactive labour	7.37	6.52	6.81	4.45	5.94	3.93	5.86	3.37

Table 5.10.15. Percentage of alcohol abuse and dinking in difficult life situations in various professional groups (in order of percentage of alcohol abuse)

Current profession	% alcohol abuse	% drinkers	N
Construction workers	16.9	11.0	338
Otherwise unclassified workers	16.9	6.8	148
Auxiliary workers in mining and construction	16.4	18.3	110
Agents in trade and business	15.6	4.8	250
Food-processing workers	14.6	7.0	185
Other equipment and machine operators	14.4	7.4	257
Tradesmen	14.3	1.8	56
Specialists in administration and management	13.6	4.9	206
Painters and similar	13.3	6.7	90
Carpenters, paper and pulp workers	11.9	6.9	218
Doctors, vets and dentists	11.1	10.2	108
Construction workers and decorators	10.9	9.2	285
Smelters and welders	10.8	3.8	186
Blacksmiths and lathe operators	10.2	5.6	215
IT specialists and similar	10.1	1.3	227
Creatives, artists, writers and journalists	9.9	9.7	71
Security workers (guards, police and similar)	9.8	2.9	244
Steel-mill workers	9.5	7.9	74
Civil servants	9.2	4.9	206
Other unskilled labour	9.0	5.9	423
Lawyers	8.9	0.0	79
Material recording and transport clerks	8.9	3.3	246
Technicians	8.8	3.2	375
Equipment and machinery mechanics	8.8	7.6	239
Mining equipment and machine operators	8.6	10.1	139
Electricians and electronics specialists	8.5	6.4	234
Hairdressers and cosmeticians	8.4	2.4	83
Personal care workers	8.4	0.8	119
Teachers other than in primary school	8.2	1.9	268
Marketing specialists	8.2	1.5	196
Drivers of various specialisations	8.0	3.2	574
Drivers of personal and delivery vehicles	7.9	6.1	229
Bus and truck drivers	7.8	7.4	282
Financial specialists	7.6	0.0	223
Chief executives, senior officials and legislators	6.9	1.1	87
Other specialists	6.8	0.9	118
Waiters, barmen and stewards	6.7	4.4	89
Engineers, architects, designers and similar	6.5	2.0	356
Assembly workers	6.5	3.9	154
Arible farmers	6.3	4.0	304
Other middle personnel	6.2	1.4	146
Arible and cattle farmers	6.0	5.2	1103
Subsistance farmers	5.9	3.6	169
Primary school teachers	5.8	2.5	361
Shop assistants	5.6	2.3	1063
Academic teachers	5.3	5.3	95
Household help and cleaners	5.3	4.5	359
Office service staff	4.6	1.1	657
Railway workers	4.6	0.0	65
Other personal service workers	4.4	4.4	68
Middle financial personnel	4.3	2.7	300
Chefs	4.0	1.0	99
Nurses and midwives	2.5	1.0	199
Other health service specialists	2.3	1.4	222
Professional soldiers	1.8	0.0	57
Textile production workers	1.7	1.7	229

Table 5.10.16. Results of regressive logistical analysis for alcohol abuse

Predictor	p	Exp(ß)
Man	Ref.	
Woman	0.000	0.219
16-24 years of age	Ref.	
25-34	0.284	1.130
35-44	0.987	0.998
45-59	0.486	0.916
60-64	0.337	0.852
65+	0.001	.486
Towns of more than 500k	Ref.	
Towns of 200k-500k	0.115	1.179
Towns of 100k-200k	0.135	1.184
Towns of 20k-100k	0.031	0.812
Towns of fewer than 20k	0.017	0.770
Rural areas	0.001	0.732
Primary and lower education	Ref.	
Basic vocational/lower secondary	0.001	0.742
Secondary	0.000	0.617
Higher and post-secondary	0.000	0.659
Public sector	Ref.	
Private sector	0.038	1.204
Private entrepreneurs	0.780	0.963
Farmers	0.607	0.927
Pensioners	0.541	0.913
Retirees	0.569	0.911
School and university students	0.948	1.011
Unemployed	0.000	1.829
Other inactive labour	0.001	1.519
Unmarried	Ref.	
Married	0.000	0.649
Widowed	0.288	0.836
Divorced	0.034	1.303
Life stress - low	Ref.	
Average	0.000	1.756
High	0.000	3.629
Total percentage of explained variance Cox & Snell R^2 x 100	5.6	
Total percentage of explained variance Nagelkerke R^2 x 100	14.4	

* Ref. stands for the reference group

5.10.4.3. Drug use

The percentage of persons who admit to using drugs increased until 2005. In this year's study it remained at the level of 2005 (table 5.10.17).

Table 5.10.17. Percentage of adult Poles who declared drug use between 1991 and 2013

1992 N=3396	1993 N=2307	1994 N=2298	1995 N=3024	1996 N=2329	1997 N=2100	2000 N=6608	2003 N=9620	2005 N=8609	2007 N=12323	2009 N=23573	2011 N=25768	2013 N=25708
0.4	0.3	0.3	0.7	0.9	0.9	1.0	0.9	1.3	1.0	1.2	1.3	1.3

Source of data: Czapiński, 1998 for 1991-1997; *Social Diagnosis* for 2000-2013.

At present, persons who are most at risk of drug addiction include men, school and university students (younger persons in general), inhabitants of large towns, unemployed persons and other professionally inactive persons, persons with secondary education and in terms of territorial differences the residents of the Zachodniopomorskie and the Mazowieckie Voivodeships (Table 5.10.18).

Table 5.10.18. Percentage of declared drug use in the past year for whole samples of 16+ years of age

Group	2013	2011	2009	2007	2005	2003	2000
Total	1.31	1.27	1.16	1.03	1.31	0.96	0.96
Gender							
Men	2.12	2.11	1.78	1.67	1.91	1.51	1.59
Women	0.58	0.51	0.58	0.51	0.79	0.48	0.42
Age							
up to 24 years	4.13	4.61	3.75	3.67	3.83	3.91	3.75
25-34	2.85	1.91	2.14	1.54	2.45	1.31	1.77
35-44	0.61	0.89	0.47	0.53	0.48	0.05	0.30
45-59	0.24	0.15	0.14	0.05	0.27	0.08	0.30
Place of residence							
Towns of more than 500k	2.65	2.17	2.60	1.54	2.64	2.03	1.66
Towns of 200k-500k	2.09	2.29	0.93	1.91	1.80	1.91	1.97
Towns of 100k-200k	1.78	1.46	1.74	1.28	1.91	0.60	1.03
Towns of 20k-100k	1.18	1.40	1.09	0.65	1.44	0.68	1.00
Towns of fewer than 20k	1.41	1.19	1.18	1.54	0.99	0.80	0.73
Rural areas	0.67	0.64	0.66	1.91	0.72	0.63	0.51
Voivodeship							
Dolnośląskie	1.94	1.48	1.21	0.92	1.04	1.57	1.05
Kujawsko-pomorskie	1.22	1.74	1.13	1.63	1.25	1.64	0.68
Lubelskie	0.61	1.27	0.53	1.58	0.47	1.08	1.38
Lubuskie	1.87	1.86	1.26	1.17	1.15	1.24	1.19
Łódzkie	1.51	0.84	1.13	0.85	1.23	0.68	1.35
Małopolskie	0.61	0.48	0.81	0.87	1.33	0.43	1.22
Mazowieckie	2.07	1.03	2.07	0.84	2.20	1.01	0.63
Opolskie	0.58	0.96	1.20	1.11	0.96	0.66	0.72
Podkarpackie	0.69	1.07	0.97	0.98	1.44	0.89	0.44
Podlaskie	1.46	1.02	0.44	1.18	0.97	0.61	0.19
Pomorskie	1.92	0.90	0.81	1.77	2.17	1.49	2.53
Śląskie	1.26	1.31	1.06	0.91	1.23	1.15	0.55
Świętokrzyskie	0.34	0.81	0.44	1.00	1.07	0.80	0.31
Warmińsko-mazurskie	0.41	1.50	0.80	0.55	1.04	0.58	1.33
Wielkopolskie	1.13	1.52	1.34	0.83	0.70	0.41	0.00
Zachodnio-pomorskie	2.06	3.57	1.59	1.08	1.53	0.96	2.19
Educational attainment							
Primary and lower	0.95	0.53	0.55	0.34	0.74	1.02	0.69
Basic vocational/lower secondary	1.19	1.61	1.15	1.47	1.51	0.67	1.16
Secondary	1.71	1.61	1.43	1.16	1.55	1.41	0.98
Higher and post-secondary	1.14	0.85	1.26	0.70	1.17	0.55	1.04
Per capita income							
Lower quartile	1.30	1.02	0.88	1.39	0.96	0.53	0.54
Middle 50%.	1.14	1.31	1.16	0.98	1.25	1.15	1.14
Upper quartile	1.77	1.38	1.47	0.86	1.95	1.27	1.29
Social and professional status							
Public sector	0.70	0.72	0.19	0.32	0.43	0.38	0.66
Private sector	1.76	1.20	1.39	1.58	1.47	1.23	1.29
Private entrepreneurs	1.26	1.18	2.07	1.44	1.53	0.34	0.65
Farmers	0.30	0.22	0.14	0.14	0.17	0.00	0.22
Pensioners	0.81	0.17	0.59	0.59	0.87	0.44	0.44
Retirees	0.13	0.07	0.03	0.00	0.10	0.23	0.00
School and university students	3.50	4.26	3.38	3.37	4.31	4.06	5.76
Unemployed	2.18	1.87	2.65	1.05	2.03	1.42	1.09
Other inactive labour	1.78	1.95	1.46	1.06	1.28	0.55	1.20

Results of logistic regression (table 5.10.19) show that women use drugs over three times less often than men, older people (aged over 59 years old) more than 20 times less often than the youngest (under 24), residents of small towns and rural areas two to five times less often than the residents of the largest agglomerations (more than 500,000 inhabitants), other professionally inactive people by 70% as often as public sector employees, unmarried persons nearly four times as often as married people and those with higher education nearly over two times less often than those with primary education.

The high risk of drug addiction is differentiated by the level of stress in life, but similarly as in the case of alcohol, it is difficult to say what the direction of the relationship is; drugs may intensify problems in life, but also stress may be conducive to take drugs.

Table 5.10.19. Results of logistic regression for drug use

Predictor	p	Exp(ß)
Man	Ref.	
Woman	0.000	0,309
16-24 years of age	Ref.	
25-34	0.086	0,755
35-44	0.000	0,220
45-59	0.000	0,089
60-64	0.000	0,036
65+	0.000	0,044
Towns of more than 500k	Ref.	
Towns of 200k-500k	0.158	0,764
Towns of 100k-200k	0.133	0,726
Towns of 20k-100k	0.000	0,421
Towns of fewer than 20k	0.001	0,500
Rural areas	0.000	0,205
Primary and lower education	Ref.	
Basic vocational/lower secondary	0.003	0,525
Secondary	0.074	0,688
Higher and post-secondary	0.000	0,397
Public sector	Ref.	
Private sector	0.715	1,089
Private entrepreneurs	0.533	1,242
Farmers	0.323	0,563
Pensioners	0.507	1,278
Retirees	0.924	0,936
School and university students	0.893	1,038
Unemployed	0.123	1,517
Other inactive labour	0.066	1,702
Unmarried	Ref.	
Married	0.000	0,273
Widowed	0.252	1,717
Divorced	0.410	0,724
Life stress - low	Ref.	
Average	0.000	1,839
High	0.000	2,304
Total percentage of explained variance Cox & Snell R^2 x 100	3.0	
Total percentage of explained variance Nagelkerke R^2 x 100	22.6	

* Ref. stands for the reference group

5.10.5. Criminals and victims of crime

As shown in Table 5.10.20, the number of victims of theft and burglary increased between 1993 and 2003, yet no change was observed as regards the percentage of victims of assaults and battery. In that period, there was also an increase in the percentage of persons in survey samples who had been accused in both criminal and civil law court cases. After 2005, the percentage of victims of theft decreased significantly (to half that of 2005 in the last years), as did the percentage share of home burglaries and the percentage of victims of assaults and battery fell up to 2011, only to once more start rising, though is still smaller than at the turn of the century. This explains a high fall in the sense of safety over that period (the percentage of persons who were satisfied with the level of safety in their place of residence fell in 2011 by 1.3 p.p.).

It is interesting that a majority of such experiences are stable over time for individual persons. Someone who fell victim to theft or assault and battery in one year, was significantly more at risk of being a victim to those crimes after two, four, and in some cases even six years. What is not surprising is the stability of the criminals' experiences; being accused and detained by the police increases the risk of being accused or detained by the police many years later to a statistically significant extent (all correlations for perpetrators and victims of crimes between 2007 and 2013 are statistically significant). Thus, one may stipulate not only that there are predispositions to breaking the law, but also that there are stable – in respect of certain categories of experiences – features of the victim, which confirms the theses of victimologists; some people are more exposed to the repeated experience of falling victim to aggression than others.

Table 5.10.20. Percentage declaring crime-related experiences aged 18+ between 1993-2013

Experience	1993	1995	2000	2003	2005	2007	2009	2011	2013
Victim of theft	5.1	5.4	6.8	5.6	5.7	4.3	3.3	2.8	2.8
Victim of assault or battery	1.6	1.7	1.5	1.3	1.2	1.1	0.9	0.7	1.0
Victim of burglary	1.2	1.2	2.0	4.1*	3.5	2.1	1.7	1.5	1.6
Charged in a criminal case	0.5	0.4	1.0	1.1	1.2	1.5	1.2	1.1	1.1
Sued in a civil case	0.4	0.6	0.8	0.9	0.9	0.9	0.7	0.6	0.6
Detained by the police	ND	ND	ND	2.2	2.5	3.2	3.4	3.3	3.1
Close person arrested or in conflict with the law	ND	ND	2.9	2.8	3.6	3.8	3.0	2.7	2.5
Caused a traffic collision or road accident	ND	ND	ND	ND	ND	1.6	1.7	1.7	1.5

* Since 2003, the question concerned home or car burglary.
Source of data: Czapiński, 1998 for 1993-1995; *Social Diagnosis* for 2000-2013.

It is worth noting that among those accused of criminal acts or detained by the police, the percentage of victims of theft, assault and battery is much higher than in the general population (Table 5.10.21). This suggests that many crimes are committed within criminal milieus. Those who break the law are themselves more at risk of falling prey to violence on the part of other criminals than law-abiding citizens (Table 5.10.21).

Table 5.10.21. Intercorrelations of crime-related experiences in 2013.

Experience	2	3	4	5	6	7	8
1. I was robbed	0.195	0.379	0.124	0.112	0.098	0.090	0.072
2. I was mugged and beaten		0.136	0.163	0.136	0.170	0.096	0.098
3. My home or car was burled			0.087	0.087	0.063	0.079	0.043
4. I was charged with a criminal offence				0.265	0.394	0.080	0.082
5. I was detained by the police					0.203	0.128	0.102
6. I was sued in a civil case						0.091	0.063
7. I caused a traffic collision or road accident							0.057
8. A close person was arrested or in conflict with the law							

NOTE: all correlation coefficients are statistically significant at p=0.000.

Regardless of the nature of the experience (the role of the victim or of the criminal), experiences related to violating the law are correlated with the drinking of alcohol and drug taking (table 5.10.22). Those who abuse alcohol or drink it in difficult situations in life more often become perpetrators, but also fall victim to crime and have close relations with those who break the law.

Table 5.10.22. Correlations of crime-related experiences and alcohol

Experience	Alcohol abuse	Drinking in difficult life situations	Drug use
I was robbed	0.074*	0.043*	0.089*
I was mugged and beaten	0.112*	0.108*	0.126*
My home or car was burled	0.055*	0.035*	0.035*
I was charged with a criminal offence	0.114*	0.082*	0.170*
I was detained by the police	0.157*	0.104*	0.179*
I was sued in a civil case	0.104*	0.092*	0.138*
I caused a traffic collision or road accident	0.077*	0.033*	0.061*
A close person was arrested or in conflict with the law	0.077*	0.051*	0.088*

* statistically significant correlations at p=0.000.

In 2007, we asked for the first time about collisions or road traffic accidents. In general, the percentage of those who caused road incidents is directly proportional to the level of motorization in individual groups (Table 5.10.24); it is the highest among young people and the middle-aged (up to 44), residents of the large towns, people with higher education, those relatively well-off and those who work (excluding farmers) especially among private entrepreneurs and private sector workers.

Both the percentage of victims and that of perpetrators are considerably higher among men than women (table 5.10.23 and 5.10.24); it is also much higher in younger age groups (with the exception of burglary victims) compared to elderly people. On average, the frequency of experiences related to criminal offences is in many categories in the largest towns than in rural areas and small towns.

Table 5.10.23. Percentage declaring crime-related experiences in whole samples

Group	Victim of theft			Victim of assault or battery			Victim of home/car burglary			Charged in a criminal case		
	2013	2011	2009	2013	2011	2009	2013	2011	2009	2013	2011	2009
Total	2.8	2.8	3.3	0.9	0.8	0.9	1.6	1.1	1.7	1.1	1.1	1.2
Gender												
Men	3.2	3.2	3.5	1.5	1.3	1.4	2.0	1.9	2.1	1.9	1.8	2.0
Women	2.5	2.5	3.0	0.4	0.3	0.0	1.1	1.1	1.3	0.4	0.6	0.6
Age												
Under 24	4.1	3.1	4.5	2.1	1.0	1.7	1.1	1.4	1.1	2.3	1.6	2.5
25-34	2.8	2.1	3.3	1.5	0.6	0.8	1.6	1.6	2.1	1.6	1.3	1.2
35-44	2.8	2.7	2.6	0.6	0.7	0.6	1.8	1.5	2.1	0.8	1.1	1.0
45-59	2.3	3.0	3.0	0.6	0.8	0.8	2.0	2.0	1.7	1.0	0.6	1.2
60-64	2.6	2.5	2.8	0.6	0.1	0.8	1.3	0.8	1.2	0.6	0.4	0.3
65 and above	2.6	3.3	3.3	0.3	0.4	0.7	1.0	0.9	1.4	0.4	0.4	0.6
Place of residence									.			
Towns of more than 500k	4.7	4.3	4.9	0.9	1.0	1.1	3.0	2.4	2.3	1.3	0.9	1.2
Towns of 200k-500k	3.6	4.0	6.0	1.5	1.0	1.2	2.9	2.5	3.1	1.1	1.1	1.6
Towns of 100k-200k	5.2	4.1	3.8	1.2	0.8	1.4	1.6	1.4	1.8	1.2	0.9	1.6
Towns of 20k-100k	2.5	2.8	2.6	1.0	0.7	0.8	1.6	2.0	1.5	1.4	1.2	1.1
Towns of fewer than 20k	2.3	2.4	3.0	0.9	1.1	0.8	1.3	1.0	1.7	0.9	1.6	0.9
Rural areas	1.9	1.9	2.3	0.8	0.5	0.7	.9	0.8	1.1	1.0	1.0	1.3
Voivodeship												
Dolnośląskie	5.2	3.3	3.8	2.0	0.7	1.0	2.6	1.9	1.8	1.1	0.7	1.7
Kujawsko-pomorskie	3.3	2.6	3.3	0.7	1.0	0.8	1.8	1.6	1.6	0.6	1.0	0.7
Lubelskie	1.9	2.5	3.5	0.4	0.7	1.0	1.2	1.3	1.5	0.9	0.4	1.0
Lubuskie	4.0	2.3	3.0	1.4	0.8	1.9	2.2	1.0	2.2	2.6	1.8	2.4
Łódzkie	1.9	1.7	2.7	1.1	0.3	1.1	1.2	1.3	1.6	1.0	1.0	1.3
Małopolskie	2.4	2.1	2.3	0.9	0.5	0.8	1.3	1.0	0.9	1.0	1.1	0.8
Mazowieckie	3.1	3.7	3.6	0.7	1.3	0.7	1.6	1.4	1.9	1.0	1.0	1.3
Opolskie	2.5	2.2	2.0	0.6	1.1	0.2	1.7	1.7	1.4	0.4	1.8	0.5
Podkarpackie	3.0	1.5	2.2	0.5	0.3	0.3	1.2	0.2	0.8	0.5	1.1	0.6
Podlaskie	2.1	2.0	4.4	1.3	1.1	1.5	1.1	0.8	1.0	3.2	1.4	1.6
Pomorskie	2.8	3.5	3.8	0.8	0.6	0.9	1.5	1.6	1.4	1.3	1.0	1.2
Śląskie	2.8	3.2	3.6	1.1	0.6	1.2	1.8	2.0	2.4	1.5	1.2	1.7
Świętokrzyskie	2.8	2.3	2.2	0.6	0.6	0.9	1.0	0.8	1.1	0.7	1.6	1.4
Warmińsko-mazurskie	1.4	2.5	3.7	0.5	1.0	1.3	1.1	0.5	1.6	0.6	1.2	0.9
Wielkopolskie	2.0	3.6	3.1	0.5	0.9	0.7	1.0	2.2	1.4	0.9	1.1	0.7
Zachodnio-pomorskie	2.9	3.2	4.6	2.4	0.7	0.7	2.0	2.8	3.1	1.4	2.0	2.0
Educational attainment												
Primary and lower	1.9	2.1	2.8	0.9	1.1	0.8	0.9	0.7	1.1	1.1	1.4	1.1
Basic vocational/lower secondary	3.0	3.0	3.2	1.4	0.9	1.1	1.2	1.5	1.6	1.4	1.7	2.0
Secondary	2.7	2.9	3.4	0.9	0.8	1.0	1.7	1.5	1.7	1.0	0.7	0.9
Higher and post-secondary	3.3	2.9	3.5	0.5	0.3	0.5	2.3	2.0	2.1	0.9	0.7	0.6
Per capita income									.			
Lower quartile	2.5	2.9	3.3	1.5	1.1	1.5	1.1	1.1	1.5	1.4	1.7	1.8
Middle 50%.	2.8	2.6	3.2	0.8	0.7	0.8	1.3	1.4	1.6	1.1	1.1	1.2
Upper quartile	3.0	3.2	3.4	0.6	0.5	0.6	2.5	2.1	1.8	1.2	0.7	0.9
Social and professional status												
Public sector	2.7	2.2	2.4	0.8	0.2	0.4	1.9	1.7	1.6	0.9	0.8	0.9
Private sector	2.7	2.4	3.4	1.1	0.9	0.7	1.8	1.8	2.0	1.5	1.7	1.5
Private entrepreneurs	3.8	5.2	5.2	1.1	0.4	0.3	3.7	3.8	5.1	1.2	1.3	1.5
Farmers	1.4	1.5	1.3	0.1	0.4	0.6	1.0	0.6	1.0	0.8	0.8	0.9
Pensioners	3.8	3.3	4.2	0.8	0.8	1.3	1.1	1.1	1.9	1.4	0.9	1.2
Retirees	2.4	2.8	2.9	0.3	0.5	0.6	1.1	1.4	1.1	0.4	0.4	0.6
School and university students	4.1	4.0	4.1	1.0	1.5	1.5	0.9	0.8	0.8	1.4	1.4	1.7
Unemployed	2.9	2.8	3.2	2.2	1.5	2.2	1.9	1.2	1.8	1.8	2.2	1.9
Other inactive labour	2.7	2.3	3.6	1.7	0.8	1.2	0.9	1.0	1.5	1.3	0.9	1.6

Table 5.10.23. cont.

Group	Detained by the police			Sued in a civil case			Caused a traffic collision or road accident		
	2013	2011	2009	2013	2011	2009	2013	2011	2009
Total	3.2	3.3	3.4	0.6	0.6	0.7	1.4	1.7	1.7
Gender									
Men	5.2	5.8	5.9	0.9	0.9	1.2	2.0	2.4	2.6
Women	1.3	1.0	1.1	0.3	0.3	0.3	0.9	1.1	0.9
Age									
Under 24	7.4	5.6	7.3	1.1	0.7	1.4	1.6	2.6	2.2
25-34	4.7	3.4	4.8	1.0	0.7	0.5	2.9	2.1	2.7
35-44	3.1	2.2	2.8	0.4	0.8	0.7	2.0	1.5	2.1
45-59	2.2	1.5	2.7	0.5	0.7	0.8	0.7	0.7	1.5
60-64	1.3	0.4	1.2	0.3	0.6	0.5	1.1	0.4	0.8
65 and above	0.5	0.2	0.3	0.2	0.1	0.2	0.4	0.2	0.4
Place of residence									
Towns of more than 500k	2.6	2.7	3.0	0.4	0.4	0.6	2.2	2.3	2.6
Towns of 200k-500k	2.7	2.5	3.8	0.5	0.3	0.5	2.3	2.1	2.2
Towns of 100k-200k	2.5	4.1	3.4	0.9	0.6	0.8	2.0	1.9	2.0
Towns of 20k-100k	3.0	3.2	3.2	0.7	0.6	0.9	1.0	1.7	1.5
Towns of fewer than 20k	3.0	3.7	3.0	0.6	0.7	0.5	1.3	1.7	1.9
Rural areas	3.7	3.4	3.6	0.5	0.6	0.7	1.2	1.4	1.3
Voivodeship									
Dolnośląskie	3.1	3.5	2.8	1.0	0.9	0.6	2.1	1.8	2.1
Kujawsko-pomorskie	3.2	2.2	2.9	0.2	0.5	0.4	1.7	1.7	1.6
Lubelskie	4.0	2.9	4.0	0.5	0.1	0.7	2.0	1.8	1.7
Lubuskie	5.0	4.0	4.3	1.3	1.4	1.1	1.7	1.3	1.6
Łódzkie	2.1	2.7	3.5	0.2	0.3	0.6	1.2	1.3	1.7
Małopolskie	2.5	1.4	2.1	0.2	0.5	0.2	1.4	1.1	1.5
Mazowieckie	3.6	3.6	3.9	0.5	0.5	1.0	1.2	1.7	2.2
Opolskie	3.3	3.4	2.6	0.3	0.9	0.9	0.7	0.9	0.9
Podkarpackie	3.8	3.6	2.2	0.6	0.4	0.3	1.5	2.0	1.2
Podlaskie	4.5	4.8	3.5	1.3	0.7	1.5	0.6	1.2	1.0
Pomorskie	1.8	3.2	4.5	0.6	0.7	0.9	1.6	3.0	2.3
Śląskie	3.1	3.5	3.1	0.8	0.6	0.8	1.8	2.4	1.3
Świętokrzyskie	2.3	3.6	4.2	0.1	1.2	0.9	0.9	1.0	1.0
Warmińsko-mazurskie	2.0	3.3	3.3	0.4	0.5	0.7	0.8	0.6	1.4
Wielkopolskie	4.2	4.5	3.9	0.8	0.6	0.4	1.4	1.9	2.5
Zachodnio-pomorskie	2.8	3.1	3.8	0.9	1.0	1.2	1.0	1.3	1.6
Educational attainment									
Primary and lower	2.6	3.1	2.4	0.4	0.8	0.5	0.4	0.6	0.6
Basic vocational/lower secondary	4.0	4.2	4.4	0.8	0.8	1.1	1.1	1.3	1.3
Secondary	2.9	3.2	3.2	0.5	0.4	0.7	1.5	2.0	2.0
Higher and post-secondary	2.8	2.2	2.8	0.4	0.4	0.3	2.5	2.6	2.9
Per capita income									
Lower quartile	3.7	4.4	3.8	0.9	0.9	1.2	1.0	1.4	0.9
Middle 50%.	2.9	2.8	3.2	0.6	0.5	0.6	1.2	1.5	1.6
Upper quartile	3.1	3.2	3.4	0.4	0.4	0.5	2.5	2.4	2.6
Social and professional status									
Public sector	2.4	2.0	2.5	0.5	0.3	0.3	1.9	2.2	2.2
Private sector	4.3	4.9	4.4	0.7	0.8	0.8	2.6	2.6	2.8
Private entrepreneurs	6.0	4.5	3.7	0.7	2.0	1.7	2.8	4.1	3.9
Farmers	3.5	3.9	4.3	0.2	0.5	1.1	1.2	0.8	1.2
Pensioners	2.8	1.7	2.3	0.7	0.4	0.9	0.3	0.8	0.7
Retirees	0.6	0.6	0.6	0.2	0.2	0.3	0.4	0.5	0.7
School and university students	5.0	5.3	6.0	0.5	0.5	0.6	1.3	1.9	1.6
Unemployed	4.3	5.8	5.8	1.1	1.3	1.0	1.1	2.1	1.2
Other inactive labour	2.9	2.9	4.0	1.0	0.4	1.1	0.5	0.7	1.1

The relationship between the incidence of victims and criminals and educational level is particularly interesting. Those with higher and post-secondary education fall victim to theft and home or car burglaries the most often, which presumably results from the level of affluence of that group of citizens. This is also evidenced by the high ratio of victims of that type of offence among those with higher income and especially among private entrepreneurs, every twenty sixth, but of whom – and every fifteenth, four years ago – was robbed, or experienced a home or car burglary. Criminals, on the other hand, are much more likely to have basic vocational education and a lower income. Greater than in other

groups percentage of persons accused of criminal acts and detained by the police are found – except for graduates of vocational schools – among school and university students, unemployed persons, private sector employees and young people (under 24), but the largest percentage of arrests is among criminals, and also this year it was one third higher than two years ago an nearly two thirds more than three years ago.

Table 5.10.24. Indicators of victims, perpetuation and crime

Socio-demographic group	Victims			Perpetuators			Crime		
	2013	2011	2009	2013	2011	2009	2013	2011	2009
Total	0.053	0.051	0.058	0.049	0.067	0.070	0.127	0.117	0.127
Gender									
Men	0.067	0.063	0.069	0.080	0.108	0.115	0.173	0.171	0.185
Women	0.040	0.039	0.047	0.020	0.029	0.029	0.084	0.069	0.076
Age									
up to 24	0.073	0.064	0.071	0.108	0.123	0.130	0.220	0.187	0.201
25-34	0.060	0.045	0.062	0.073	0.092	0.091	0.165	0.137	0.153
35-44	0.053	0.046	0.054	0.042	0.074	0.066	0.121	0.121	0.119
45-59	0.049	0.052	0.054	0.037	0.053	0.060	0.107	0.105	0.114
60-64	0.045	0.059	0.047	0.022	0.032	0.028	0.083	0.091	0.075
65 and more	0.039	0.043	0.053	0.011	0.013	0.017	0.063	0.055	0.070
Place of residence									
Towns of more than 500k	0.085	0.077	0.082	0.042	0.063	0.074	0.161	0.141	0.156
Towns of 200k-500k	0.079	0.074	0.105	0.044	0.060	0.083	0.149	0.135	0.189
Towns of 100k-200k	0.080	0.064	0.073	0.046	0.076	0.077	0.156	0.138	0.150
Towns of 20k-100k	0.050	0.055	0.046	0.051	0.067	0.065	0.125	0.121	0.111
Towns of fewer than 20k	0.044	0.043	0.058	0.046	0.078	0.063	0.112	0.120	0.120
Rural areas	0.035	0.033	0.041	0.052	0.064	0.068	0.110	0.097	0.108
Voivodeship									
Dolnośląskie	0.098	0.059	0.066	0.052	0.067	0.073	0.182	0.122	0.138
Kujawsko-pomorskie	0.057	0.053	0.057	0.040	0.054	0.055	0.124	0.107	0.111
Lubelskie	0.035	0.045	0.061	0.053	0.052	0.071	0.115	0.097	0.131
Lubuskie	0.075	0.042	0.068	0.089	0.086	0.092	0.191	0.128	0.159
Łódzkie	0.042	0.033	0.054	0.033	0.053	0.071	0.109	0.086	0.125
Małopolskie	0.045	0.035	0.040	0.037	0.042	0.047	0.109	0.078	0.086
Mazowieckie	0.055	0.063	0.060	0.051	0.068	0.084	0.129	0.131	0.144
Opolskie	0.047	0.051	0.035	0.041	0.071	0.049	0.111	0.121	0.085
Podkarpackie	0.046	0.020	0.033	0.049	0.071	0.043	0.117	0.091	0.076
Podlaskie	0.045	0.039	0.069	0.090	0.075	0.076	0.156	0.113	0.145
Pomorskie	0.050	0.057	0.059	0.036	0.078	0.088	0.106	0.135	0.146
Śląskie	0.056	0.057	0.071	0.055	0.076	0.068	0.137	0.133	0.140
Świętokrzyskie	0.044	0.037	0.042	0.031	0.074	0.075	0.093	0.111	0.116
Warmińsko-mazurskie	0.029	0.040	0.066	0.030	0.056	0.057	0.077	0.097	0.123
Wielkopolskie	0.035	0.067	0.052	0.058	0.082	0.073	0.117	0.148	0.125
Zachodniopomorskie	0.073	0.066	0.084	0.051	0.075	0.086	0.144	0.141	0.169
Level of education									
Primary and lower	0,036	0,039	0,046	0,041	0,057	0,044	0,102	0,097	0,090
Basic vocational/lower secondary	0,055	0,053	0,059	0,062	0,080	0,086	0,145	0,133	0,144
Secondary	0,052	0,052	0,061	0,044	0,063	0,069	0,122	0,116	0,130
Higher and post-secondary	0,060	0,052	0,061	0,040	0,060	0,065	0,118	0,111	0,126
Per capita income									
Lower quartile	0,051	0,050	0,060	0,060	0,083	0,076	0,145	0,133	0,136
Middle 50%.	0,049	0,046	0,055	0,046	0,059	0,066	0,117	0,105	0,121
Upper quartile	0,061	0,058	0,057	0,046	0,067	0,074	0,135	0,124	0,131
Social and professional status									
Public sector	0,054	0,041	0,043	0,038	0,053	0,060	0,115	0,092	0,103
Private sector	0,056	0,051	0,061	0,065	0,098	0,094	0,151	0,149	0,155
Private entrepreneurs	0,086	0,095	0,104	0,078	0,119	0,107	0,177	0,214	0,211
Farmers	0,026	0,025	0,030	0,044	0,056	0,069	0,096	0,081	0,099
Pensioners	0,058	0,052	0,074	0,048	0,037	0,050	0,132	0,090	0,122
Retirees	0,038	0,047	0,046	0,011	0,017	0,021	0,063	0,063	0,068
School and university students	0,060	0,063	0,064	0,070	0,090	0,099	0,158	0,154	0,163
Unemployed	0,070	0,054	0,070	0,072	0,114	0,100	0,185	0,168	0,170
Other inactive labour	0,052	0,040	0,063	0,052	0,050	0,075	0,128	0,090	0,138

Summarising each category of law-breaking, we introduced three synthetic indicators: victims (victimisation), perpetuators and crime as a general linking of the former two. Table 5.10.24 presents the breakdown of these three factors in socio-demographic terms from the last three *Diagnosis* editions. There was a marked fall in perpetuation in all groups between 2009 and 2013 as confirmed by the statistically significant difference between two panel group readings (t=27.54, p p<0.000). The strong differentiating factor for victimisation size is gender (men are crime victims more often), place of residence class (more victims in larger towns), Voivodeship (the lowest indicator reading Warmińsko-Mazurskie and highest in Dolnośląskie, Lubuskie and Zachodniopomorskie) and socio-professional status (the highest victimisation is in the group of private entrepreneurs). There is a similar social differentiation for the remaining two synthetic indicators.

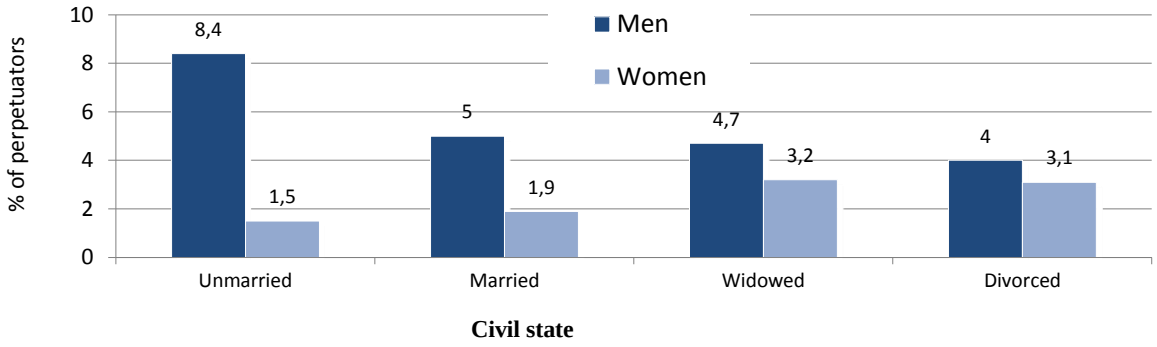
In order to verify the significance of differences in probability of being among the victims, perpetuators and being generally caught up in crime for particular social groups, we conducted a logistical regression analysis taking into account 8 predictors (gender, age, place of residence class, education, socio-professional status, marital status and alcohol abuse) (table 5.10.25). Women are three times less likely to perpetuate crime and 30% fewer are victims. The probability of being a perpetuator or victim falls with age (with the exception of 45-59 year olds, who are victims most rarely). The size of place of residence increases the chances of finding victims (the most in the largest towns) but not perpetuators. The differentiation effect of education is very weak, though generally the most perpetuators are in the least well educated group.

Table 5.10.25. Logistical regression results for being a perpetuator or victim of crime

Predictor	Perpetuator		Victim		Both	
	p	Exp(ß)	p	Exp(ß)	p	Exp(ß)
Man	Ref.					
Woman	0.000	0.387	0.000	0,719	0,000	0,655
Age under 24	Ref.					
25-34	0.000	0.436	0.002	0,646	0,000	0,527
35-44	0.000	0.284	0.001	0,587	0,000	0,417
45-59	0.000	0.220	0.000	0,470	0,000	0,320
60-64	0.000	0.203	0.005	0,557	0,000	0,339
65 and above	0.000	0.118	0.004	0,518	0,000	0,278
Towns of more than 500k	Ref.					
Towns of 200k-500k	0.781	1.044	0.422	0,909	0,154	0,878
Towns of 100k-200k	0.754	0.948	0.769	0,964	0,031	0,807
Towns of 20k-100k	0.210	1.183	0.000	0,620	0,000	0,698
Towns of fewer than 20k	0.975	1.005	0.000	0,518	0,000	0,604
Rural areas	0.177	1.188	0.000	0,377	0,000	0,591
Education: primary and lower	Ref.					
Basic vocational/lower secondary	0.021	0.754	0.151	1,195	0,557	0,953
Secondary	0.000	0.622	0.714	1,048	0,111	0,871
Higher and post-secondary	0.010	0.678	0.262	1,173	0,152	0,868
Public sector	Ref.					
Private sector	0.849	1.024	0.005	0,724	0,427	0,939
Private entrepreneurs	0.005	1.594	0.078	1,327	0,067	1,241
Farmers	0.925	1.018	0.378	0,819	0,451	1,102
Pensioners	0.893	0.974	0.433	1,142	0,747	0,960
Retirees	0.074	0.632	0.286	0,822	0,038	0,751
School and university students	0.000	0.473	0.010	0,622	0,000	0,519
Unemployed	0.283	0.842	0.601	1,081	0,460	1,080
Other inactive labour	0.291	0.832	0.946	0,989	0,273	0,884
Unmarried	Ref.					
Married	0.068	0.834	0.120	0,853	0,977	1,002
Widowed	0.226	0.731	0.256	1,210	0,025	1,320
Divorced	0.701	0.925	0.021	1,437	0,001	1,451
Poor	Ref.					
Average wealth	0.874	0.986	0.405	1,078	0,211	0,928
Wealthy	0.468	1.084	0.984	1,002	0,598	0,962
No alcohol abuse	Ref.					
Alcohol abuse	0.000	4.329	0.000	2,839	0,000	3,111
Total percentage of explained variance Cox & Snell R^2 x 100	4.1		1.6		3.3	
Total percentage of explained variance Nagelkerke R^2 x 100	14.4		5.7		7.2	

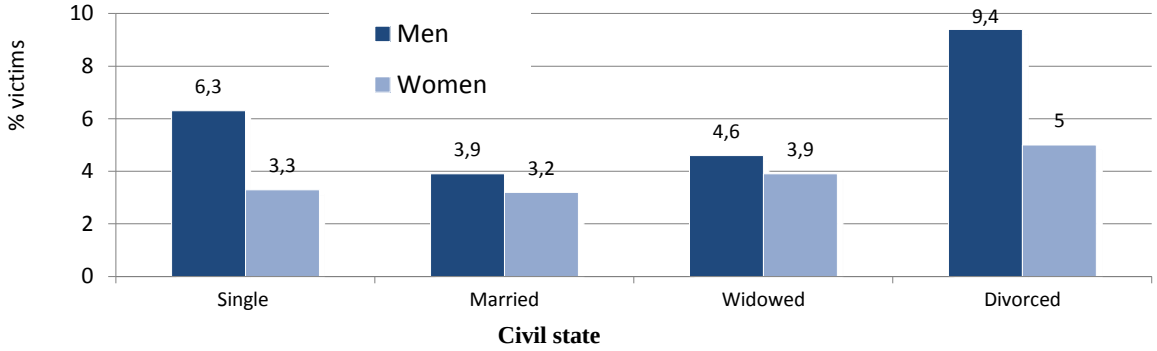
* Ref. – reference group

Definitely the most victims and perpetuators are in the private entrepreneurs' group, and the chances of being a victim are over 40% higher for the divorced than for those living as singles, though this mainly concerns men (figure 5.10.26). Though marital status does not affect the probability of being a perpetuator to a statistically significant degree, single men do dominate in this case (figure 5.10.27). Wealth does not differentiate the probability of being a perpetuator or a victim, though it is no surprise that alcohol abuse increases, by as much as over four times, the chances of being a perpetuator, and almost three times o victim.



NOTE: main effect of civil status F(3, 25683)=7.038, p<0.000, η^2=0.001; effect of gender F(1, 25683)=58.644, p<0.000, η^2=0.002; effect of civil status and gender interaction F(3, 25683)=19.866, p<0.000, η^2= 0.002 with age as the co-variable

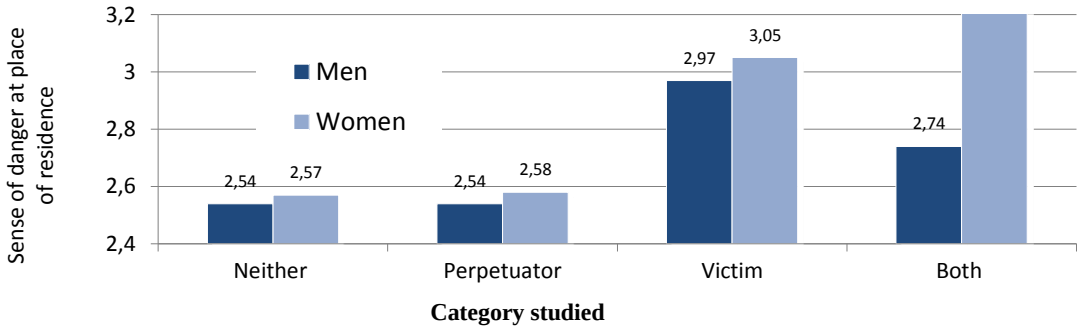
Figure 5.10.26. Criminality by gender and civil status with control for age



NOTE: effect of civil status F(3, 25683)=15.738, p<0.000, η^2=0,002; effect of gender F(1, 25683)=28.445, p<0.000, η^2=0.001; effect of civil state and gender interaction F(3, 25683)=7.866, p<0.000, η^2= 0.001 with age as the co-variable

Figure 5.10.27. Victim of crime by gender and civil status with control for age

It is no surprise that the victims of aggression are less satisfied with the state of security in their place of residence, even if they happen to have broken the law themselves (figure 5.10.28)



NOTE: indicator of sense of danger reading on a scale of satisfaction with safety in place of residence (very happy-1, very unhappy-6); effect of category F(3, 25550)=73.309, p<0.000, η^2=0.009; effect of gender F(1, 25550)=18.341, p<0.000, η^2=0.001 ; effect of category of study and gender F(3, 25550)=5.106, p=0.01, η^2= 0.001 with age as the co-variable

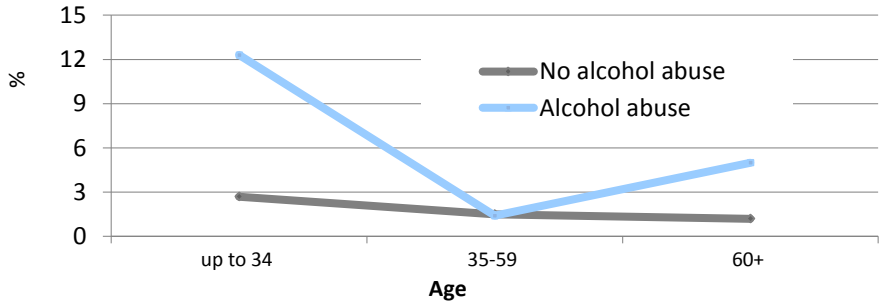
Figure 5.10.28. Sense of danger at place of residence for men and women by category of victim or perpetuator of aggression

In the sample of driving licence holders, those who abuse alcohol cause collisions or road traffic accidents over three times as often irrespective of age (table 5.10.26), though this concerns mainly younger drivers (up to 34 years old), among whom those abusing alcohol are four times more likely to be the perpetuators of accidents than those who do not (figure 5.10.29). Age itself is related to the likelihood of causing a collision or accident; collisions or accidents are three times less likely to be caused by those aged over 34 than by those aged less than 30. Gender is also of a certain importance. Women cause collisions or road traffic accidents less often, yet the difference is by 30% significant.

Table 5.10.26. Results of logistic regression analysis of the probability of causing a collision or a road traffic accident due to gender and to alcohol abuse in the sample of drivers

	B	S.E.	Wald	df	p.	Exp(B)
Alcohol abuse	1.190	.136	77.011	1	.000	3.289
Gender	.270	.118	5.242	1	.022	1.309
Age (60+)			57.969	2	.000	
34	.910	.181	25.263	1	.000	2.485
35-59	.108	.189	.328	1	.567	1.114
Constant	-4.545	.187	588.344	1	.000	.011

NOTE: reference groups include those who do not abuse alcohol, women, and those aged up to 60+.



NOTE: the effect of age F(2, 15390)=49.009, p<0.000, η^2= 0.006; the effect of alcohol abuse F(1, 15390)=29.199, p<0.000, η^2= 0.002; the effect of interaction of alcohol abuse and age F (2, 153900=30.509, p<0.000, η^2=0.004

Figure 5.10.29. Percentage causing a collision/road accident among drivers by alcohol abuse and non-abuse and age

5.10.6. General attitudes to life

In the present edition of the *Diagnosis*, similarly as in the previous three, materialist orientation was measured with the use of the abbreviated scale of Richins and Dawson (1992) (Annex 1, individual questionnaire question 54). The factor analysis with varimax rotation for this scale shows two separate factors behind materialistic orientation (Table 5.10.27). The first, which explains 47% of variance, is materialism proper; i.e. attaching greater importance to material goods, the other is the passion for shopping; i.e. shopaholism, which explains 20% of variance.

Table 5.10.27. Results of factor analysis for the materialism scale with varimax rotation

Materialism scale statements	Contents							
	factor 1				factor 2			
	2013	2011	2009	2007	2013	2011	2009	2007
I look up to people who have expensive clothes, cars and houses.	0.802	0.744	0.739	0.799				
The measure of a successful life is the ownership of various material goods.	0.836	0.816	0.813	0.835				
I like having things that may make people jealous.		0.723	0.696	0.711				
I like shopping for things which have no practical purpose.				0.785	0.769	0.783	0.783	
Shopping in itself gives me a lot of joy.				0.841	0.801	0.771	0.771	
Material goods are very important to me.	0.747	0.744	0.744	0.707				
Percentage of explained variance	46.9	45.2	43.5	43.6	20.3	16.9	17.4	18.1

* This was not in the 2013 questionnaire

Table 5.10.28. Partial correlations between indicators of psychological well-being, materialism and shopaholism with control for age

Orientation	Test of dependence	Assessment of life-as-a-whole*	Sense of happiness*	Suicidal tendencies*	Desire to live	Depression
Materialism	Correlation	0.051	0.033	-0.052	-0.009	-0.007
	Significance (two-sided)	0.000	0.000	0.000	0.145	0.259
	N	25666	25666	25666	25666	25666
Shopaholism	Correlation	-0.019	-0.063	-0.027	0.028	-0.035
	Significance (two-sided)	0.003	0.000	0.000	0.000	0.000
	N	25666	25666	25666	25666	25666

* inverse rated indicator - the lower the scale value, the higher the indicator value

Table 5.10.29. Indicators of materialism and shopaholism in a breakdown of various socio-demographic groups in 2011 and 2013

Socio-demographic group	Materialism		Shopaholism		Group variance significance test 2013	
	2013	2011*	2013	2011	Materialism	Shopaholism
Total	3.73	3.72	3.15	3.10		
Gender					F=480.324	F=690.296
Men	3.90	3.89	2.94	2.88	p<0.000	p<0.000
Women	3.55	3.55	3.37	3.32	η^2= 0.018	η^2= 0.026
Age					F=278.730. p < 0.000	F=329.796. p < 0.000
16-24	4.24	4.21	3.73	3.59	η^2= 0.051	η^2= 0.060
25-34	3.94	3.90	3.42	3.30	all groups differ	all groups differ
35-44	3.70	3.71	3.16	3.08		
45-59	3.63	3.59	3.04	2.98		
60-64	3.50	3.54	2.88	2.89		
65+	3.28	3.27	2.70	2.71		
Place of residence					F=69.384. p<0.000	F=9.384. p<0.000
Towns of more than 500k	3.55	3.48	3.30	3.17	η^2= 0.013	η^2= 0.002
Towns of 200k-500k	3.52	3.49	3.12	3.07	rural areas and small towns differ from larger agglomerations	the largest towns differ from all the rest while the latter do not differ among each other
Towns of 100k-200k	3.59	3.54	3.10	3.09		
Towns of 20k-100k	3.65	3.69	3.14	3.15		
Towns of fewer than 20k	3.69	3.78	3.14	3.12		
Rural areas	3.90	3.88	3.16	3.08		
Education					F=159.138. p<0.000	F=62.939. p<0.000
Primary and lower	3.69	3.71	2.89	2.91	η^2= 0.018	η^2= 0.007
Basic vocational/lower secondary	3.93	3.96	3.17	3.15	persons with higher and basic education differ from the rest. and those with secondary do not differ from those with basic	persons with higher education do not differ from those with basic and comprehensive
Secondary	3.70	3.68	3.23	3.12		
Higher and post-secondary	3.46	3.41	3.21	3.17		
Per capita income					F=68.279. p<0.000	F=8.855. p<0.000
Lower quartile	3.83	3.83	3.10	3.04	η^2= 0.006	η^2= 0.001
Middle 50%	3.74	3.75	3.15	3.16	all groups differ	the lower quartile differs from the middle 50%
Upper quartile	3.56	3.58	3.21	3.23		
Socio-professional status					F=127.415. p<0.000	F=130.931. p<0.000
Public sector	3.56	3.50	3.23	3.15	η^2= 0.038	η^2= 0.039
Private sector	3.81	3.84	3.23	3.14	public sector does not differ from receivers of welfare benefits. private sector does not differ only from entrepreneurs and passive labour. entrepreneurs do not differ only from private sector and passive labour and farmers do not differ only from passive and pensioners and students differ from all	public sector workers do not differ only from private sector. entrepreneurs and unemployed. farmers do not differ entrepreneurs and receivers of welfare and students differ from all
Private entrepreneurs	3.83	3.76	3.14	3.02		
Farmers	3.99	4.01	3.06	3.00		
Pensioners	3.50	3.55	2.93	2.94		
Retirees	3.35	3.33	2.77	2.78		
School and university students	4.17	4.15	3.75	3.60		
Unemployed	3.96	3.97	3.28	3.28		
Other inactive labour	3.80	3.75	3.31	3.27		

* The indicator was the average of inverted-scale values for only three questionnaire items, the same as in 2011

The indicators of materialism and shopaholism are composed of the average of the sum of inverted medians for responses to items, which obtained loadings of more than 0.4 for individual factors.

Numerous studies carried out mostly in the US, prove that materialist orientation negatively affects psychological well-being (Czapiński, 2004a). Several theories have even been formed to explain the mechanisms behind that negative relationship (e.g. Kasser, 2002; Kasser, Ryan, 1996; Lane, 2000).

Without going into theoretical debates, let us see whether indeed also in Poland materialism makes people less happy and more depressive. Generally speaking, it does, but the relationships are weak and inconsistent (Table 5.1.28). Persons with a materialistic attitude formulate worse opinions of their life-as-a-whole, are less happy, demonstrate suicidal tendencies more often, with the exception of suicidal tendencies. Shopaholism has the opposite effect, affecting positively all well-being indices.

Considering the social differentiation of materialistic orientation (table 5.10.29), the strongest factor is gender. Men are the greater materialists, while women have the greater shopacholism indicator. Residents of rural areas and small towns are greater materialists and less shopacholic than residents of the largest towns.

There is a clear linear dependence of age, materialism and shopaholism; the younger the respondents, the more materialistic their attitudes and the greater their passion for shopping (this is particularly true for the youngest people, those aged 16-18). Education does not significantly differentiate either materialistic attitude or shopacholism. However, materialistic attitude clearly follows from shortage; the have-nots would very much like to have, and the haves can concentrate on something else even if it is spending money. This is in line with Abraham Maslow's (1990) hierarchy of needs, which – simplifying somewhat – states that we first need to get enough food and warmth before we start wishing for a visit to the theatre (or shop in this case).

Social and professional status is a strongly differentiating factor. And again, the youngest; i.e. school and university students, have the highest indicators for shopaholism and materialism. In terms of materialism, they are matched by farmers and unemployed persons. The lowest level of materialism and shopaholism is found among retirees and pensioners.

Between 2011 and 2013, the level of materialism did not change to a statistically significant degree, though that of shopaholism did ($F(1.16936)=15.847$, $p<0.000$, $\eta^2= 0.001$).

5.11. Poles and television

Television is the main medium connecting Poles to the world. In the past 17 years, the amount of Poles spending more than three watching hours increased significantly up to one third (table 5.11.1).

Table 5.11.1. Percentage spending various average amounts of time per day watching TV between 1996 and 2013 among 18 plus

Year of study	Amount of time watching TV per day			
	none	up to 2 hours	2-3 hours	3 or more
1996	6.4	45.9	27.1	19.5
2005	2.6	40.3	26.1	30.9
2007	2.7	42.2	25.8	29.4
2009	3.7	39.9	26.1	30.3
2011	3.4	39.6	26.1	30.9
2013	4.3	36.5	26.8	32.4

Data source: 1996 — World Values Survey (http://wvs.isr.umich.edu/fig.shtml; 2005-2013 — *Social Diagnosis.*

The amount of television watching time depends on certain socio-demographic variables (table 5.11.2), with socio-professional status, age and education being the strongest differentiators. Those who work less (retiree, pensioners, the unemployed and women working in the home), devote much more time to television than those in work, especially entrepreneurs, who watch it the least, and farmers. The elderly watch more than the younger, and in the youngest group the share watching no longer than an hour a day increased markedly compared to 2011. The higher the education, the less television watching time there was.

Some Voivodeships watch more television than others, with the most viewing in Lubuskie and Dolnośląskie and the least in the south-eastern regions of Małopolskie and Podkarpackie. The towns, especially the middle-sized, watch slightly more than rural areas most likely because farmers display the greater attachment to their work, and because the cable and satellite TV content in the cities is richer and more attractive than the terrestrial equivalent that reaches rural areas. The bereaved and living in separation watch the most in terms of marital status while the singles the least.

Table 5.11.2. Percentage of respondents over 18 spending various amounts of time watching TV as well as a significance test for the relation between TV watching time and socio-demographic group

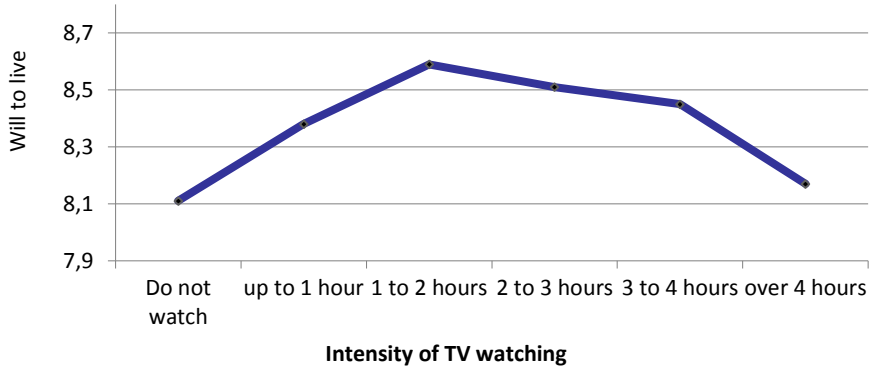
Socio-demographic group	Never or up to 1 hour	From 1 to 3 hours	3 or more hours	Chi-square level of significance
Total	14.1	53.5	32.4	
Gender				
Men	14.8	51.8	33.4	27.034
Women	13.6	55.0	31.5	0.000
Age				
16-24	23.5	51.3	25.2	
25-34	19.8	56.1	24.1	
35-44	16.8	57.0	26.2	1416.813
45-59	10.8	57.9	31.3	0.000
60-64	7.4	47.4	45.2	
65+	6.8	44.7	48.6	
Education				
Primary and lower	8.6	46.4	45.0	
Basic vocational/lower secondary	11.1	52.8	36.1	906.463 0.000
Secondary	14.0	54.0	32.0	
Higher and post-secondary	21.7	57.9	20.4	
Place of residence				
Towns of more than 500k	19.2	48.2	32.6	
Towns of 200k-500k	18.0	49.0	33.0	
Towns of 100k-200k	15.5	50.1	34.4	280.604
Towns of 20k-100k	11.3	51.4	37.3	0.000
Towns of fewer than 20k	12.9	52.9	34.3	
Rural areas	13.1	58.1	28.8	
Voivodeship				
Dolnośląskie	13.3	50.5	36.2	
Kujawsko-pomorskie	10.7	55.3	34.0	
Lubelskie	17.6	53.8	28.6	
Lubuskie	11.0	50.1	38.8	
Łódzkie	11.6	56.1	32.4	
Małopolskie	18.2	56.4	25.3	
Mazowieckie	15.5	50.2	34.3	
Opolskie	11.0	57.4	31.6	296.762
Podkarpackie	19.7	57.2	23.2	0.000
Podlaskie	12.9	55.1	32.0	
Pomorskie	17.0	48.2	34.8	
Śląskie	12.8	52.6	34.6	
Świętokrzyskie	13.1	56.3	30.6	
Warmińsko-mazurskie	9.0	53.1	37.9	
Wielkopolskie	12.2	55.8	32.0	
Zachodniopomorskie	13.5	53.0	33.4	
Civil status				
Single	21.4	51.3	27.3	
Married	11.9	56.4	31.7	
Widowed	8.0	46.3	45.7	678.708
Divorced	14.4	46.6	39.0	0.000
Separated	9.9	47.2	42.9	
Socio-professional status				
Public sector	17.7	62.8	19.5	
Private sector	17.3	58.1	24.6	
Private entrepreneurs	21.2	59.1	19.6	
Farmers	12.4	64.6	23.0	1920.858
Pensioners	8.3	44.1	47.6	0.000
Retirees	6.2	45.8	48.0	
School and university students	26.3	52.0	21.7	
Unemployed	12.1	45.6	42.3	
Other inactive labour	11.4	49.0	39.6	

Does watching television favour the feeling of happiness or vice versa, do the unhappy spend more time in front of the screen? This question has not yet been answered in the studies. There are theories

(eg Mandler, 1978; Nesse, Williams, 1994[71]; Postman, 1986) that actually place the blame for the depression epidemic, generally poor psychological condition and low quality of life on television. Its dysfunctional role are demonstrated by the results of various empirical studies (eg Kubey and Csikszentmihalyi 1990; Robinson, Martin, 2008). *Diagnosis* data shows that the link between psychological well-being and television watching time is non-linear with control for age and gender. There is a greater share of unhappy people dissatisfied and frustrated with life and depression sufferers among those who do not watch at all and those who watch many hours of television a day than there is among the "moderate" viewers (figures 5.11.1 - 5.11.4).

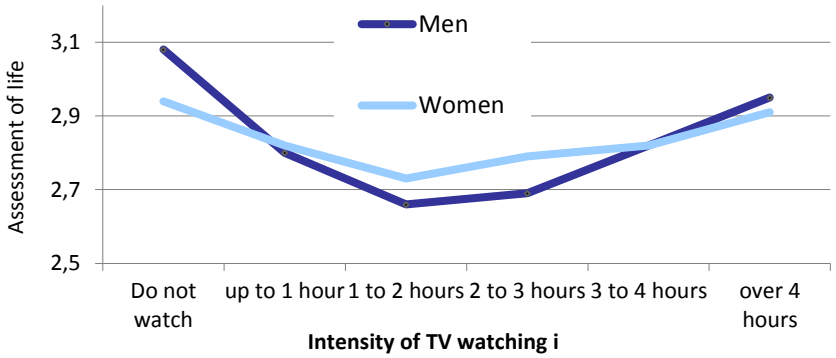
Like in the case of psychological well-being, the relation between intensity of viewing and physical condition is also non-linear. People who do not watch TV at all and those who spend many hours a day in front of the screen assess their state of health worse and display more symptoms of somatic disruption (figures 5.11.5 -5.11.6). In the case of the Body-hight to Mass Indicator (BMI)[72] , the relation is linear with the more viewing time, the greater the share of body weight (figure 5.11.7). The average BMI value is normal only in the group that does not watch at all, with in all other groups the average being the overweight category.

In accordance with Robert Putman's thesis, television also undermines social capital (see chapter 6.3). In this case, as with that of body weight, the relation is linear as the more time spent watching TV, the smaller the trust in people and the lower the general level of social capital[73] (figure 5.11.8)



NOTE: effect of TV watching intensity F(5, 25558)=30.670, p<0.000, η^2=0.006 with age and gender as control variables

Figure 5.11.1. Intensity of TV watching and will to live with control for gender and age



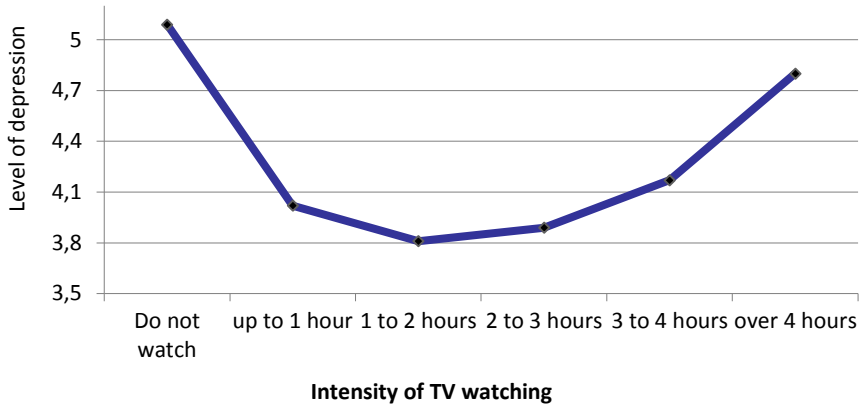
NOTE inverse scale of life assessment (the higher the value the lower the assessment); effect of TV watching intensity F(5, 25560)=35.599, p<0.000, η^2=0.007; effect of TV watching intensity and gender interaction F(5, 25560)=3.870, p<0.000, η^2=0.001) with age the control variable

Figure 5.11.2. Intensity of TV watching and whole life assessment with control for gender and age

[71] "Mass conmmnications, especially television and movies, effectively make us all one competitive group even as they destroy our more intimate social networks. In the ancestral environment you would have had a good chance at being the best at something. Even if you were not the best, your group would likely value your skills. Now we all compete with those who are the best in the world. Watching these successful people on television arouses envy. Envy probably was useful to motivate our ancestors to strive for what others could obtain. Now few of us can achieve the goals envy sets for us, and none of us can attain the fantasy lives we see on television." (Nesse, Williams, 1994, s. 220).

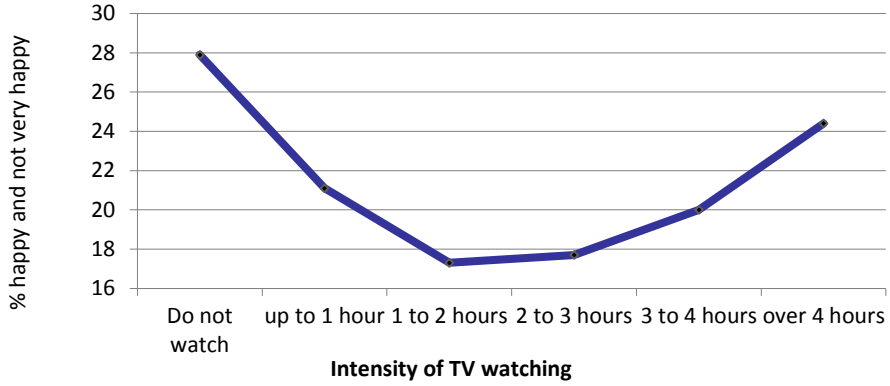
[72] This is a straightforward indicator of illnesses linked to obesity (see chapter 5.6.3).

[73] See chapter 9.1 for the make-up of the indicator.



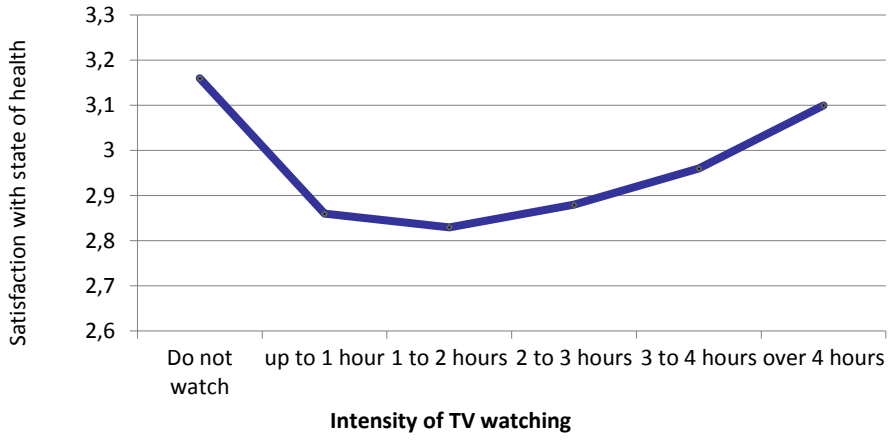
NOTE: effect of the intensity of watching TV F(5, 25221)=61.882, p<0.000, η^2=0.012 with age and gender as control variables

Figure 5.11.3. Intensity of TV watching and the incidence of depression symptoms with control for gender and age



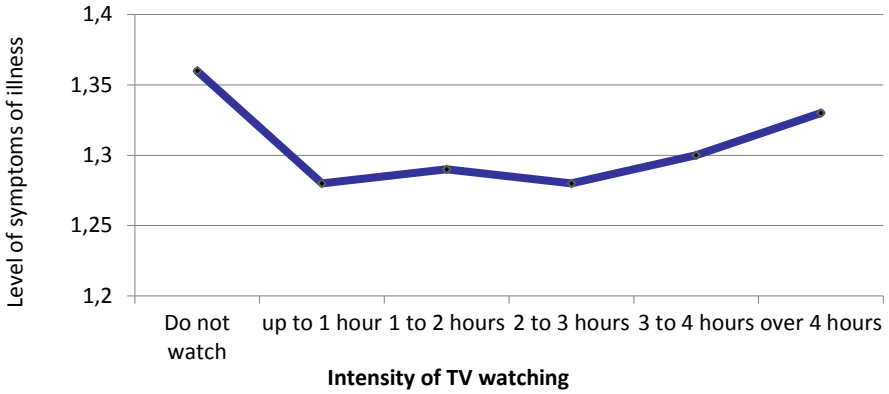
NOTE: effect of TV watching intensity F(5, 25571)=24.382, p<0.000, η^2=0.005 with control variables for age and gender

Figure 5.11.4. Intensity of TV watching and sense of unhappiness with control for gender and age



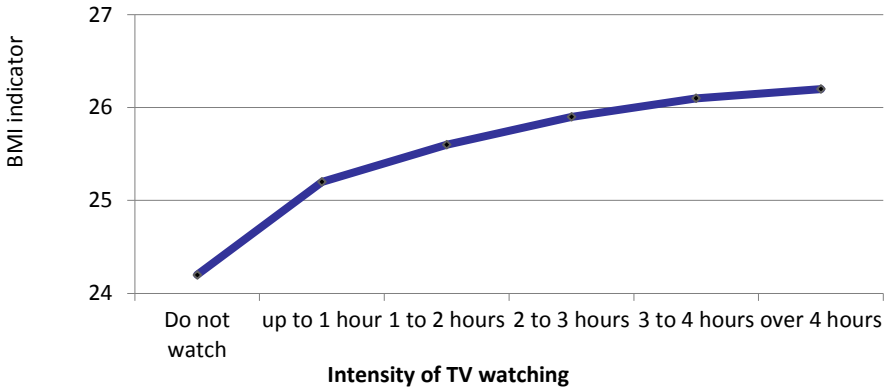
NOTE: inverted scale of satisfaction with health - the lower the value the grater the satisfaction; effect of TV watching intensity F(5, 25506)=34.082, p<0.000, η^2=0.007 with age and gender as the control variables

Figure 5.11.5. Intensity of TV watching and satisfaction with one's state of health with control for gender and age



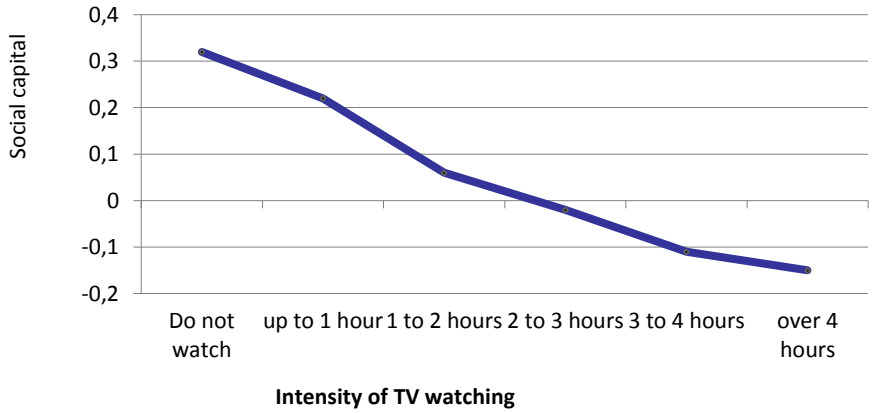
NOTE: effect of TV watching intensity F(5, 25055)=23.182, p<0.000, η^2=0.005 with age and gender as control variables

Figure 5.11.6. Intensity of TV watching and level of symptoms of illness with control for gender and age



NOTE: effect of TV watching intensity F(5, 25571)=24.382, p<0.000, η^2=0.005 with age and gender as control variables

Figure 5.11.7. Intensity of TV watching and BMI indicator with control for gender and age



NOTE: effect of TV watching intensity F(5, 25547)=57.055, p<0.000, η^2=0.011 with age and gender as the control variables

Figure 5.11.8. Intensity of TV use and level of social capital with control for age and gender

5.12. Socio-psychological profile of selected professions

We identified 54 professional groups each represented by at least 50 respondents (table 5.12.1). We counted their average age, share of women, education level (years of study), share of single persons, married and divorced couples living in formal or informal separation, those supporting children, share of internet users, percentage of those overweight by BMI, those with active foreign language abilities, number of friends, the share of those who trust people, those who believe in the superiority of democracy over other forms of government, monthly frequency of churchgoing, percent of crimes or misdemeanours, the number of somatic symptoms lasting at least 2 weeks in the last month, the share of those with suicidal thoughts in recent months, intensity of psychological depression symptoms, the share of the unhappy (together with those not very happy), the percent of the very satisfied and the satisfied with their life achievements and with their future perspectives and with their work, average number of weekly hours at work, the share of those intending to go abroad to work in the next two years, the percentage of unemployed between 2011-2012 and that of those who had changed their job in the last two years.

In other parts of the report contain data on the differentiation of these professional groups in terms of personal income (chapter 5.5.1), religious belief (chapter 5.10.3), nicotine addiction, alcohol abuse and the quality of life (chapter 9.1 and Appendix 6).

All professional groups display marked differences in terms of these indicators (table 5.12.1). The youngest, with an age average less than 36 are IT specialists, hairdressers, cosmeticians and waiters, barmen and stewardesses, and the oldest with an average of over 47 are household helpers, cleaners, railway workers, representatives of the authorities and directors, subsistence farmers and workers in the remaining personal services. The least feminised (less than 3% women) are the auxiliary worker, mining, builder and truck, bus, personal car and delivery driver professionals, while the most women work in the personal care profession (69%) and as lawyers (61%). The most male professions are academic teachers (57%), among the authorities and upper management staff (67%), engineers (70%) and IT specialists (84%).

In terms of years of study, auxiliary workers in mining and construction, subsistence farmers and painters and decorators have the least education (less than 11 years), and the most upper education teachers, doctors and lawyers (over 18 years). The fact that in as many as 21 out of 55 professions the average number of years in education exceeds 14 and in only three it is not more than 11, may be attributed to the post-1989 education boom.

The share of single persons not in a relationship strongly correlates to age, so it is not strange that the greatest share of singles finds employment in the "youngest" professions as creatives, waiters and IT specialists, though there are also many in law, paper and timber work and miner and builder auxiliary. Fewest singles work as authority representatives and directors, railway workers, support and cleaner staff and remaining personal services. The most married are railway workers, authority representatives and directors, miners and subsistence farmers and the least are waiters, barmen and stewards, creatives and lawyers. The greatest divorce and separation readings are among personal service workers, representatives of authority and upper-management, nurses and midwives, office service workers, and the lowest among personal car and delivery drivers, railway workers, technicians and painters. Being married goes hand-in-hand with the share of persons with children to support, and the most of these are to be found among the representatives of authority and directors, managers, railway workers and primary school teachers, while waiters, lawyers and personal service workers least often have children.

The most internet users are of course among financial, administration and managerial specialists, creatives and lawyers (100% respectively), with the least farmers at below 50%.

The most overweight people are blacksmiths and leatherworkers, smelters, welders as well as policemen and firemen (over 70%). Closest to BMI norms are mining and building auxiliary workers, household help and cleaners, technicians and railway workers (less than 20% overweight).

Best in terms of language use are creatives, lawyers, academic teachers doctors and IT specialists (at least 70% use a foreign language with fluency). Miners, mining and building auxiliary workers and building workers are least often able to use foreign languages.

Waiters, barmen and stewards, representatives of the authorities and managerial staff and academic teachers have the most friends while miners have the least.

The level of general trust in others is one of the lowest in Europe in Poland and in this context only creatives, artists, writers and journalists come out positively (46% trust others) and academic teachers (29%). Also, among other specialists, IT workers, representatives of authority and directors as well as

hairdressers and cosmeticians over 20% trust, which is well above the national average (see chapter 6.3). Most lacking in trust are mining and building auxiliary workers, personal care workers and waiters, barmen and barstewards (6% trust in others).

Democracy speaks most to creatives, lawyers, representatives of authority and directors and specialists of IT, finance, marketing, administion and management (over 50% agreeing with the statement that democracy as a system is better than all other forms of government). The least positive attitude to democracy is characteristic of personal care workers and subsistence farmers (7% and 10% respectively support the above thesis).

Subsistence farmers most frequently go to church (on average around 4 times a month), followed by the remaining specialists, drivers of personal cars and delivery vans, primary school teachers and academics, commercial farmers and representatives of the authorities and directors (over three times). Creatives and marketing specialists practice the least and go to church on average once a month.

Auxiliary workers in mining and construction, technicians, truck drivers and buses are prone to breaking the law most often (over 10% of perpetuators) and least often textile production workers, the remaining specialists, creatives, academic teachers, civil servants and mill workers (less than 2% crimes or misdemeanours).

Somatic symptoms lasting at least half a month most often visit personal care workers, household helpers and cleaners, creatives, subsistence farmers, administration and management specialists, so mainly representatives of the most feminised professions (between 45% and 98% women). At the other end of the scale, most healthy are bus and truck drivers, railway workers, auxiliary workers in mining and construction, civil servants, machinery operators and painter-decorators, therefore representatives of the least feminised professions.

Hairdressers and cosmeticians are most prone to having suicidal thoughts, as do otherwise unclassified workers, creatives and railway workers (more than 15%), while specialists, doctors and nurses entertain them the least (less than 5%).

Farmers, helpers and cleaners and railway workers suffer most from depression, while IT specialists, machinery operators, mill workers and other health care specialists reveal the least symptoms.

Over half of lawyers, representatives of the authorities and directors, teachers, doctors, administration and management specialists, various specialist managers and machinery operators are satisfied with their life achievements, while the least satisfied are auxiliary workers in mining and construction and helpers and cleaners.

Lawyers see the best perspectives before them while mill workers, auxiliary workers in mining and construction, railway workers and cleaners take the dimmest view of their future prospects.

The largest share (over 60%) of those satisfied with their job are the representatives of the authorities and directors, hairdressers and cosmeticians, doctors, post-primary school teachers and other remaining specialists, and the smallest (less than 30%) among subsistence farmers, auxiliary workers in mining and construction and textile production workers.

Doctors and lorry drivers work the most hours per week (over 45), and the least subsistence farmers (27 hours) and primary school teachers (34 hours).

Those most often preparing to work abroad in the next two years are builders (20-22%), and apart from them smelters, welders, waiters, barmen and barstewards (over 15%). Mill workers, lawyers, representatives of the authorities and directors and railway workers hardly think of working abroad at all (0-1%).

In 2011-2012, one in five mining and construction auxiliary worker, construction worker and physical labourer was out of work. Railway workers, specialists in administration and management, managers of various specialisation, creatives, artists and journalists could feel the most secure in their jobs.

The most mobile on the Polish labour market in 2011-2013 were mining and construction auxiliary workers (over $^1/_3$ changed their jobs in this time) as well as smelters and welders (over 25%). Railway workers (4%), subsistence farmers and academic teachers (6% respectively) were least likely to change their place of work in search of employment.

Table 5.12.1. Characteristics of representatives of 54 professions and professional groups

Current profession	Age	% women	Education (years of study)	% singles	% married
Chief executives, senior officials and legislators	48.86	33	16.5	6	84
Managers of various specialisations	42.61	36	15.4	14	79
Science and engineering professionals	39.87	30	17.2	31	65
Doctors, vets and dentists	45.31	54	18.0	30	62
Nursing and midwifery professionals	46.87	93	14.5	13	73
Other health professionals	38.90	75	15.5	31	62
University and higher education teachers	43.94	43	19.5	26	69
Secondary education teachers	43.63	63	17.3	18	74
Primary school teachers	40.85	84	17.0	18	76
Business and Administration Professionals	39.03	69	17.2	27	67
Financial specialists	38.57	66	17.0	26	69
Marketing specialists	36.28	63	16.6	31	64
Information technology specialists	34.65	16	16.0	46	52
Lawyers	36.85	61	18.0	53	38
Other specialists	40.15	79	16.6	27	64
Creatives, artists, writers and journalists	37.86	54	16.6	60	31
Technicians and associate professionals	42.63	24	13.5	24	69
Financial associate professionals	43.86	90	15.1	20	71
Salespersons in trade and business	38.32	37	14.9	29	61
Civil servants	41.04	58	15.0	14	76
Other middle personnel	39.98	77	14.7	32	58
Office service workers	38.82	84	14.5	28	60
Material recording and transport clerks	39.61	23	12.8	37	56
Cooks	41.69	76	11.8	26	59
Waiters and bartenders	33.01	77	13.7	64	28
Hairdressers and cosmeticians	33.20	95	12.9	33	59
Other personal service workers	50.61	26	12.2	10	65
Sales Workers	36.80	76	12.9	31	62
Personal care workers	43.79	98	12.8	18	63
Security staff (firemen, police and similar)	45.09	15	13.1	21	71
Farmers of plant crops	44.93	41	11.5	18	77
Farmers of plant crops and cattle	44.75	43	11.2	19	76
Subsistence farmers	49.63	45	10.6	22	69
Construction workers	40.63	1	11.3	27	67
Decorators	38.99	1	11.6	35	61
Painters and similar	40.58	3	10.9	32	66
Blacksmiths and lathe operators	44.00	3	11.8	22	71
Smelters and welders	41.87	4	11.5	18	75
Other unclassified workers	41.25	32	11.7	30	63
Machine and equipment mechanics	39.03	3	12.0	32	66
Electricians and electronics specialists	40.93	6	12.6	26	71
Food-processing workers	37.19	42	11.5	28	69
Timber, paper and pulp workers	36.23	11	11.8	44	50
Textile production workers	43.69	77	11.5	13	76
Mining machinery and equipment operators	39.43	4	12.0	31	61
Steel-mill workers	43.01	16	11.9	21	78
Operators of other machinery and equipment	41.18	15	11.9	23	71
Assembly workers	38.60	36	11.7	28	65
Railway staff	48.23	15	12.3	8	91
Drivers of personal and delivery vehicles	42.15	2	12.3	30	69
Bus and truck drivers	41.51	2	11.8	20	76
Househelp and cleaners	48.09	85	11.2	10	71
Auxiliary workers in mining and construction	36.26	1	10.6	43	53
Other manual labour	41.83	49	11.4	31	58

Table 5.12.1. Characteristics of representatives of 54 professions and professional groups, cont.

Current profession	% divorced or separated	% supporting children	% internet users	% overweight	% with foreign languages
Chief executives, senior officials and legislators	11	71	92	64	44
Managers of various specialisations	5	66	98	62	54
Science and engineering professionals	3	54	99	55	64
Doctors, vets and dentists	5	57	96	49	75
Nursing and midwifery professionals	11	60	91	50	28
Other health professionals	4	42	95	43	48
University and higher education teachers	2	53	98	32	78
Secondary education teachers	6	61	98	49	52
Primary school teachers	3	65	99	42	50
Business and Administration Professionals	5	50	100	37	65
Financial specialists	4	64	100	34	66
Marketing specialists	5	52	98	34	63
Information technology specialists	1	44	99	52	70
Lawyers	8	37	100	30	82
Other specialists	6	47	98	34	72
Creatives, artists, writers and journalists	7	41	100	37	89
Technicians and associate professionals	3	55	93	53	35
Financial associate professionals	6	47	96	45	43
Salespersons in trade and business	7	60	97	53	53
Civil servants	6	63	98	52	38
Other middle personnel	7	54	92	38	41
Office service workers	10	52	95	42	41
Material recording and transport clerks	5	45	86	47	28
Cooks	7	51	67	60	23
Waiters and bartenders	6	30	90	35	50
Hairdressers and cosmeticians	7	59	79	28	27
Other personal service workers	16	38	60	54	18
Sales Workers	5	54	88	39	30
Personal care workers	11	49	69	50	35
Security staff (firemen, police and similar)	7	49	74	72	25
Farmers of plant crops	1	55	48	66	14
Farmers of plant crops and cattle	2	58	41	65	12
Subsistence farmers	3	40	33	64	14
Construction workers	4	55	60	64	11
Decorators	4	57	67	60	22
Painters and similar	0	52	72	65	24
Blacksmiths and lathe operators	5	52	71	74	15
Smelters and welders	5	64	74	73	15
Other unclassified workers	4	50	64	54	25
Machine and equipment mechanics	2	47	77	59	19
Electricians and electronics specialists	2	58	84	70	24
Food-processing workers	1	61	72	57	12
Timber, paper and pulp workers	6	45	71	56	24
Textile production workers	7	64	61	53	12
Mining machinery and equipment operators	4	61	75	60	14
Steel-mill workers	1	60	60	57	7
Operators of other machinery and equipment	4	58	73	63	16
Assembly workers	0	62	77	13	13
Railway staff	0	66	62	17	17
Drivers of personal and delivery vehicles	0	45	76	22	22
Bus and truck drivers	2	64	71	28	28
Househelp and cleaners	9	62	50	12	12
Auxiliary workers in mining and construction	3	50	57	11	11
Other manual labour	7	44	58	15	15

Table 5.12.1. Characteristics of representatives of 54 professions and professional groups, cont.

Current profession	Number of friends	% who trust other people	% of lovers of democracy	Frequency of religious practice	% of law-breakers
Chief executives, senior officials and legislators	8.0	22	56	3.1	5
Managers of various specialisations	6.4	17	45	2.0	4
Science and engineering professionals	6.2	20	45	2.0	4
Doctors, vets and dentists	5.8	18	44	1.8	7
Nursing and midwifery professionals	5.6	17	33	2.5	2
Other health professionals	5.8	21	35	2.4	3
University and higher education teachers	7.9	29	45	3.1	1
Secondary education teachers	5.6	14	41	2.5	4
Primary school teachers	6.0	16	45	3.3	4
Business and Administration Professionals	6.8	20	53	1.8	1
Financial specialists	5.4	17	57	2.1	4
Marketing specialists	5.8	22	52	1.4	5
Information technology specialists	6.7	23	53	1.6	2
Lawyers	7.2	18	64	2.2	8
Other specialists	5.8	24	60	3.7	0
Creatives, artists, writers and journalists	6.8	46	66	1.1	1
Technicians and associate professionals	6.2	12	35	1.9	6
Financial associate professionals	5.5	15	37	2.7	1
Salespersons in trade and business	6.5	13	36	1.6	8
Civil servants	5.8	17	38	2.3	1
Other middle personnel	5.7	16	35	2.6	2
Office service workers	5.7	12	36	2.1	3
Material recording and transport clerks	5.1	9	35	1.8	2
Cooks	6.0	11	24	2.6	4
Waiters and bartenders	8.4	6	29	1.9	9
Hairdressers and cosmeticians	6.6	23	29	2.0	7
Other personal service workers	6.0	10	42	2.4	1
Sales Workers	5.8	10	25	2.1	6
Personal care workers	5.6	6	7	3.1	5
Security staff (firemen, police and similar)	6.6	13	31	2.1	4
Farmers of plant crops	7.3	13	22	3.2	7
Farmers of plant crops and cattle	6.6	12	17	3.0	4
Subsistence farmers	7.3	8	10	4.6	3
Construction workers	7.3	12	21	2.3	7
Decorators	5.9	10	24	1.8	6
Painters and similar	6.2	9	14	2.2	10
Blacksmiths and lathe operators	6.7	11	19	2.1	6
Smelters and welders	6.7	7	19	2.1	4
Other unclassified workers	7.2	14	16	2.3	6
Machine and equipment mechanics	7.2	10	23	2.2	8
Electricians and electronics specialists	6.9	14	25	2.2	3
Food-processing workers	5.8	13	19	1.9	5
Timber, paper and pulp workers	6.6	12	21	2.0	13
Textile production workers	6.1	7	18	2.8	0
Mining machinery and equipment operators	6.8	9	17	2.3	3
Steel-mill workers	4.8	7	13	2.3	1
Operators of other machinery and equipment	5.6	12	17	2.5	6
Assembly workers	6.2	10	26	2.1	12
Railway staff	6.1	12	25	2.0	10
Drivers of personal and delivery vehicles	7.4	11	19	3.6	2
Bus and truck drivers	6.5	12	15	1.7	12
Househelp and cleaners	6.4	9	17	2.1	6
Auxiliary workers in mining and construction	5.3	6	13	2.3	1
Other manual labour	6.0	10	17	2.5	6

Table 5.12.1. Characteristics of representatives of 54 professions and professional groups, cont.

Current profession	Number of physical symptoms	% with suicidal thoughts	Incidence of depression symptoms	% satisfied with their achievements	% satisfied with their prospects
Chief executives, senior officials and legislators	0.35	5	2.32	59	33
Managers of various specialisations	0.37	6	2.56	53	32
Science and engineering professionals	0.45	5	2.51	45	25
Doctors, vets and dentists	0.41	3	2.76	57	32
Nursing and midwifery professionals	0.49	4	3.17	47	20
Other health professionals	0.37	8	2.13	49	21
University and higher education teachers	0.52	11	3.03	55	29
Secondary education teachers	0.48	10	2.92	57	31
Primary school teachers	0.59	9	2.93	57	27
Business and Administration Professionals	0.60	6	2.90	53	35
Financial specialists	0.39	9	2.82	39	23
Marketing specialists	0.49	9	2.55	48	24
Information technology specialists	0.40	5	1.77	39	20
Lawyers	0.39	10	2.63	65	43
Other specialists	0.53	2	2.37	57	31
Creatives, artists, writers and journalists	0.74	15	2.85	40	25
Technicians and associate professionals	0.42	7	2.69	42	23
Financial associate professionals	0.50	10	3.62	38	25
Salespersons in trade and business	0.40	11	2.55	41	18
Civil servants	0.26	6	2.64	45	17
Other middle personnel	0.48	11	2.87	42	24
Office service workers	0.46	9	2.73	39	23
Material recording and transport clerks	0.52	9	2.70	40	18
Cooks	0.42	11	2.99	45	26
Waiters and bartenders	0.38	11	2.19	38	19
Hairdressers and cosmeticians	0.56	19	2.26	43	17
Other personal service workers	0.59	13	3.55	42	27
Sales Workers	0.51	9	2.66	35	19
Personal care workers	1.00	14	3.52	30	17
Security staff (firemen, police and similar)	0.51	9	3.37	35	23
Farmers of plant crops	0.56	8	3.60	38	21
Farmers of plant crops and cattle	0.45	10	3.86	31	17
Subsistence farmers	0.68	10	4.66	31	18
Construction workers	0.30	11	2.55	32	22
Decorators	0.27	9	2.28	37	19
Painters and similar	0.48	11	2.85	36	21
Blacksmiths and lathe operators	0.57	14	3.14	30	19
Smelters and welders	0.29	7	2.23	35	18
Other unclassified workers	0.41	16	3.21	29	23
Machine and equipment mechanics	0.33	7	2.00	41	20
Electricians and electronics specialists	0.30	7	2.55	41	19
Food-processing workers	0.40	9	2.52	38	21
Timber, paper and pulp workers	0.51	8	2.44	32	18
Textile production workers	0.52	11	3.55	29	15
Mining machinery and equipment operators	0.41	11	2.69	51	35
Steel-mill workers	0.38	6	2.13	31	9
Operators of other machinery and equipment	0.27	10	2.89	36	21
Assembly workers	0.41	12	2.44	30	20
Railway staff	0.21	15	4.04	44	13
Drivers of personal and delivery vehicles	0.43	7	2.28	34	20
Bus and truck drivers	0.19	6	2.20	37	22
Househelp and cleaners	0.92	13	4.38	24	15
Auxiliary workers in mining and construction	0.21	12	2.19	24	9
Other manual labour	0.59	13	3.55	31	19

Table 5.12.1. Characteristics of representatives of 54 professions and professional groups, cont.

Current profession	% satisfied with their work	Number of hours worked per week	% intending to emigrate	% unemployed in 2011-2012	% changing jobs in 2011-2013
Chief executives, senior officials and legislators	73	42	0	3	11
Managers of various specialisations	58	45	6	0	12
Science and engineering professionals	49	42	12	3	15
Doctors, vets and dentists	64	46	3	2	9
Nursing and midwifery professionals	49	42	3	2	8
Other health professionals	56	39	6	10	15
University and higher education teachers	53	40	5	5	6
Secondary education teachers	62	36	7	3	8
Primary school teachers	58	34	2	4	8
Business and Administration Professionals	44	40	4	0	21
Financial specialists	46	41	7	6	13
Marketing specialists	50	41	5	3	22
Information technology specialists	38	42	11	5	18
Lawyers	53	42	0	8	23
Other specialists	62	37	2	3	13
Creatives, artists, writers and journalists	43	37	7	0	10
Technicians and associate professionals	47	43	11	4	16
Financial associate professionals	38	40	6	6	14
Salespersons in trade and business	38	42	7	7	24
Civil servants	43	40	5	4	11
Other middle personnel	51	36	10	13	11
Office service workers	45	40	8	12	15
Material recording and transport clerks	40	41	5	10	14
Cooks	42	41	8	5	14
Waiters and bartenders	44	39	18	7	29
Hairdressers and cosmeticians	67	41	5	5	11
Other personal service workers	53	41	3	7	10
Sales Workers	37	42	8	12	21
Personal care workers	41	37	14	14	23
Security staff (firemen, police and similar)	43	44	2	9	22
Farmers of plant crops	42	38	6	3	8
Farmers of plant crops and cattle	34	41	5	4	6
Subsistence farmers	26	27	6	9	9
Construction workers	36	44	20	13	24
Decorators	37	45	22	20	25
Painters and similar	46	43	14	10	24
Blacksmiths and lathe operators	36	43	15	8	19
Smelters and welders	41	45	18	8	26
Other unclassified workers	33	41	16	13	19
Machine and equipment mechanics	45	43	11	7	17
Electricians and electronics specialists	38	42	7	7	15
Food-processing workers	39	43	8	7	14
Timber, paper and pulp workers	43	45	15	9	21
Textile production workers	29	42	8	10	21
Mining machinery and equipment operators	56	41	2	3	12
Steel-mill workers	31	41	0	8	10
Operators of other machinery and equipment	39	43	6	9	18
Assembly workers	33	42	11	15	24
Railway staff	37	44	1	0	4
Drivers of personal and delivery vehicles	41	44	7	10	18
Bus and truck drivers	41	46	10	7	17
Househelp and cleaners	33	37	4	17	18
Auxiliary workers in mining and construction	27	41	16	22	35
Other manual labour	31	39	11	20	18

6. The state of civil society

6.1. Social attitudes and relations

Janusz Czapiński

6.1.1. Attitudes to the common good

In 2013, in comparison with previous years, fewer respondents declared that they did not care at all about harm to the common good or cared little about it (table 6.1.1).

Polish people care least about the fact that someone does not pay for public transport or avoids paying taxes. However, in comparison especially with 2007 and 2009, the indifference to these forms of abusing the common good decreased. In relation to the remaining questions, a similar growth in the sensitivity to the abuse of the common good was observed. These differences are of statistical significance (table 6.1.2.). However, after 20 years of building a democratic state, almost half of its citizens are still indifferent to six forms of how the common good is abused.

Table 6.1.1. Percentage distribution of answers on the abuse of the common good

Categories of behaviour	Year	I do not care at all	little	some extent	very much	It is hard to say
Tax evasion	2007	27.8	28.3	24.0	13.5	6.4
	2009	28.6	27.6	22.5	13.5	7.8
	2011	24.9	26.9	26.9	16.0	6.3
	2013	22.9	25.9	27.0	17.6	6.7
Fare-dodging on public transport	2007	26.6	32.3	22.5	13.3	5.3
	2009	26.9	31.7	21.7	13.5	6.2
	2011	23.6	31.2	24.4	15.8	5.0
	2013	22.4	30.6	24.8	16.7	5.5
Unemployment benefit fraud	2007	21.3	25.1	24.2	23.3	6.0
	2009	22.2	24.5	23.1	23.2	7.0
	2011	18.5	24.5	26.9	24.5	5.6
	2013	18.6	23.4	26.6	25.5	5.9
Welfare benefit fraud	2011	18.7	22.8	25.6	25.8	6.9
	2013	18.0	22.3	25.9	27.0	6.8
Insurance fraud	2011	19.8	23.8	24.0	24.9	7.5
	2013	19.2	23.5	23.4	25.8	8.1

Table 6.1.2. Comparison of attitudes to the public good between in panel samples from 2009, 2011 and 2013

Variable	Study year	Average	Standard deviation	Average difference	t	Degrees of freedom	Statistical significance	Correlation
Sensitivity to the common good	2009	2.54	1.059	-0.105	-8.932	11891	0.000	0.270*
	2013	2.65	1.056					
	2011	2.67	1.031	-0.040	-4.359	17792	0.000.	0.316*
	2013	2.71	1.057					

* p<0.000

The five questions form one coherent and highly reliable indicator of degree of sensitivity for common-good (Cronbach *alpha* 0.93) as the higher the reading, the greater the sensitivity to the public good. Table 6.1.3 shows the average indicator value in 2013 broken down by socio-demographic group.

Men are less sensitive about the damaging of public goods, the least sensitive are the youngest, while the most are people between 45 and 59. The least sensitive are residents of rural areas and small towns, the poorest and those with the lowest educational attainment. It is exactly the differences in education

that explain the differentiation according to previous divisions - there are more educated people in the large and largest cities and the prosperous than there are among the poor. After consideration of this fact (excluding education), difference between rich and poor and the residents of cities and rural areas almost disappeared. So, education is the main factor responsible for at least some demographic and economic differences in sensitivity to the common good[74]. The lowest sensitivity was recorded in Warmińsko-Mazurskie and Wielkopolskie, and the highest in Mazowieckie, Śląskie and Dolnośląskie.

Table 6.1.3 Indicator of sensitivity to public good by various socio-demographic groups

Socio-demographic group	Average
Total	2.70
Gender	
Men	2.67
Women	2.73
Age	
Under 24	2.48
25-34	2.65
35-44	2.75
45-59	2.79
60-64	2.76
65 and above	2.73
Place of residence	
Towns of more than 500k	2.87
Towns of 200k-500k	2.91
Towns of 100k-200k	2.86
Towns of 20k-100k	2.69
Towns of fewer than 20k	2.65
Rural areas	2.59
Voivodeship	
Dolnośląskie	2.76
Kujawsko-pomorskie	2.64
Lubelskie	2.72
Lubuskie	2.73
Łódzkie	2.62
Małopolskie	2.75
Mazowieckie	2.82
Opolskie	2.70
Podkarpackie	2.69
Podlaskie	2.77
Pomorskie	2.71
Śląskie	2.78
Świętokrzyskie	2.61
Warmińsko-mazurskie	2.43
Wielkopolskie	2.52
Zachodnio-pomorskie	2.67
Educational attainment	
Primary and lower	2.52
Basic vocational/lower secondary	2.59
Secondary	2.75
Higher and post-secondary	2.91
Per capita income	
Lower quartile	2.57
Middle 50%.	2.70
Upper quartile	2.85
Social and professional status	
Public sector	2.86
Private sector	2.72
Private entrepreneurs	2.73
Farmers	2.64
Pensioners	2.62
Retirees	2.77
School and university students	2.49
Unemployed	2.62
Other inactive labour	2.59

[74] The education effect is the strongest among these social categorisation criteria, $F(3,25958)=155,226$, $p<0.000$, $\eta^2= 0,018$.

Regressive analysis once more reveals the importance of education (table 6.1.4), a variable that explains the greatest portion of variation after social capital[75]. The next variable is place of residence class - the smaller the location the weaker the sensitivity to the common good and then age (the older, the more sensitive). Farmers are more sensitive and entrepreneurs less compared to other professional social groups. Sensitivity rises with religious belief, prosperity and positive attitude to democracy.

Table 6.1.4. Factors explaining differences in sensitivity to the public good

Predictor	Beta	t	p
(Constant)		27.618	0.000
Educational attainment	0.090	8.668	0.000
Social Capital	0.078	8.782	0.000
Age	0.082	6.983	0.000
Public sector worker	0.011	1.169	0.243
Private sector worker	0.016	1.648	0.099
Farmer	0.018	2.104	0.035
Pensioner	-0.003	-0.237	0.813
Entrepreneur	-0.029	-3.434	0.001
Per capita income	0.025	2.793	0.005
Attitude to democracy	0.017	2.025	0.043
Materialistic attitude	0.004	0.521	0.602
Religiousness	0.047	5.564	0.000
Age	0.011	1.279	0.201
Class of place of residence	-0.067	-7.634	0.000

Sensitivity to the common good is growing, which is without doubt an effect of Poles rapidly improving education. Thanks to education, ever more are aware that we are "all in the same boat" and that sooner or later the dishonesty of others will bounce back on us. However, this rise in sensitivity is not sufficient to be able to say that we are building a civil society.

6.1.2. Social Dominance and Egalitarianism

Jim Sidanius and Felicia Pratto's social dominance theory (1993, 1999; Pratto, Sidaniu, Stallowrth and Malle, 1994), derives from the influential theory of social identity (Tajfel, Turner, 1979). It assumes that people, to various degrees, prefer inequalities between groups in order to defend social hierarchy and their own positions in it, usually favouring the groups to which they themselves belong and discriminating foreign groups. The theory proposes a *Social Dominance Scale* (ODS) as a tool to gauge the strength of inequality orientation. Persons of a high indicator level towards social domination seek to maintain the hierarchical structure in which one group dominates and others are subordinate. Studies with the use of this scale prove its considerable predictive capacity, as it allows the accurate definition of attitudes to foreign groups, especially minority groups. It is therefore a good instrument to assess xenophobic, authoritarian and racist attitudes. This year in the *Diagnosis* we have included 4 questions from the *Social Dominance Scale* (Annex 1, individual scale, questions 54.13 - 54.18).

However they break down not into one, as the creators of the original instrument wanted and as was confirmed in an enormous number of studies in the USA and other Western countries, but two separate factors explaining together 66% of variation (table 6.1.5). The first factor includes two statements denying certain people value and certain social groups respect, and may be accepted as an appropriate measure of orientation on social domination. The second factor links two statements on the subject of equal treatment of other people and the minimalisation of economic differences between people. Therefore egalitarian attitudes are not in Poland in opposition to orientations of social domination. It is possible to support equal treatment of all and at the same time entertain the conviction that not everyone deserves respect. The correlation between the two amounted to 0.

[75] Please see chapter 9.2 for an operational definition of this indicator.

Let us therefore accept that the ODS scale measures two different, independent attitudes in the Polish population – dominance (conviction of the moral superiority of one group of people over other people and groups) and egalitarianism. The breakdown of the two indicator values indicates that the egalitarian attitude is more common than that of dominance. The egalitarian attitude (average assessment of appropriate statements from 1-definitly yes to 3.5 - rather yes) is presented by 74% of respondents, and the domination attitude (average assessment of appropriate statements from 1-*definitly yes* to 3.5 - *rather yes*) by much less - 45%. Therefore one can say that Poles generally support equal treatment of all and a levelling of income differences, and less often deny certain people and groups their right to respect.

Taking both attitudes into account, it is possible to create a four-category typology and call those presenting egalitarian and domination attitudes egalitarian conservatives (not everyone deserves respect, but everyone is equal), those with non-egalitarian and non-domination attitudes are open liberals (everyone should be respected, though not everyone is equal), those with egalitarian and non-domination attitudes are open egalitarians (everyone should be respected and everyone is equal), and finally those who present non-egalitarian and domination attitudes may be called liberal conservatives (not everyone deserves respect and not everyone is equal). It is a certain simplification that this division into four types is linked to a division of prejudices into moral, associated with a value system (denial of respect) and instrumental (non-acceptance of differences of an economic and social position).

Table 6.1.5. Results of factor analysis by principle component method with varimax rotation of ODS scale position

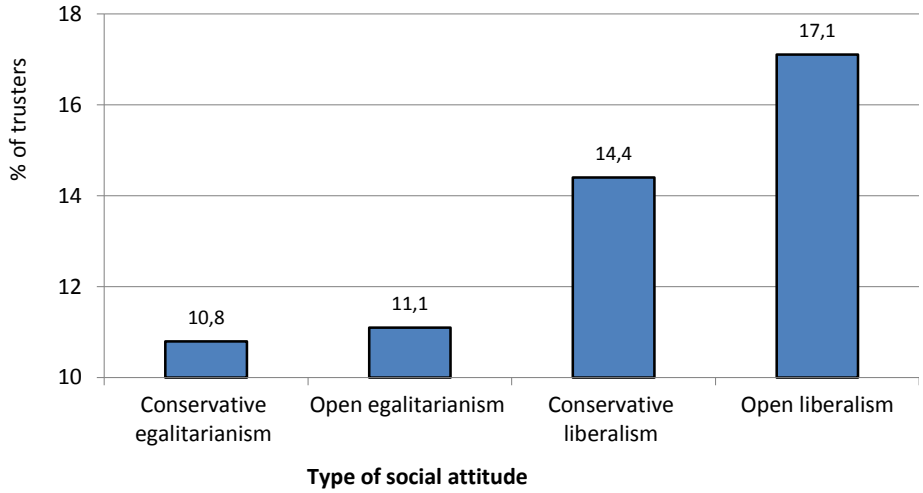
Statements from the orientation scale on social domination	Factors					
	Social dominance			Egalitarianism		
	2013	2011	2009	2013	2011	2009
Some people are worth more than others	0.817	0.815	0.790			
We should at all costs treat others in the same way				0.779	0.786	0.773
Some social groups do not deserve respect	0.834	0.827	0.809			
We should try to make sure that everyone's earnings are more or less equal				0.795	0.799	0.797
Percentage of explained variation	35	35	33	31	32	31

Table 6.1.6 presents the percentage breakdown of these four categories of person, with that of open egalitarians (40%) and conservative egalitarians (34%) dominant. Therefore, altogether 7 out of 10 Poles present egalitarian attitudes. Liberals are definitely in the minority, and conservatives denying certain people and groups their right to respect and who accept income differentiation as well as different positions are 10.8% of the research sample, and open liberals who do not deny anyone the right to respect but accept differences in status are 14.8%.

Table 6.1.6. Typology of respondents in terms of type of social attitude in 2005, 2007, 2009 and 2011 (%)

Attitude	Dominance				No dominance			
	Respondent category	2013	2011	2009	Respondent category	2013	2011	2009
Egalitarian	Conservative egalitarians	34.3	38.1	37.7	Open egalitarians	40.1	39.0	37.6
Non-egalitarian	Conservative liberals	10.8	10.8	12.3	Open liberals	14.8	12.1	12.3

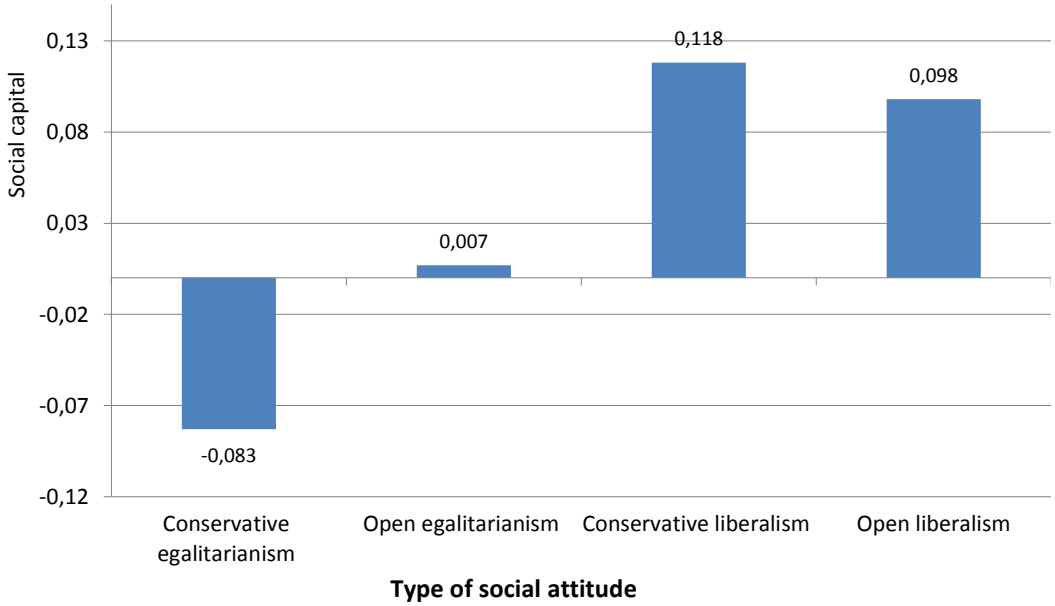
Social attitude resulting from orientation on social domination and acceptance of egalitarianism has a significant bearing on behaviour that forms social capital (chapter 6.3). One of the important factors of social capital, general trust in people, is the lowest value in both groups of egalitarians (11%), and highest in the open liberal group (17%) (figure 6.1.1).



NOTE: effect of attitude type F(3, 25603)=45.240, p <0.000, η^2= 0.005; *post hoc* difference test (Scheffe): only conservative egalitarianism does not differ from open liberalism to a statistically significant extent. All other differences are significant.

Figure 6.1.1. Share of trusters in others by type of social attitude

The breakdown of the synthetic indicator of social capital looks similar, including, apart from trust, membership in organisations and functional duties in organisations, participation in local community work, active vocal participation in public meetings and taking part in parliamentary elections. The highest value of the indicator occurs in the conservative liberal group, and the lowest among the conservative egalitarians, while only the conservative liberals do not differ to a statistically significant degree from the openly liberal in this respect (figure 6.1.2).

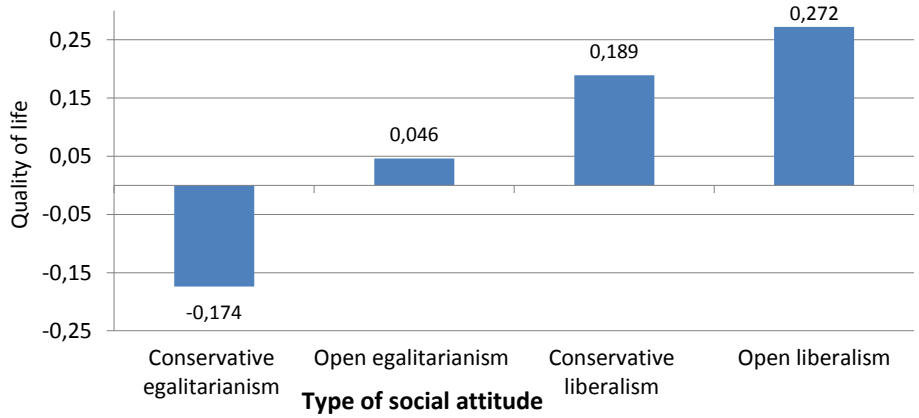


NOTE: effect of attitude type F(3, 25596)=45.261, p <0.000, η^2= 0.005; *post hoc* difference test (Scheffe): only open liberalism does not differ from conservative liberalism to a statistically significant extent. All other differences are significant.

Figure 6.1.2. Degree of social capital in terms of type of social attitude

The relation between the type of social attitude and quality of life is also significant (figure 6.1.3).[76] Just as in the case of social capital, the highest quality of life indicator readings are characteristic of liberals, and the lowest among the conservative egalitarians.

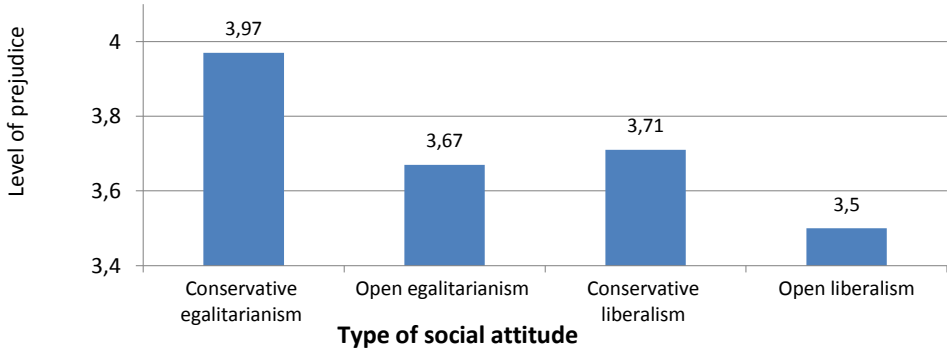
[76] See chapter 9.2 for detailed information on the quality of life indicator



NOTE: effect of attitude type F(3,21270) = 187.948, p <0.000, η^2= 0.026; *post hoc* difference test (Scheffe): all attitudes differ between each other to a statistically significant extent.

Figure 6.1.3. General quality of life by social attitude

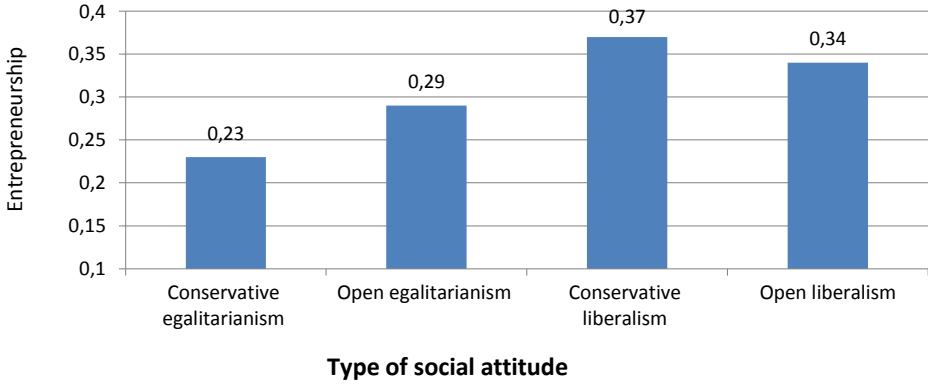
The level of prejudice towards foreigners and homosexuals [77] is highest in the conservative egalitarian group and the lowest among the open liberals (figure 6.1.4).



NOTE: effect of attitude type F(3, 25600)=161.056, p <0.000, η^2= 0.019; *post hoc* difference test (Scheffe): only open egalitarianism does not differ from conservative liberalism to a statistically significant extent.

Figure 6.1.4. Level of prejudice by social attitude

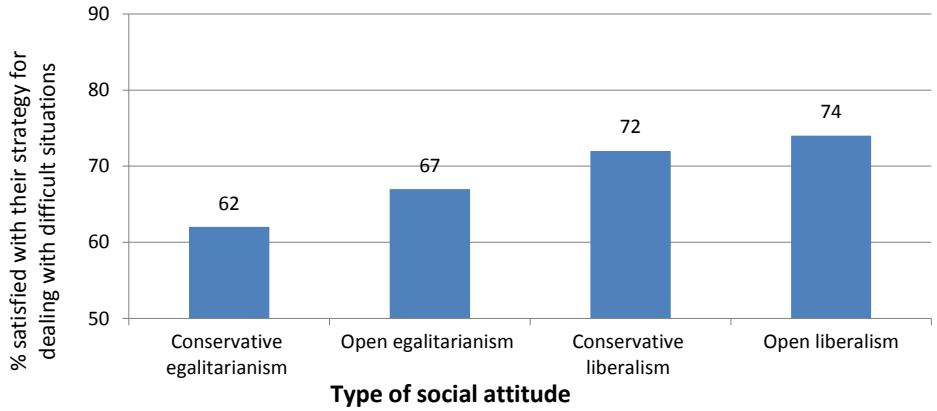
Liberalism goes hand in hand with entrepreneurship (figure 6.1.5)[78]. Among those with egalitarian attitudes, the level of entrepreneurship (so called foxyness) is clearly lower than among liberals, and the breakdown of those applying take-orientated strategy in difficult situations fits in with this (figure 6.1.6). It therefore comes as no surprise that liberals achieve much higher incomes than the egalitarians, and the open egalitarians somewhat higher earnings than conservative egalitarians (figure 6.1.7).



NOTE: effect of attitude type F(3, 25643) = 50.556, p <0.000, η^2= 0.006; *post hoc* difference test (Scheffe): only conservative liberalism does not differ from open liberalism to a statistically significant extent.

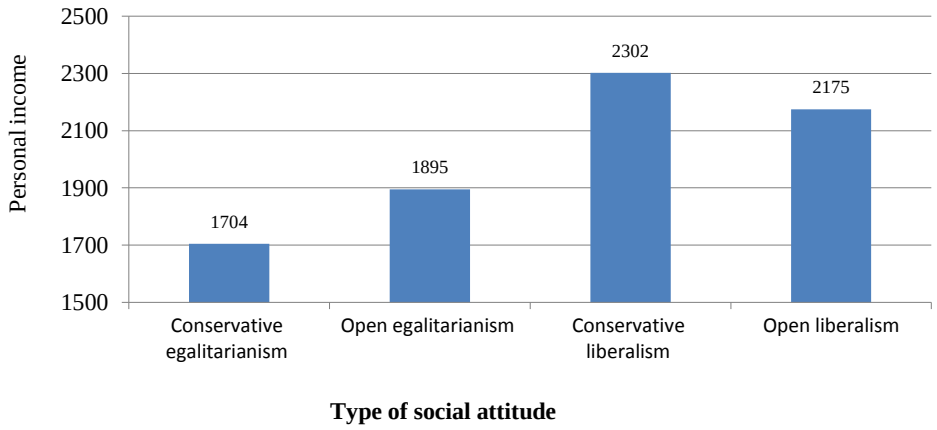
Figure 6.1.5. Indicator of entrepreneurship (% of "foxes") by social attitude

[77] This indicator was created on the basis of questions 54.9 and 54.12 of the individual questionnaire (Annex 1)
[78] The entrepreneurship indicator is the sum of YES answers to questions 30-33 of the individual questionnaire (Annex 1).



NOTE: effect of attitude type F(3, 25374) = 49.256, p <0.000, η^2= 0.006; *post hoc* difference test (Scheffego): only conservative liberalism does not differ from open liberalism to a statistically significant extent.

Figure 6.1.6. Percentage of persons applying task-oriented coping strategy by social attitude



NOTE: effect of attitude type F(3, 18815) = 114.856, p <0.000, η^2= 0.018; *post hoc* difference test (Scheffe): all attitudes differ between each other to a statistically significant extent.

Figure 6.1.7. Personal income by social attitude

There is no strong link to political identification with the two largest parties in Poland, PO and PiS, though clear liberals tend to be PO rather than PiS, and egalitarians are the opposite (figure 6.1.8).

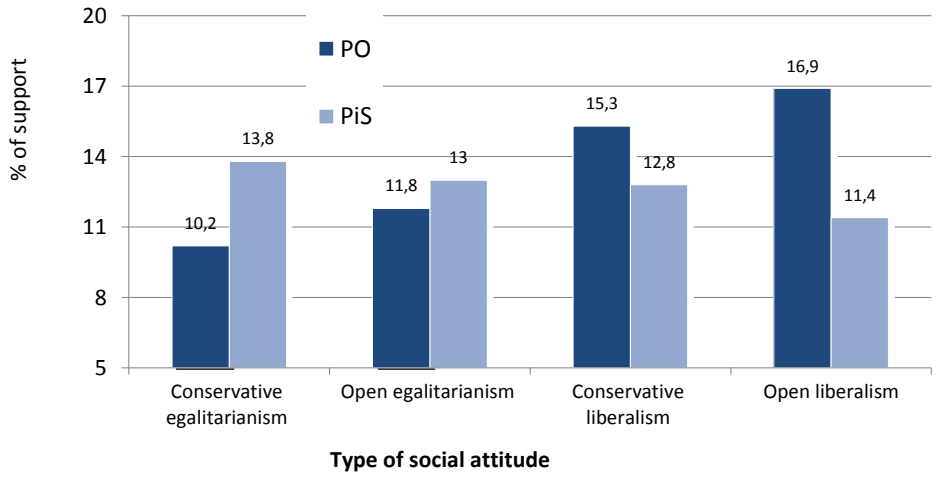


Figure 6.1.8. Percentage of PO and PiS support by social attitude

6.2. Civil experience, activities for the benefit of the community and civil skills

Antoni Sułek

Civil experience, activities for the benefit of the community and civil skills are indispensable to both a democratic society and its citizens. Democracy needs citizens who want and are able to make use of its mechanisms, and if the citizens are deprived of civil skills, they are unable to benefit from the opportunities democracy offers them, such as the possibility to express their preferences and fulfil their interests. The development of democracy and the increase in civil skills in society support each other. The places where citizens may gain experience and learn civil skills include voluntary organisations, activities and contacts that fill the space between an individual and the society, citizen and state. The network of such organisations and activities creates what we call self-organising civil society.

6.2.1. Assessment of systemic change and their influence on the life of Poles

The political and economic systemic changes in Poland since 1989, the establishment of democracy in the place of authoritarianism and the replacing of the command with the market economy, brought with them deep and far-reaching changes in society, changed the position of basic social groups and influenced the fate of millions. In order to assess these changes, the following questions were asked: *Do you believe that the reforms in Poland since 1989 were a success or rather not?* (question 43). The question has been posed since 1997, which allows us to follow changes in assessment over time. This is important because the influence, memory and assessment of such an enormous historical event as this have their own dynamic.

6.2.2. General assessment of the reforms and its social differentiation

The general assessment of the reforms initiated in 1989 is a difficult study material. Only just over half of those surveyed were able to provide answers at all, and 44.4% of these found themselves in the "difficult to say" category" - even among people with a higher than secondary education, this share is not much lower (41.3%) (table 6.2.1). However, those who are unable to provide an assessment of the reforms are slowly growing fewer. In 1997, there were 59.8%, the trend fluctuates visibly as between 2009 and 2011 the category lost 3.1p.p. and since 2011 another 4.1 p.p., but between 2007-2009 there were 4.0 p.p. more undecided respondents.

The difficulty in formulating this assessment has many reasons connected to the complex character of the events assessed as well as the process by which these assessments are created. The post 1989 reforms are a complex of events ever further in the past and as the population loses those who actually remember them, the share of the answer "difficult to say" may grow in natural fashion. The assessments of these reforms do not arise only on the basis of personal observation as new generations form theirs on the basis of narrations of their elders or simply accept their assessment, and narrations present in the public domain are also important. These experiences and narrations are differentiated, as are also the assessments. But that is not only why the post-1989 reforms cannot count on a consensus opinion generally accepted in society. For that to be possible, a consensus among the political and media elite is essential in that it would shape mass opinion and raise it to the level of a socially accepted "common imagination". However, for many more years many Poles will not know what to think of the 1989 reforms, and so opinions will differ.

Respondents who assessed the post-1989 reforms as unsuccessful (53.9%) were 4 times more numerous than those with the opposite opinion (11.6%). In relation to 2011, these assessments became more negative as then 14% said the reforms had been a success as opposed to 37.2% who answered that this had not been the case.

The dominant opinion that the reforms had been *un*successful varies with social position, however it does prevail over the opposite in all social categories by age, education, income, professional status and all place of residence classes. Therefore it is the real opinion of a definite, though relative majority. Our analysis will focus on the minority of the opinion that the reforms had succeeded, with the majority as the backdrop.

Of significance to the assessment of the post-1989 reforms is educational level (table 6.2.1), behind which label is concealed number of years in education and its kind, as is also profession and belonging to a definite level of society. In the four main educational groups (primary and lower, basic vocational, secondary and higher) the breakdown was 5.3%, 7.3%, 11% and 22.4% respectively. The rise in positive

assessments with education is slow and there is only a jump with higher education, and only in the elitist doctorate group do the positive opinions (36.9%) outweigh the negative (34.9%). Theoretically speaking one could expect that the opinions of the upper social spheres, which are propagated by the media, will "cascade down" to the high-school graduate and engineer groups, there to mix with already existing opinions and so on. However, compared to 2011, nothing of the sort was observed. Quite the opposite was, as in the masters' degree group there was a balance of opinions (a difference of 0.6 p.p.), and today negative opinions clearly prevail.

Table 6.2.1. Percentage distribution of answers to "In your opinion, were the reforms in Poland after 1989 in general successful or unsuccessful?" by educational attainment for the 18+

Educational attainment	Successful	Unsuccessful	Hard to say	N
Higher education with at least a PhD title	36.9	34.9	28.2	147
Higher education with at least an MA degree or an equivalent degree	26.5	34.1	39.3	3770
Higher education with an Engineer or Bachelor degree	15.4	36.6	48.0	1263
Post-secondary education	11.5	46.6	41.9	805
Secondary vocational	10.5	48.4	41.4	5499
Secondary general	11.9	42.5	45.6	2570
Basic vocational education	7.4	50.2	42.4	6724
Lower secondary	6.9	21.9	71.2	1524
Primary completed	5.3	48.8	45.9	3575
No education / primary not completed	6.0	42.8	51.2	213
Total	3039	14490	11632	26170

Correlation between place of residence class and assessment of reform had a similar direction and shape (table 6.2.2). Positive assessment of the reforms become more frequent with place of residence size very slowly and only in the largest cities of over 500 thousand residents does their frequency go above 21.8%, but even there they are far from parity.

Table 6.2.2. Percentage distribution of answers to "In your opinion, were the reforms in Poland after 1989 more successful than not?" by place of residence class for the 18+

Place of residence class	In your opinion, were the reforms in Poland after 1989 more successful than not?			
	Successful	Unsuccessful	Hard to say	N
Towns of more than 500k	21.8	39.6	38.6	3160
Towns of 200k-500k	17.0	42.4	40.9	2483
Towns of 100k-200k	12.6	41.6	45.8	2015
Towns of 20k-100k	10.6	44.5	44.9	5098
Towns of fewer than 20k	10.7	48.4	42.9	3119
Rural areas	7.7	45.2	47.1	10292
Total	11.6	43.9	44.4	26170

Income also influences the assessment of the reforms. 6.7% of the lowest per capita household income quartile assesses the reforms as successful, the two middle quartiles report 7.5% and 10.5% and the upper is 21.5% of those expressing an opinion

As far as the great professional groups are concerned, it is the private entrepreneurs who most often rate the reforms positively at 39%, and this proportion is for the group recognised to be the biggest beneficiary of the market reforms! Each of the remaining groups assess the reforms negatively many times more often than positively. Among public sector workers the proportion amounts to 15.8% to 44.7% and the private sector 14.3 to 41.7%. Among farmers it is 6.7% to 50.2% similarly to pensioners, those receiving welfare benefits, the unemployed and other categories of the passive professional.

In 2011, 26.5% of entrepreneurs claimed the reforms had been a success as opposed to the 31.4% who reported that they had not, though there was near parity among students (12.9% "successful" to 14.4% "unsuccessful"). These however, just like entrepreneurs in the last two years, drew closer in their assessments to the other social groups (10.4% to 24.4%).

Generally, beliefs about the success of the post-1989 reforms culminate in the upper-regions of the social ladder, while occurring much more rarely in the lower reaches where the dominant opinion that the reforms did not succeed is especially strong. This culmination of positive and negative ratings of reform is strengthened by the fact that the basic dimensions of social position like educational level, income and place of residence size interrelate. As a result, for example there are categories in which the combined influence of education, place of residence class and income cause positive assessment to be clearly dominant. Such a category would be, among all the city types, those with higher education in the upper income quartile, so that around 80% of those resident in towns of over 200 thousand with higher education and highest income assess the reforms positively. These categories are made up of few individuals and do not have a marked effect on the breakdown of ratings in the whole of society. Also, their influence on mass opinion are similarly small, and mass opinion is rather shaped by people's personal experience and opinions encountered in the immediate surroundings.

6.2.2.1. Factors shaping the general assessment of the reforms

The differentiating influence of social position (education, place of residence class and income) on the assessment of reforms may be explained with the aid of various factors that, being correlates or components of features of social position, influence that position more directly.

In previous editions of *Social Diagnosis* it was demonstrated that there continues to be a positive relation between the ratings of the conditions of *one's own* life and the *general* assessment of reform after 1989. People who answered the question *"When was life easier for you - before 1989 or today?"* as today, also clearly better assess the post-1989 reforms. For example, in 2009, among the respondents who subjectively felt that their life had been better before 1989, only 7.4% assessed the reforms positively and 59.9% negatively. However, of those who reported that their life had improved after 1989, 30.2% assessed the reforms as successful and 31.4% as unsuccessful. Because as time goes by the share of persons who can actually make the comparison between their lives before and after 1989 is shrinking all the time, this question has not been posed in this edition of *Social Diagnosis.*

An important shaping factor of the general assessment of post-1989 reforms is political values and the belief that democracy is a good system. On the acceptance of democracy scale, 25.5% respondents chose the opinion that "democracy is superior to all other forms of government", 13.6% that "sometimes non-democratic government can be better than democratic", 16% that "it does not matter whether the government is democratic or non-democratic" while 5.8% believes that "democracy is a bad form of government" and that 39% gave no opinion. Therefore, unreserved acceptance of democracy as a form of government is in Poland low; even though it gained 4 p.p. in 2009-2011, in the last two years it lost 2.7% so it is difficult to talk about a strengthening in the absolute faith in democracy.

Attitudes to democracy strongly depend on educational attainment. In the following four main education groups, the view of democracy as absolutely superior to other forms of government was expressed by respectively 11.6% (2011-14.4%), 16.7 (20.5), 27.1 (29.8) and 43.6 (45.6)% of respondents. Just as two years before, this view was shared by more than half respondents with an opinion only in the group of the highest educated.

Being in good personal economic shape also favours the affirmation of democracy. 38.7% of respondents in the upper-income quartile absolutely accept democracy, in the third 26.7%, in the second 19.5% and in the lower only 15.6%, which is two and a half times less than in the highest. Ratings also grow with size of place of residence from 19.2% in rural areas to 41.8% in the largest cities (over 500 thousand residents). The greatest growth (6.9 p.p.) takes place between towns of 200-500 thousand and that of over 500 thousand. The influence of each of these factors: education, income and size of place of residence, is therefore abrupt and the rise in the affirmation of democracy takes place only at the highest level of the three factors mentioned. While they are inter-correlated, each has its individual effect on the acceptance of democracy.

Such a low absolute acceptance of political democracy cannot favour society's positive evaluation of the reforms taken up since 1989. However it does explain some of the individual distribution of these assessments (table 6.2.3). People who treat democracy as the best form of government sharply differ in their positive assessment of the reform (28%)

The affirmation of democracy influences the assessment of the reforms on each of the four main levels of education as those who accept democracy without reservation much more often than is the norm see the reforms as successful (19.1% compared to 5.3% in the educated group, 18.9% compared

to 7.3%, 23.5% compared to 11% and 38.1% compared to 22.4% in the highest educated group), which is similar in all the classes of residence and income quartiles, and is therefore the real influence of acceptance of democracy on the assessment of the post-1989 reforms. Most likely, people who value democracy appreciate that Poland became a democratic country after 1989.

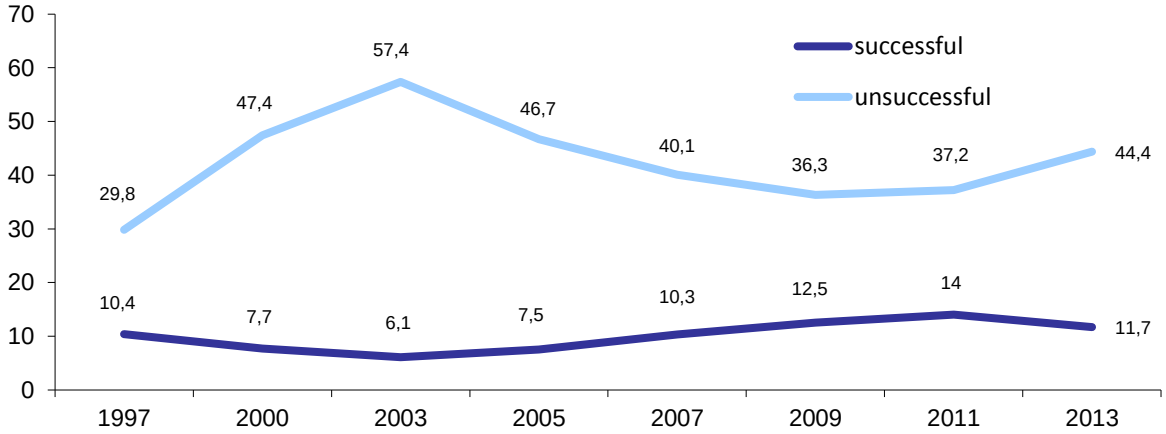
Table 6.2.3. Percentage distribution of answers to "In your opinion, were the reforms in Poland after 1989 more successful than not?" by attitude to democracy for the 18+

Which of these statements on democracy is closer to your attitude?	In your opinion, were the reforms in Poland after 1989 more successful than not?			
	Successful	Unsuccessful	Hard to say	N=100%
Democracy is a superior form of government	28.0	34.0	38.1	6596
Sometimes non-democratic rule is better than democracy	10.9	56.1	33.0	3512
It does not really matter whether the government is democratic or not	6.2	53.9	38.9	4170
Democracy is a bad form of government	5.5	71.2	23.2	1498
It is hard to say	4.4	37.8	57.8	1071
Total	11.6	43.9	44.5	25847

6.2.2.2. Dynamic of assessment of reform in 1997-2013

Dynamic analysis of social assements of post-1989 reforms covers eight readings starting in 1997. Their results are presented in figure 5.11.1. Over that whole period the opinion dominated in society that the 1989 reforms had not succeeded. Negative ratings always occurred several times more often than the positive, and such a long-term statistical domination of negative ratings of the 1989 reforms has a tendency to turn into a self-perpetuating social dominance. A social climate is created in which a negative opinion of the reforms takes on the features of political correctness.

Over this whole period there is a lack of a single general tendency allowing the prediction of assessments, whether for their steady improvement or deterioration. Firstly, between 1997 and 2003 the already small minority positively rating the reforms actually shrank, while the opposite view doubled in size. However later, from 2003, a new trend appeared and the assessment of reforms systematically improved from 6.1% in 2003 to 14% in 2011, while the share of negative ratings fell from 57.5% to 37.2%, after which in 2013 there was another reversal. Negative opinions have risen to levels from before 2007 and the positive have fallen to that before 2009 (see figure 5.11.1). The improvement in opinions on the 1989 reforms may occur as a result of general economic growth and its positive effect on respondents. This influence cannot however be very significant as the events in question recede with time and mass opinion tends to see the association between the current state of the economy and the 1989 reforms ever less clearly. Meanwhile, socially accepted assessments of those changes have started to live a life of their own. Data source: 1997 - Czapiński, 1998, 2000-2011 - *Social Diagnosis*.



Data source: 1997 — Czapiński, 1998; 2000-2011 — *Social Diagnosis*

Figure 6.2.1. Percentage distribution of answers to "In your opinion, were the reforms in Poland after 1989 more successful than not?" between 1997 and 2013 among those aged 18 and above

6.2.3. Participation and serving functions in organisations

The degree of *participation in associations*, that is the percentage of the citizens who belong to a voluntary organisation, is the simplest measure of the state of a civil society. In 2013 in Poland, 13.7% of respondents belonged to some "organisations, associations, parties, committees, councils, religious groups or a clubs". 10.3% of them were members of only one association, 2.5% of two associations, and 0.9% of two or more. 86.3% did not belong to any organisation. If the question about the membership used in the research (Question 48) was broken down and respondents were asked separately about their membership in associations, parties and committees and so on, this percentage would probably be higher. However, this demonstrates that only in the case of not quite 15% of respondents the membership in an association is important enough to recall when asked.

Supplementary to the question on formal membership was one on real activity in organisations like this *(Do you currently take active part in the activities of this kind of organisation?).* 72.2% of association members say they are active, and 27.8 admit not to being active in their associations. Few people belong to organizations, but once they are members, then they say they are active, with those who are members and active amounting to 9.9% of society.

The current edition of *Social Diagnosis* for the first time investigates to which kind of organization respondents belong. The following results were gained (figure 6.2.2). Those who belong to whatever organisation definitely more often (23.9%) are active in religious organisations. This result is worth noting because, in discussions about voluntary organisations and civil society etc., religious organisations are often missed out altogether.

Serving functions in organisations constitutes a higher level of participation in the civil society. 46% of respondents who declared membership in an organisation stated that they "fulfil some functions in these organisations". This means that at present (only) 6.3% of Polish people serve roles voluntarily. This experience is of double importance for them; these persons not only participate in managing the organisation, but also have been elected to do so. The remaining 94% are deprived of this experience and the skills that it shapes.

In comparison with 2011, there has been a fall in the percentage of the persons participating in associations by 1%; however, we have no basis to interpret this fall (table 6.2.4.). In ten years of research (2003-2013) there has been either systematic increase or systematic decrease in interest in civil organisations, the association indicator changes irregularly between 12.1 and 15.1%. Civil society in Poland, understood as participation in voluntary organisations, has not been developing and has been failing to attract more people to its networks and structures. Similarly to fulfilling functions in organisations between 2003 and 2013 the share among respondents changed irregularly between 4.8-6.8%.

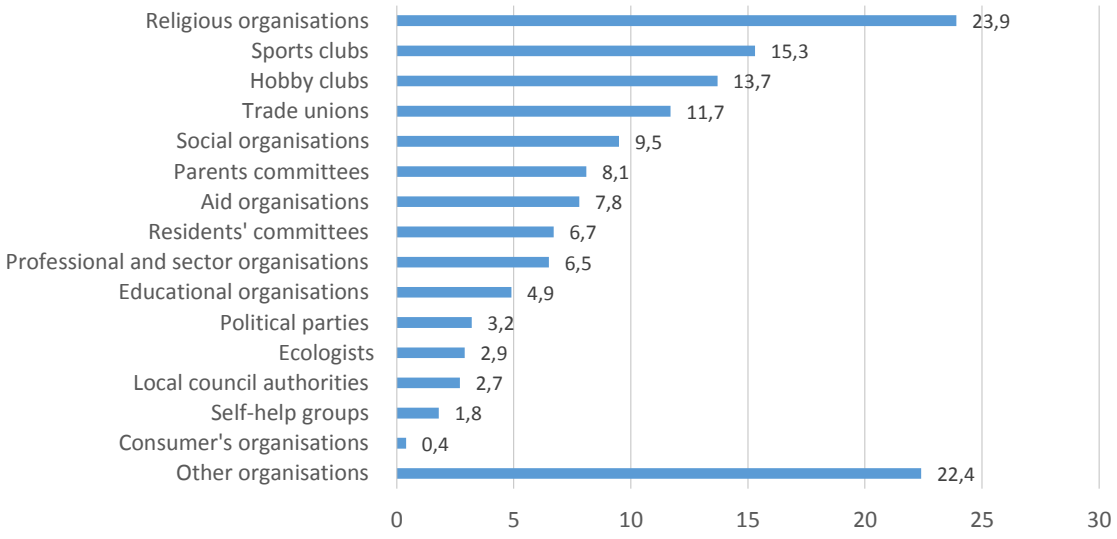


Figure 6.2.2. Percentage of active members of various organisations

Table 6.2.4. Percentage of active organisation members and the active in the community in 2003, 2005, 2007, 2009 and 2011 and 2013 for the 18+

	2003 N=9380	2005 N=8539	2007 N=12747	2009 N=25568	2011 N=25580	2013 N=26170
Organisation members	12.2	12.1	15.1	13.2	14.8	13.7
Actively fulfilling functions among members	45.1	55.7	41.4	37.9	32.2	46.0
Actively fulfilling functions in general	5.3	6.8	6.3	5.0	4.8	6.3
Active in the community	12.9	13.6	14.1	15.6	15.6	15.2

Participation in associations is socially stratified and the differences between the groups result from diverse organisational offers addressed to specific groups and from various degrees of their willingness to join an organisation. The percentage of persons participating in associations is increasing slightly and irregularly together with the size of place of residence from 8.5% in the rural areas up to 12.9% in large cities. On the other hand, this percentage increases regularly together with their educational level of achievement (from 4.7% among the persons with primary and lower secondary education up to 15.7% in the case of the persons with higher education, see also table 6.2.3.) and income (next quarters 7.7%, 8.1%, 10.8% and 15.4%). The group with the highest percentage of persons participating in associations is the group of public sector employees (27.2%) while the groups with the lowest percentage of such persons include the unemployed (6.1%) and other professionally inactive (9.6%).

The effect of social position factors on members' activity in organisations is not great. In the for education groups, it changes in the range of 70.5-74.3%, in income quartiles 70.1-73.4% and in terms of place of residence 64.9-74.9%

In the case of serving functions in organisations the pattern of diversification is similar. The higher the educational attainment, the more frequently those persons have such experience. In the four main categories of educational attainment, the percentages of the respondents participating in organisations who also work in such organisations are as follows: 31.1%, 38.7%, 45.3 and 53.5%. The difference between the groups with extreme results is very great. Smaller is the differentiation in the income categories: in the following quartiles of income functions fulfilled by the following 39.1, 34.3%, 45.9% and 53.8 of the associated.

Educational attainment and income are then the basic factors of stratification, hence participation in associations depends on stratification; the strata from the upper parts of the social ladder participate in associations more often while the lower strata less often. Since educational attainment is connected with income, the impact of educational attainment alone, regardless of the income, was examined as well and vice versa. It turned out that at every income level, education retains its influence on association, though also at every education level both these factors, though linked, favour independent association.

The group of persons serving functions in organisations is similarly socially stratified. This experience is slightly more common among men than among women (50.1% in relation to 41.9% of the associated) with a small difference in the degree of participation in organisations between these two groups (14.3% in relation to 13.1%).

39.1%, 34.3%, 45.9% and 53.8% of persons participating in organisations from the further quartiles also worked in organisations. Similarly as in the case of participation in organisations alone, the impact of the attainment level is crucial here. The higher the category of educational attainment, the more persons served in organisations. 31.1% of persons participating in organisations with primary education also served functions in such organisations, just as 38.7% with vocational secondary education, 35.3% with general secondary education and 53.5% with higher and post-secondary education (see also table 6.2.3).

If we compare the diversification in the case of serving functions with the differences related to participation in organisations, these differences become more visible. At present, 1.7% of respondents with primary education serve in organisations, just as 3.8% of respondents with vocational education, 6.7% with general secondary education and 12.1% with higher education. Educational attainment, especially in the case of higher education, not only contributes to membership in voluntary organisations – persons with higher education are also more likely to work in such organisations. As a result, persons from the upper social strata, and in particular persons with higher education, are several times more likely to be elected and serve in civil organisations. Below the group with general secondary education such experience is very rare and at the lowest educational level even extremely rare as it is shared by only one and a half% of persons from this category.

6.2.4. Joint actions and work for the benefit of others

Participation in organisations is only one of the possible measures of a civil society's development. In Poland persons who want to do something for their communities are unwilling to establish formal organisations to this end. It is enough for them to initiate or join some *activities for the benefit of their own community*. However, the research shows that this phenomenon is as rare as membership in organisations. Only 15.2% of respondents were involved in "any activities for the benefit of the local community (gmina, housing estate, town or neighbourhood)" (Question 46) which would be important enough to recall in answering the question. In 2001 and 2009 the percentage of such persons was at 15.6%, but in 2007 it was 14.1%, in 2005 13.6%, in 2003 12.9% (see table 6.2.1). This slow but systematic growth in the involvement in the works for the benefit of the community observed during the last decade halted and it is not known when this will change.

Men are more likely to get involved in local initiatives than women (16.7% in relation to 13.9%). This kind of commitment increases together with educational attainment level. In the subsequent four main education categories the percentages of persons involved in local initiatives are as follows: 6.1%, 12.5%, 16.2% and 23.5%. In the subsequent income quartiles, 15.7%, 11.6%, 11.3 and 16.1% of respondents were involved in local initiatives.

An even more informal form of taking part in the community's life is *unpaid work or services for persons outside the family or for a social organisation*, which was measured only in the previous (2011) edition of *Social Diagnosis*. This type of social activity covers many diverse actions, from spontaneous neighbourly help in rural areas to organised voluntary services. During the year this type of activity was performed by 19.6% of respondents.

Men prevailed in this group (22.6% in comparison to 16.9% women). This type of activity is less frequent and it is slightly more frequent in large cities (22.6% in cities with 200,000-500,000 inhabitants and 24.8% in cities with more than 500,000 inhabitants). In the lower income quartile such activities were initiated by 16.5%, in the middle 50% 18.0%, and in the upper quartile 25.4% of respondents. The factor which had the greatest impact on this type of activity was educational attainment, and in the main four subsequent education categories the percentages of persons taking up such activities were as follows: 7.6%, 17.2%, 20.15% and 30.3% with a four-fold difference between the extreme groups.

Therefore, not only the membership and active participation in formal civil organisations are clearly dependent on the social group, measured by educational attainment, but also participation in work for the benefit of the community as well as work for other persons or for a social organisation. Social inactivity, avoiding grassroots initiatives for the benefit of others or social organisations are common in Poland, and among the persons with primary education the experience of social activity is very rare, several times less frequent than among the persons with higher education. The persons with higher education visibly stand out above the rest.

6.2.5. Participation in public meetings

People participate in democracy not only when they participate in organisations or do something jointly for others or for the benefit of their community, but also when they gather, discuss and decide on something together. Participation in public meetings is an easily accessible phenomenon. Such events occur in virtually every environment and the only cost the participants incur concerns their time. Participation in such meetings allows for learning about the issues outside one's life, listen to various arguments, express own opinions, influence decisions, decide on something jointly and take responsibility for one's decisions. Moreover, the participants may take part in voting, elect bodies at least for the time of the meeting, and sometimes also choose their representatives, listen to their reports and learn about the meeting's procedures and organisation. Preparing and leading meetings, commenting on a certain matter publicly as well as participating in decision making processes all constitute important civil skills. At a public meeting these skills are not only practised but also developed as this is the place where people learn how to be active citizens.

The research demonstrates that every sixth respondent (17%) participated in a public meeting during last year (outside the workplace). Some meetings were probably forgotten as unimportant, though on the other hand certain earlier meetings were probably remembered as being more recent (the telescoping effect). Since 2003, this percentage rose up to 2011, after which it dropped sharply by 5 p.p. to the lowest ever studied level (figure 6.2.3)

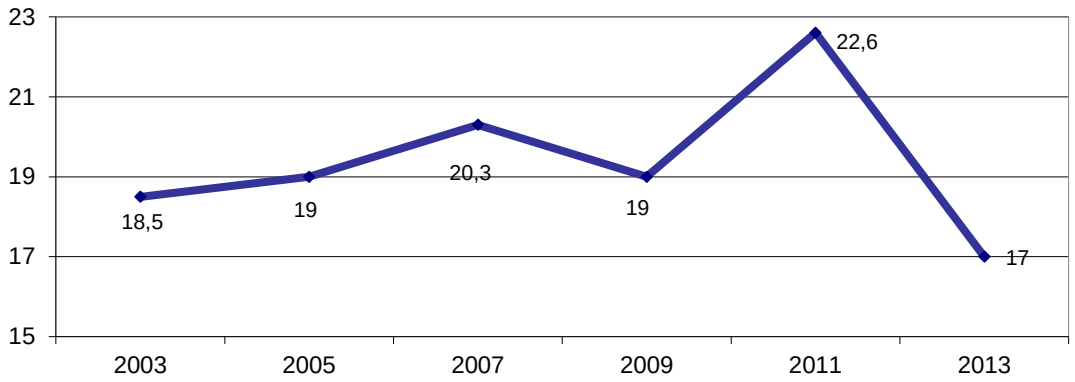


Figure 6.2.3. Percentage participating in public meetings in 2003, 2005, 2007, 2009, 2011 and 2013 for the 18+

6.2.5 Participation in elections

Participation in elections is the most common civil experience. When asked about the participation in the last (2011) government elections, held in 2013, 64.6% of respondents responded positively, 30.1% answered negatively, and 5.3% were not yet 18.

The percentage of persons who voted in the elections resulting from the research is highly overstated in relation to the actual turnout of 48.9%, as announced by the National Electoral Commission (www.pkw.gov.pl).

The retrospective overstating of the turnout by voters is common in surveys and explained by how respondents conform to the good citizen model. Approximately 2/3 of *Social Diagnosis* respondents declare their participation in elections, regardless of the election type and the actual turnout. In 2007, 65% of respondents declared voting in the local government elections in November 2006, where the actual turnout was 46%. Similarly, in 2009, 66% of respondents declared voting in the parliamentary elections in 2007 with an actual turnout of 54%. However, it may be assumed that this bias is not systematically connected with social factors and thus, in general, it does not prevent an analysis of the social conditions of participation in elections.

Participation in elections is connected with the social status, measured by educational level of achievement. In the main four education categories the percentages of persons taking part in elections were as follows: 50.1%, 53.5%, 70.4% and 81.2%. In the following income quartiles this percentage is 57.6%, 63.8%, 72.2% and 78.9%. Generally, similar results and relations were observed in the previous editions of *Social Diagnosis*, both in 2009 were asked about whether they had voted in parliamentary elections, and as in 2011 when the respondents were asked about their participation in the previous local government elections.

All surveyed types of social experience and civil activities are then connected, some even considerably, with social status measured by educational attainment (see table 6.2.5.).

The lower the educational attainment, the more inactive and less experienced people are as regards organised grassroots activities. The higher the educational level, the more frequently people set up organisations and become members of already existing ones or voluntarily serve functions in such organisations. Also they are more willing to take part in initiatives for the benefit of their own community. Moreover, they more frequently participate in public meetings and, as determined in *Social Diagnosis* 2007 and 2009, they organise such meetings and speak at them, as well as are more willing to sign collective letters, protests and petitions and so more often they participate in local and national elections more often. People with higher education are better organised in social terms and better at voicing their interests. They know how to take advantage of the opportunities democracy offers them at the local level.

A summary measure of the social experiences and civic activities is presented as an index – which consists in the number of experiences where each of the six experiences was counted as one point. The index has the following distribution (table 6.2.6.):

An average value of the index for the total respondents is 1.27, and the modal value is 1 (47.1%). In the last year, 28% of respondents had no social or civil experience as defined herein. The value of the index depends highly on participation in government elections, the figure for which is considerably overstated. If it were possible to correct declarations of participation in elections, the index value would be even significantly higher. This considerable impact of participation in elections on the index demonstrates that elections are a special standard of civil life in Poland and also how uneventful this life is in between the elections; many Polish people take up social and civic activities only in the years of elections.

Table 6.2.5. Distribution of social experiences index and civil activity for the 18+

Educational attainment	Organisation membership	Fulfilling functions in organisations as members	Community service	Voluntary work	Public meeting attendance	Voting in 2010
Higher, at least a PhD	44.5	79.8	72.2	42.5	54.8	88.6
Higher, at least an MA or equivalent degree	25.2	69.8	51.6	26.3	27.6	84.9
Higher, Engineer or Bachelor degree	16.9	71.7	56.5	16.7	20.3	73.8
Post-secondary	16.4	78.3	52.4	17.7	19.5	74.3
Secondary vocational	15.6	74.7	48.0	17.3	18.6	72.0
General secondary	13.3	73.3	38.6	13.9	14.9	66.8
Basic vocational	8.7	69.3	37.3	12.1	14.1	63.7
Lower secondary	14.6	78.8	42.3	14.5	13.4	83.0
Primary completed	5.6	70.3	31.5	6.3	8.9	51.3
None / primary not completed	1.6	81.2	9.7	2.1	3.9	30.4
Total	13.7	72.2	46.0	15.2	16.9	64.6

Table 6.2.6. Distribution of the social experience index and civil activities for the 18+

Index value	Percentage	Cumulative percentage
0	28.0	28.0
1	47.1	75.0
2	11.2	86.2
3	5.6	91.8
4	3.1	94.9
5	2.7	97.6
6	2.4	100.0

The index demonstrates the importance of educational attainment for all social and civil experiences (figure 6.2.4.).

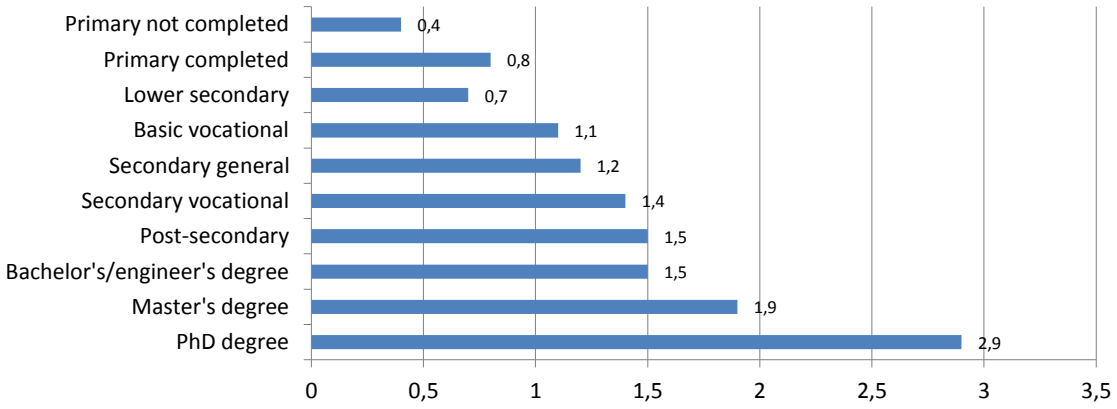


Figure 6.2.4. Social experience index and civil activities by educational attainment for the 18+

Social experiences tend to accumulate; the persons who are members of an organisation, those who act for the benefit of the community, work for others and for social organisations and participate in public meetings are very often the same people (table 6.2.7.).

Table 6.2.7. Intercorrelations (Pearson's r) between civil experience for the 18+

	2	3	4	5
1. Voting in elections in 2011	0.14*	0. 14*	0.12*	0.12*
2. Community service		0.40*	0.40*	0.37*
3. Public meeting participation			0.32*	0.35*
4. Voluntary work for social organisations				0.34*
5. Membership of organisation				

* p=0,000

6.2.7. Acceptance of democracy and trust in people in relation to social and civil experiences

The social experiences and civic activities of Polish people are visibly dependent on social status. Theoretically speaking, they should be also dependent on individuals' political values (acceptance of democracy) and their psychological dispositions (trust in other people). The acceptance of democracy as a form of government may include the acceptance of democracy as a general rule of living in a society as well as an idea of local democracy and civil society. It is commonly understood that trust in other people contributes to self-organisation in society and participation in collective actions, which in turn reinforces trust.

The data suggest that the acceptance of democracy does not increase in any systematic way the value of the index of social experiences and civil activities (table 6.2.8.). While it is true that in every group of educational attainment, those persons who accept democracy unconditionally have a higher index value than the respondents that see democracy as a bad form of government, though in none of the educational groups those who absolutely accept democracy do not have the highest values of that index from all other categories of attitude to democracy. The acceptance of democracy as a political principle has no greater impact on participation in civil life at the local level and observed here correlations have to a great extent a superficial character linked to, as I have shown above, the influence of education on both of these variables.

Table 6.2.8. Social experience index and civil activities by acceptance of democracy as a form of government and trust in people and educational attainment for the 18+

	Educational attainment				
	Basic and lower	Basic vocational/lower secondary	Secondary	Higher and post-secondary	Total
Attitude to democracy*					
Democracy is better than any other form of government	0.87	1.11	1.52	1.91	1.55
Sometimes non-democratic rule is better than democracy	0.90	1.25	1.52	2.04	1.55
It does not really matter whether the government is democratic or not	0.74	0.94	1.36	1.60	1.12
Democracy is a bad form of government	0.75	0.97	1.31	1.80	1.14
Total	0.78	1.01	1.35	1.80	1.26
Trust in people					
Most people can be trusted	0.79	0.92	1.56	2.21	1.52
One cannot be too careful in dealing with people	0.78	1.05	1.36	1.72	1.26
It is hard to say	0.61	0.84	1.00	1.60	0.97
Total	0.76	1.00	1.35	1.80	1.27

* Respondents who answered the democracy question "It is hard to say" were not taken into account

Participation in civil society, learning and using civil skills are more clearly related to trust in other people, expressed in the answers to the following question: "*In general, do you believe that most people can be trusted or are you of the opinion that one can never be too careful with people?*". In 2013, 12.2% of respondents, which is less than in 2011 and 2009 (13%), but slightly more than in the previous studies,

ticked the answer "most people can be trusted" (in 2007 – 11.5% and in 2005 and 2003 – 10.5%). 77.3% chose the answer "One cannot be too careful in dealing with people" and 10.5% of respondents did not have an opinion on this subject ("It is hard to say").

However, since – just as the acceptance of democracy – trust in other people is more present in the upper education categories, the question arises about its separate impact on participation in the life of civil society, independent of education. The analysis demonstrates the lack of the systematic impact of trust on the index of activities. Trust does not have an influence on the index in the group with primary education, but raises it in the upper groups of education.

Trust requires active citizenship only after reaching or exceeding the threshold of secondary education. Other factors related to education have greater influence than trust towards people. These factors include, for example, greater interest in public matters, a more developed network of social contacts, lifestyle with more space for motivations other than the economic, as well as organisational skills connected with knowledge of procedures and regulations. The impact of these factors is not overly high though, since the indicators of active citizenship in Poland are low and thus their diversification explained here is also slight.

6.2.8. Summary

The research shows a low level of Poles' social and civil experiences as far as participating in organisations and grassroots initiatives, public meetings or voluntary activities is concerned. Polish people participate in organisations rarely, they also infrequently act for the benefit of other people, organisations or their own communities and they are unwilling to gather to plan and act jointly. Therefore, they have few opportunities to learn how to be socially active in an organised way and gain the skills necessary for living in civil society. Polish people do not know how to organise themselves effectively and act together except for strikes or protests against the construction of a road in the neighbourhood, a waste landfill in their local area or the construction of a hospice in their town. They do not know how to act jointly because that having modest experience of doing so, they have not learned how. They do not know how to act, since they do not act, and they do not act since they do not know how: a vicious circle of passive citizenship.

6.3. Social capital

Janusz Czapiński

Social capital is the essence of civil society and surely of an effectively developing society (e.g. Czapiński, 2011b; Halpern, 2001; Woolcock, 1998)[79]. Why is social capital thought to have impact on the economic development of a community? The theoretical answer is as simple, nearly obvious, as it is still poorly documented by research (e.g. Sabatini, 2007): social capital facilitates negotiations, lowers transaction costs, shortens investment processes (reduces the probability that subsequent administrative decisions will be contested), reduces corruption, increases the reliability of contractors, contributes to long-term investments and diffusion of knowledge, prevents the abuse of the common good and fosters inter-group solidarity and, through the development of the third sector (see below), contributes to social control over the authorities' actions (Coleman, 1990; Halpern, 2005; Glaeser, Laibson, Sacerdote, 2002; Knack, Keefer, 1997; LaPorta et al., 1997; Putnam, 2000, 2008; Sztompka, 2007). Obviously, the advantages of social capital go beyond mere economic effects as they comprise the broadly understood quality of social life.

The term "social capital" has no precise definition. However, it is very vast – it covers all that determines sound social relations, care for the common good and cooperation[80].

According to Robert Putnam (2003, 2008), social capital is a cultural phenomenon and covers the civil attitude of society's members, social standards supporting joint action and interpersonal trust as well as the citizens' trust towards public institutions. The research conducted by Putnam in Italy proves that social capital is created within a long-term historical perspective and constitutes a public good. It is not a resource or a feature of specific individuals, although it depends on individuals, their approaches, beliefs and the system of values.

Francis Fukuyama (1997, 2000), similarly as Putnam, defines social capital as „a set of informal values or norms shared among members of a group that permits cooperation among them." The cooperation for the benefit of the public good is based on the mutual trust of the group members. The principles which create social capital range from the norm of reciprocity between two friends to very complex and codified doctrines, such as Christianity or Confucianism. However, not every system of norms creates social capital.

Unlike Putnam, Pierre Bourdieu (1986, 1993) defines social capital as individual investments in the network of social relations. According to Bourdieu, social capital is a private good and not a public one, and may produce cultural capital, affluence or "symbolical capital", that is the signs of the social status. An individual's social capital is a crucial element of his or her social position.

In our research, we have assumed a definition which is more similar to the concepts of Putnam and Fukuyama than to Bourdieu's theory. Social capital is understood here as the social networks regulated by moral norms or customs (and not by formal legal regulations, or not solely) binding an individual to society in a manner which enables him or her to cooperate with others for the benefit of the common good. Based on his research conducted in Italy, Putnam argued a considerable economic importance of social capital. The level of economic development may be treated as the result of social capital or as one of its functions. Moreover, social capital contributes also to:

- social integration and solidarity, thus preventing exclusion and discrimination;
- supporting and replacing ineffective state institutions;
- the control of the government sector and enforcing the accountability of government;
- the control of the commercial sector;
- building local culture and its protection against commercialisation.

The indicators of social capital thus defined can include general interpersonal trust, voluntary (not imposed, for instance, by the nature of the professional self-government) membership in organisations and serving functions in such organisations, participation in voluntary public meetings and speaking at such meetings, organising public meetings, voluntary actions for the benefit of the local community, including unpaid work for those in need (voluntary services), participation in parliamentary elections and a positive attitude towards democracy which creates better conditions for the development of social capital and feeds onto attitude towards minorities, e.g. sexual minorities, and in general openness towards others[81].

[79] Particularly in the wealthier countries (Czapiński, 2008, 2009, 2011b).

[80] A critical overview of various definitions of social capital can be found in Hardin (2009).

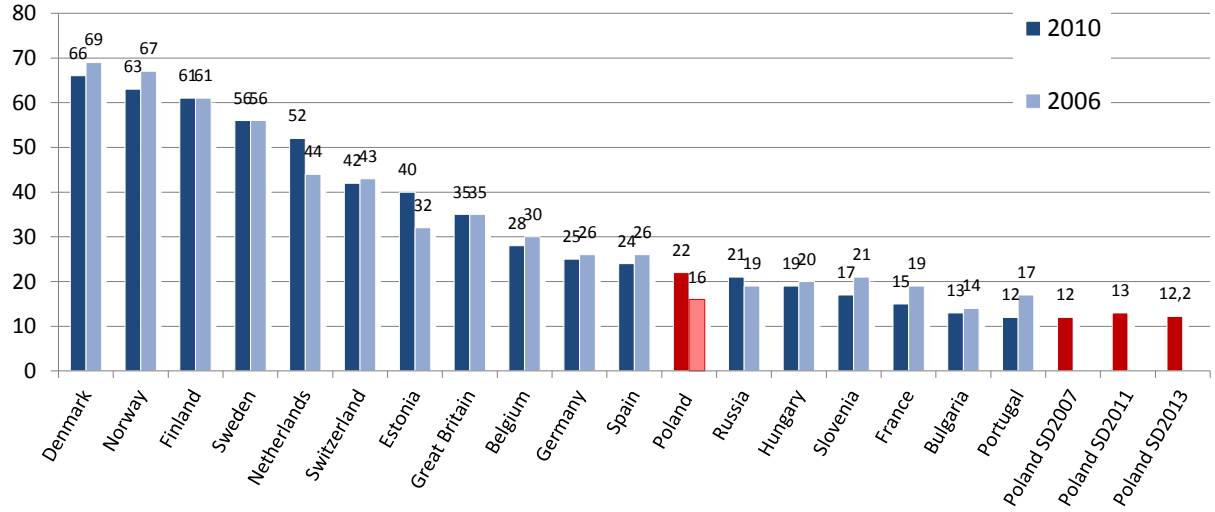
[81] The results of some of these indices will be discussed here. The majority of them were used for the purpose of the synthetic index of social capital which constitutes one of the dimensions of the quality of life (see chapter 9.1).

The space in which and through which social capital is created is the third sector (voluntary non-governmental and non-family organisations, both associations and foundations), which constitutes a network of formal relations. The network of informal relations (among the family or friends) may also create social capital, however, in the case of strong informal relations within a definite group effectiveness of social capital is lower, due to a greater risk of putting particular benefits (of family, clique or mafia nature) first, at the expense of the common good. "Relying on informal social capital (connections), especially in the public sector, may undermine the faith in the impartial character of public institutions and distort their operation through corruption, clientelism and putting public resources in private hands." (Raiser, Haerpfer, Nowotny and Wallace, 2001). This does not mean that non-governmental organisations do not face such risk, especially in the case of corporations and trade unions.

According to Jeremy Rifkin (2000), Western civilisation is now at a turning point. With weak states and the aggressive expansion of commercialism going global, culture is losing its dynamics and diversity, which are the basic conditions of sustainable development. There are three possible scenarios: the growth of fundamentalism, the development of the fourth sector (criminal groups) or of the third sector (the renewal of civil society). The building of the third sector is the only effective scenario which guarantees sustainable development. However, this requires fulfilment of at least two conditions which define social capital as characterised by Putnam: mutual trust between people and a considerable share of voluntary work among the professionally active persons. Voluntary work, that is unpaid activity for the benefit of the community, is an essential basis for the development of non-profit non-governmental organisations; that is, the third sector perceived by Rifkin as the only positive scenario for democracy and sustainable development.

Poland does not meet any of the two criteria of civil society. As regards general trust, it is at one of the lowest positions among the countries covered by the *European Social Survey* (ESS) in 2006 and 2010 (fig. 6.3.1). According to our research, only 10.5% of respondents agreed that "most people can be trusted" in 2003 and 2005, 11.5% in 2007, and 13.4% in 2009 and in 2011, as well as 12.2% in 2013, and under the ESS in 2010 as much as 22% agreed with this statement. Our result is over three times worse than in Denmark, Norway and Finland, which in the ranking of the quality of life conducted among 199 countries were on the 15th, 21st (Poland 39) and 16th position, accordingly (UNDP, 2013)[82].

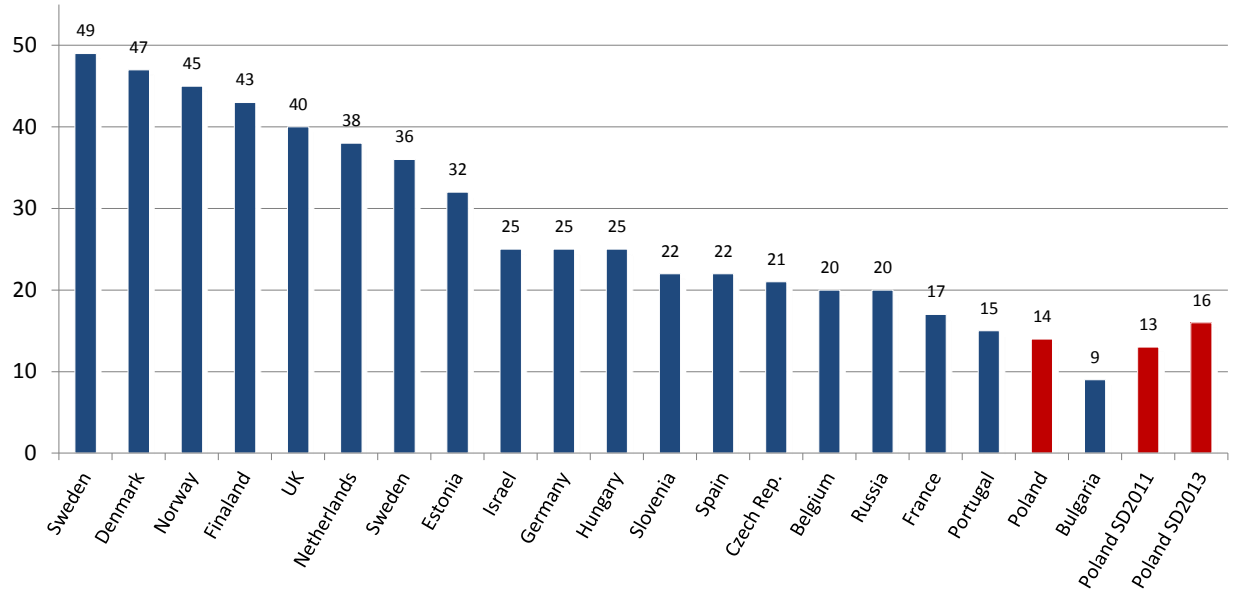
In comparison with the representatives of other societies, Polish people have also less faith in the good intentions of the others. According to the ESS of 2010 and *Social Diagnosis* of 2011, as little as 14% of Polish people (lower results were recorded only for Bulgaria) somewhat more according to *Social Diagnosis* 2013 (16%) is convinced that people most often try to be helpful (fig. 6.3.2).



Source of data: for all countries, including Poland, ESS - *European Social Survey 2006 and 2010* (percentage of answers from 7 to 10 on the following scale: 0-"One cannot be too careful in dealing with people", 10-"Most people can be trusted"), for Poland – *Social Diagnosis* (SD) from the period 2009-2013 (percentage of answers "Most people can be trusted" on the following scale: Most people can be trusted, One cannot be too careful in dealing with people, Hard to say).

Figure 6.3.1. Percentage trusting people for the 16+

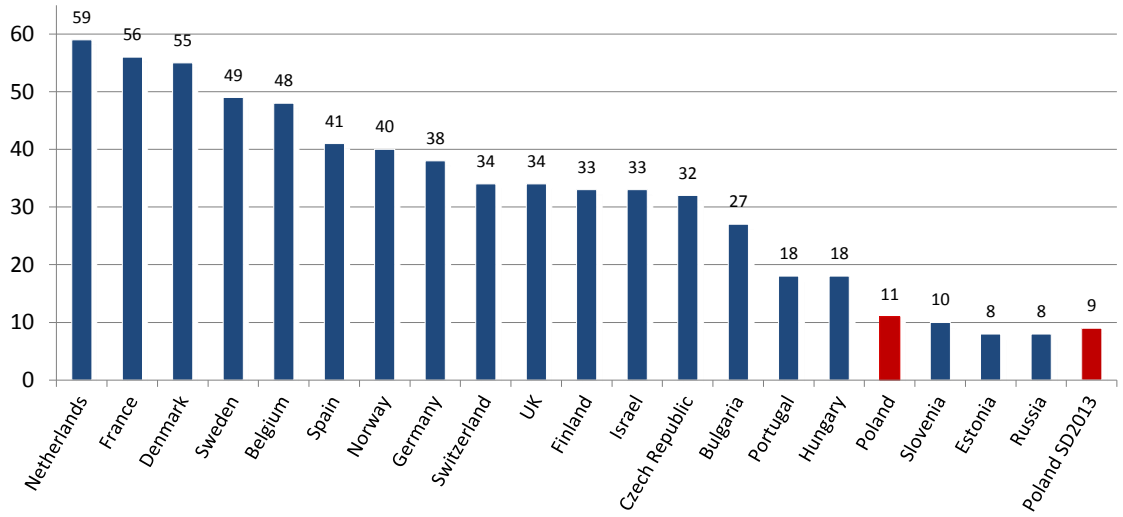
[82] In this ranking Poland was at the 41st position, which is 3 positions higher than in 1998 (UNDP, 2000).



Source: for all countries ESS - *European Social Survey 2010* (percentage of answers from 7 to 10 on the following scale: 0-"People mostly look out for themselves", 10-"Most people try to be helpful"), average for all countries in 2010 27.3.

Figure 6.3.2. Percentage believing that most people try to be helpful 16+

One of the signs of low tolerance among Polish people is their attitude towards homosexuals (fig. 6.3.3.). According to the ESS 2010 (4th from last of 20 countries) and similarly (8.5%) to *Social Diagnosis* 2013 even less (8%) decisively agree with the opinion that homosexuals should be allowed to live according to their beliefs.



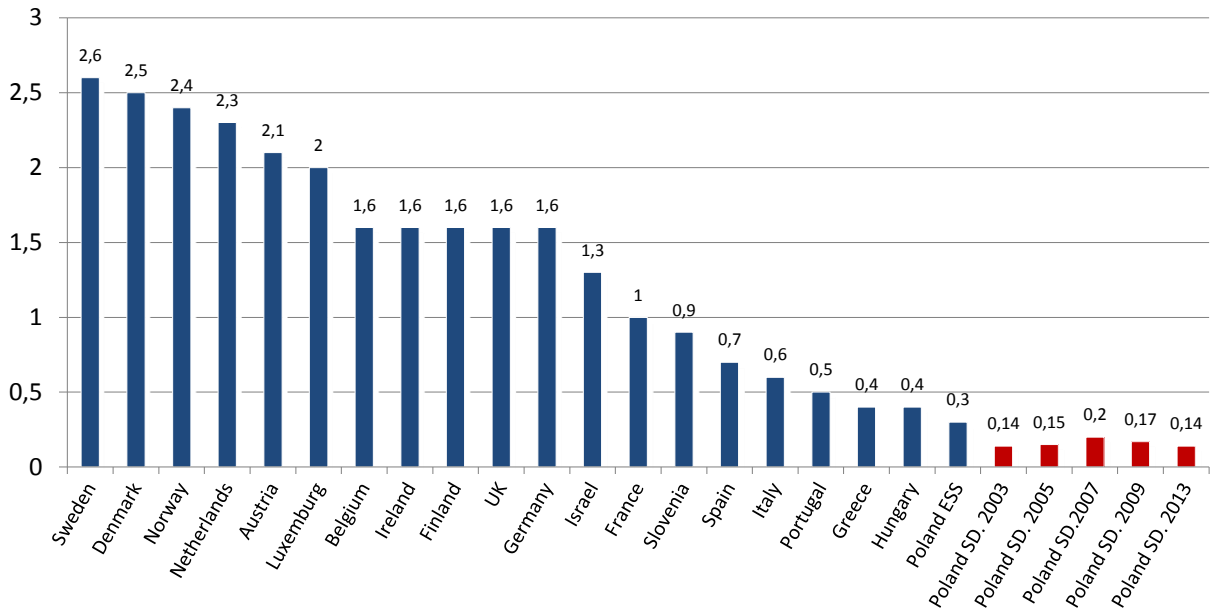
Source: for all countries, including Poland, ESS - *European Social Survey 2010*, for Poland- *Social Diagnosis* (DS) 2013.

Figure 6.3.3. Percentage that definitely agrees that homosexuals should be allowed to live according to their beliefs

As for the second condition of the development of civil society, that is the third sector, the data are as follows. In 2012, 72,000 associations and 11,000 foundations were registered in Poland. As little as 60-80% of these operated actively according to the Central Statistical Office (GUS) (http://www.ngo.pl/PodstawoweFakty_2012_raport/ebook/content/PodstawoweFaktyNGO_2

012_KlonJawor_raport.pdf), downloaded on 27.07.2013). The associations have 35 members on average, of which half are totally passive. Post 2000, the tempo of growth of new associations stopped at four thousand, though a a large part ceases activity in this period which is shown by the steady growth in the share of organisations existing over 15 years or more.

The willingness to participate in organisations – with membership fully voluntary after transformation of the political system – dropped from 30.5% in 1989 (*World Value Survey*) to 14.8% and remains at this level until today (13.7% in 2013). In terms of this matter, just as in the case of trust, we have one of the last positions among the countries covered by the *European Social Survey* (ESS) in 2002 (figure 6.3.4).



Source: all countries including Poland ESS - *European Social Survey 2002*, for Poland SD – *Social Diagnosis* 2003-2013.

Figure 6.3.4 Average number of organisations with respondent members for the 16+

Of those who are members of associations, 72.2% claim active participation in association activities. In this year's edition of *Diagnosis*, we also asked in what kind of organisations Poles actively take part. Religious (church) organisations have the greatest number of active members (24%), then sports clubs (15.3%), interest clubs (eg. fishing, stamp collecting, motoring etc.) (13.7%) and trade unions (11.7%). In the remaining 11 organisation types included in the questionnaire, there are less than 10% of those indicating activity in organisations, and 22.4% claim activity in organisations not mentioned in the questionnaire (figure 6.3.5).

Each type of organisation differs in its active members' gender and age structure. Typically male are the sports clubs, political parties, interest clubs, consumers' organisations and elected local authorities, while there is a marked majority of women in social and religious clubs, self-help groups, organisations that broadcast information and parents' committees (figure 6.3.6).

As far as age structure is concerned, sports clubs have the most young members (up to 29 years of age), interest clubs and ecological organisations, and the oldest are local authorities, organisations that broadcast information (largely due to universities for the elderly), religious organisations and social clubs and housing committees. In parents' committees, most members are parents of schoolchildren and in trade unions and professional organisations, members tend to be 45 to 59 years of age. In the remaining organisation types, the age structure is quite balanced (figure 6.3.7).

Active members of organisations are mostly better educated (38% have a higher education diploma and 35% have graduated high-school). The highest proportion of members with higher education is in professional corporations, political parties, support groups, organisations that broadcast information and in sports clubs, while the smallest share is in social and religious clubs (figure 6.3.8).

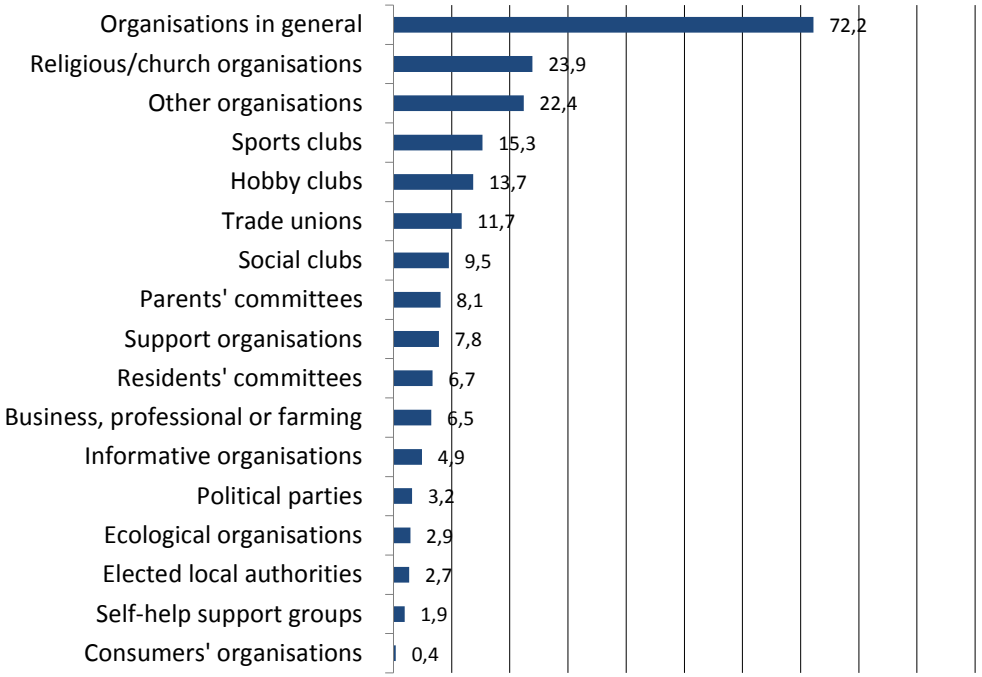


Figure 6.3.5. Percentage of active members of organisations by organisation type

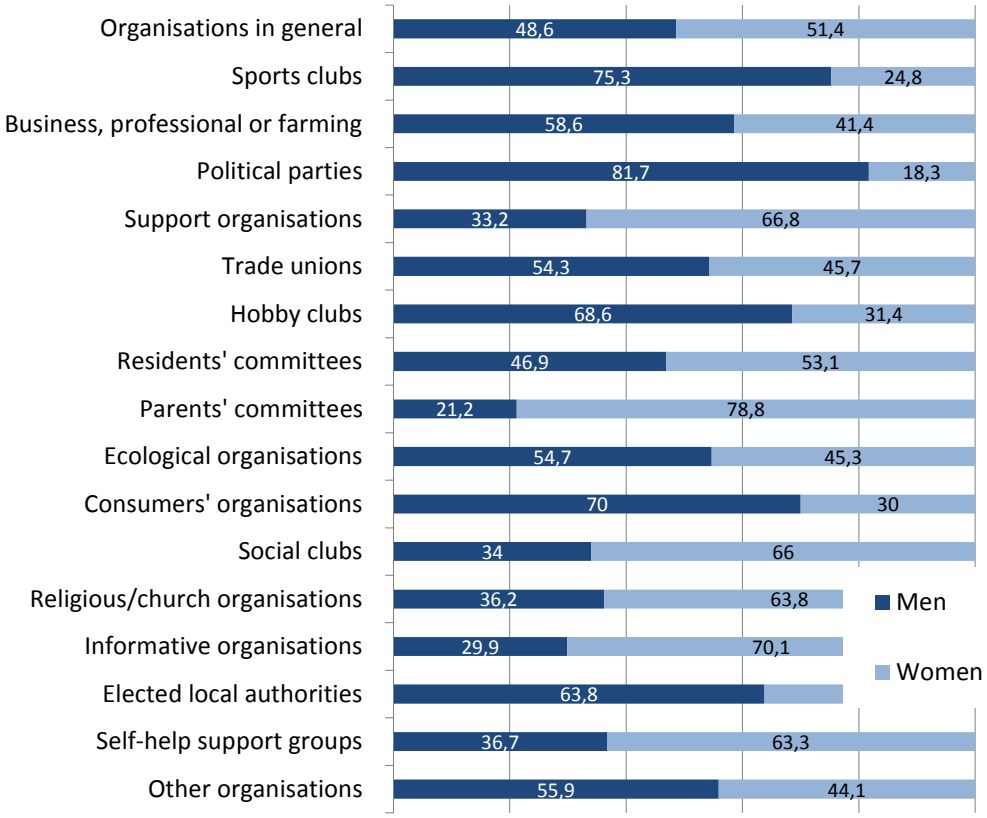


Figure 6.3.6. Percentage share of men and women among active members of organisations

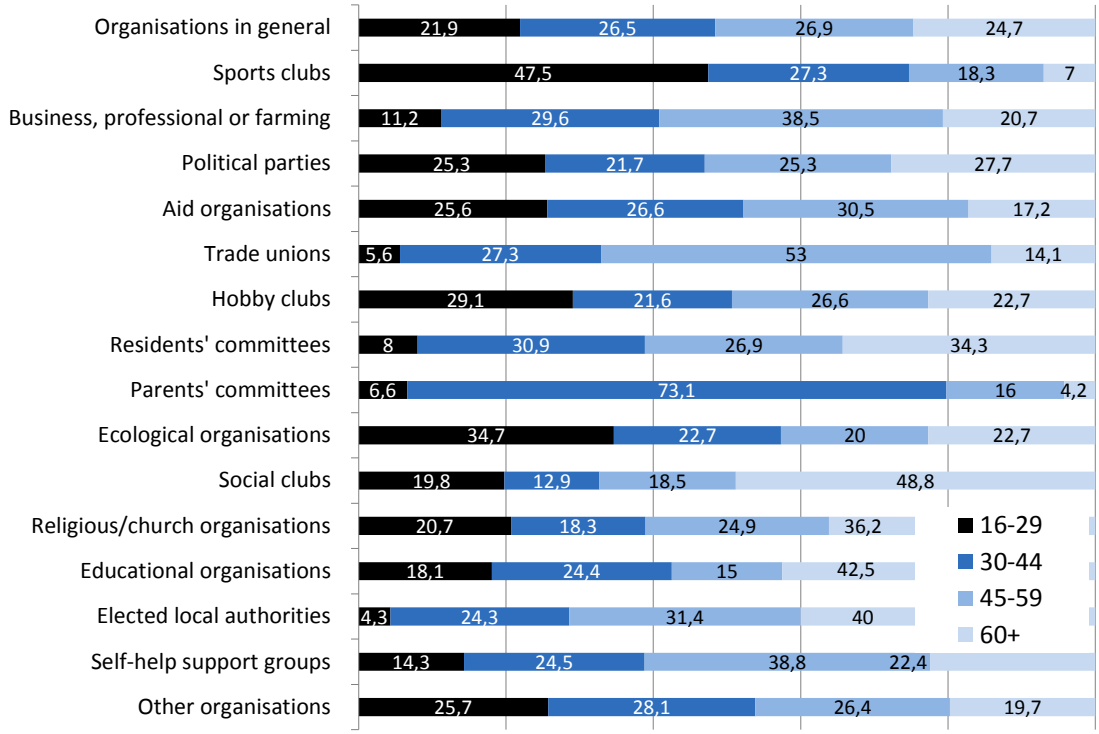


Figure 6.3.7. Percentage of four age-groups for active members of organisations (consumers' associations not included due to small number)

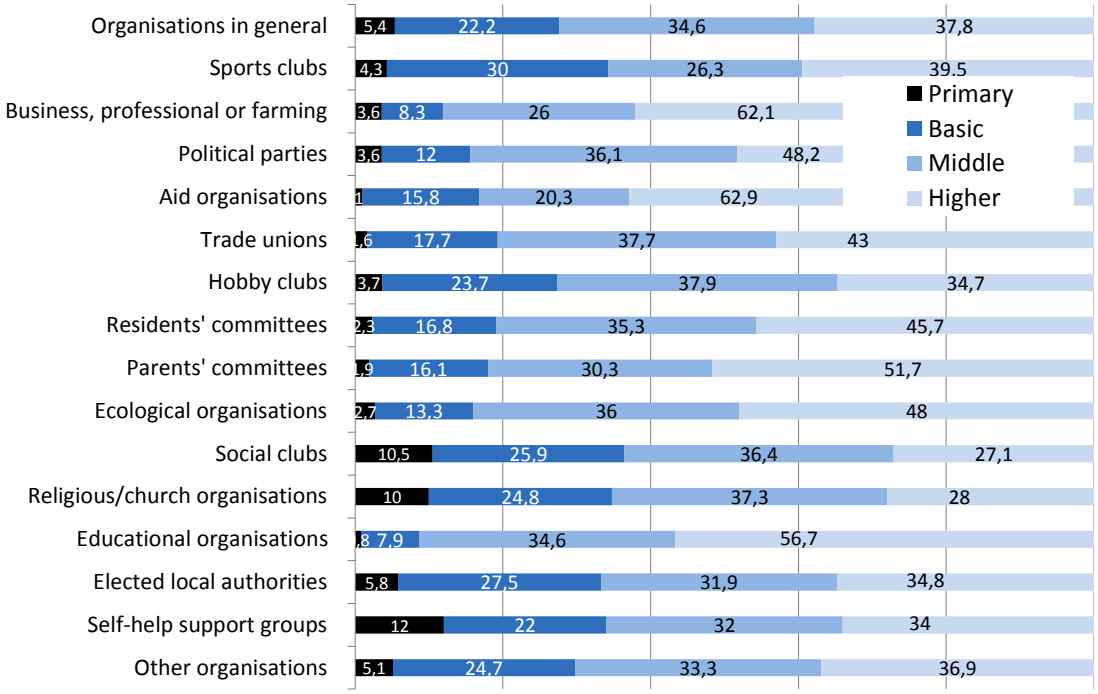
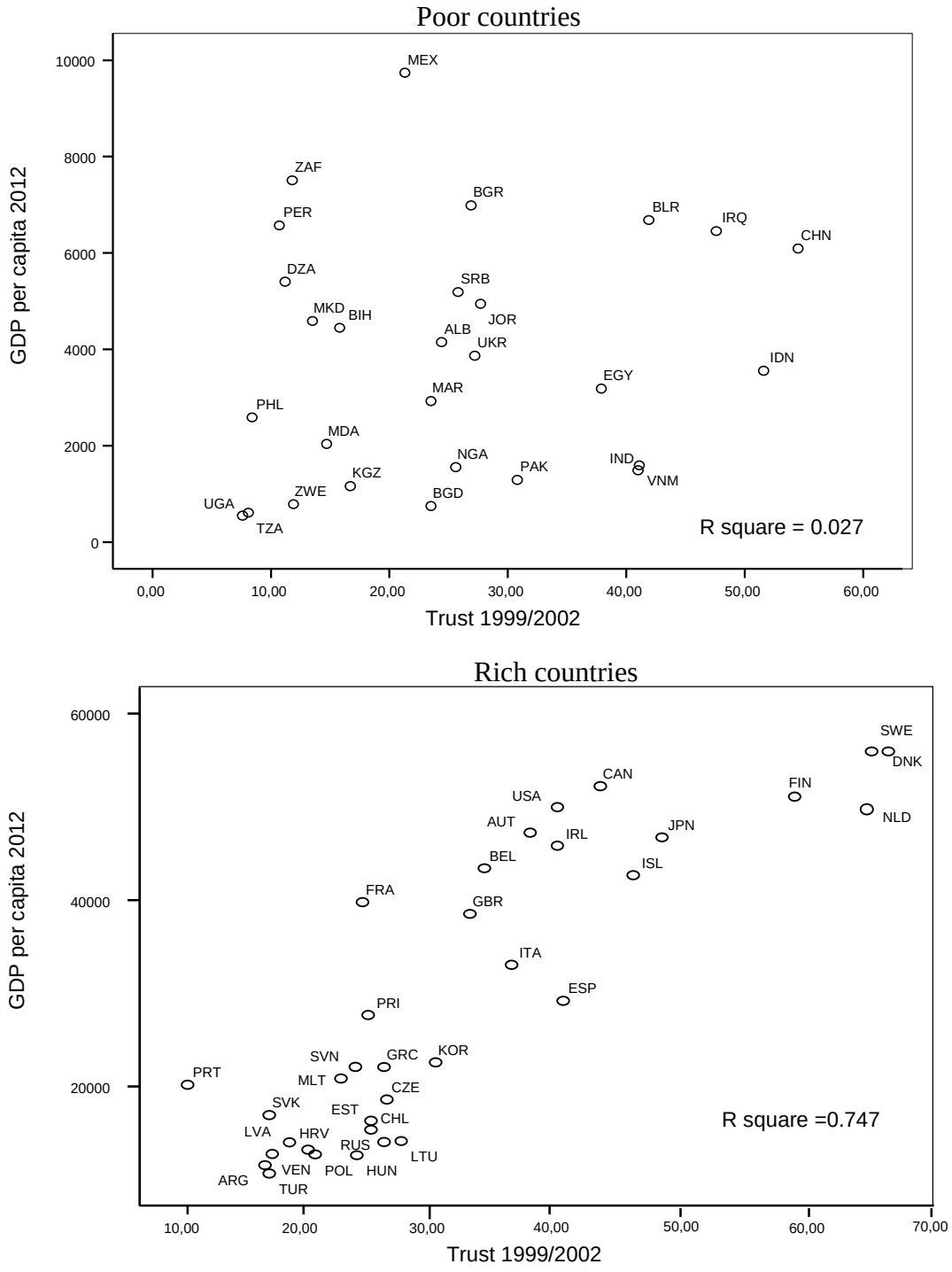


Figure 6.3.8. Percentage of four education level groups for active members of organisations (consumers' associations not included due to small number)

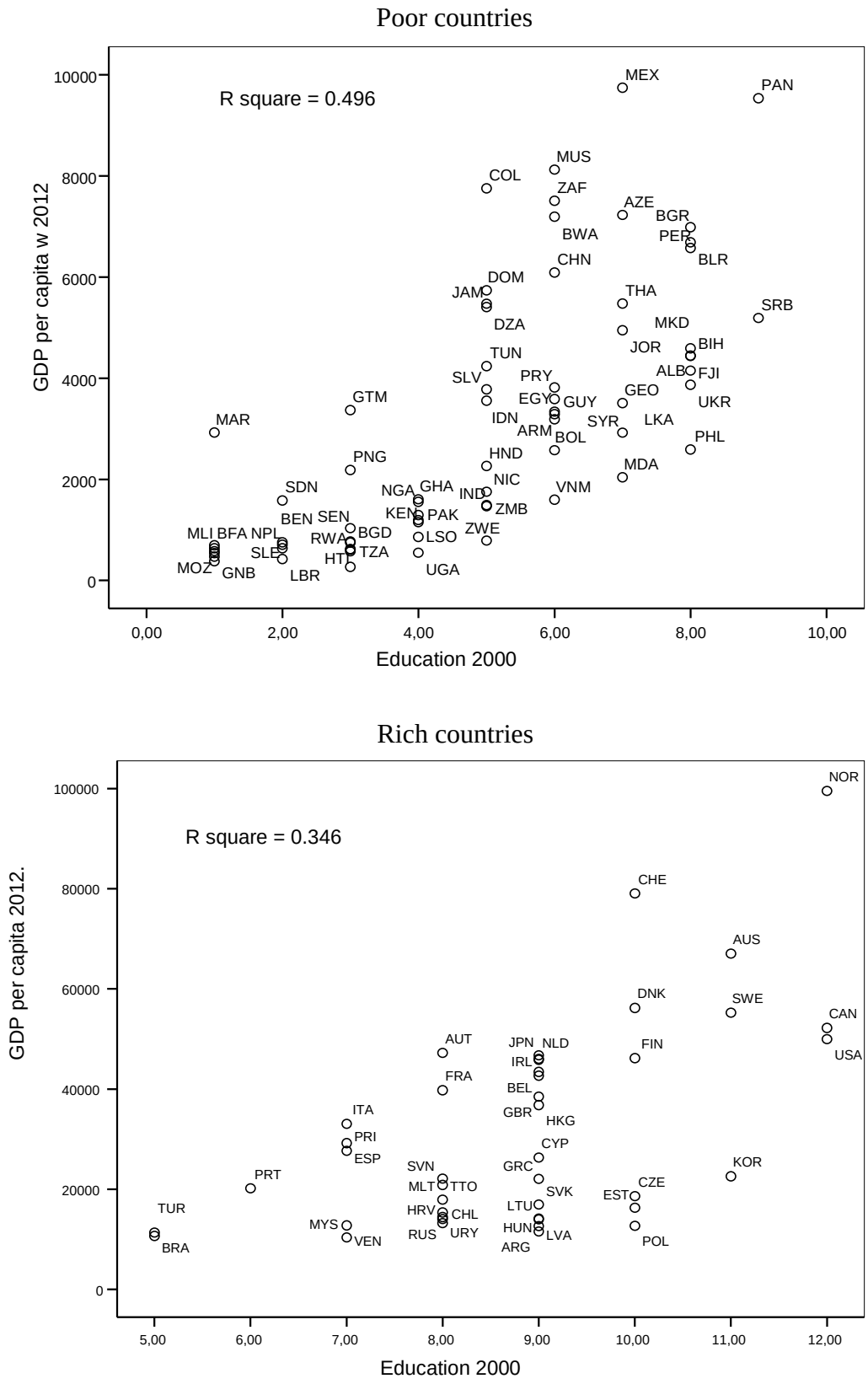
So far we have mentioned the importance of social capital for the development of society and for standard of living, but we have not given any evidence for this statement. Hence, below we present some information on this subject. In the international perspective, the level of interpersonal trust is linked to an unusual extent with material standard of living measured in terms of per capita GDP. Figure 6.3.9 proves that social capital is a significant correlate of prosperity only in developed countries. In developing countries, the factor explaining GDP differences is human capital, measured here by the simple number of years in education (figure 6.3.10). Human capital also seems a significant predictor

in developed countries, but in fact this is a result of a strong positive relation between educational attainment and general trust in these countries. When we included at once educational attainment and trust in the multiple regression equation, it turns out that in developing countries human capital remains a significant predictor of GDP, while in developed countries social capital has the predictive power (table 6.3.1).



Data source: trust – World Values Survey, GDP – World Bank

Figure 6.3.9. Interpersonal trust in 1999/2002 and per capita GDP in USD in 2012 for poor and rich countries



Data source: World Bank

Figure 6.3.10. Average number of years of study in 2000 and per capita GDP in USD in 2012 for poor and rich countries

Table 6.3.1. Results of multiple regression analysis of GNP and the level of trust and number of years of education in poor and rich countries

Country group		Unstandardized coefficients		Standardized coefficients	t	p
		B	Standard error	Beta		
Poor	(Constant)	349.706	991.628		0.353	0.727
N=30	Trust	605.472	453.382	0.202	1.335	0.192
	Years of education	782.809	185.757	0.636	4.214	0.000
Rich	(Constant)	15042.529	13104.660		1.148	0.259
N=37	Trust	13410.124	3019.511	0.650	4.441	0.000
	Years of education	1845.313	1598.209	0.169	1.155	0.256

Naturally, the relation between these two variables does not determine the direction of this dependency, as it does not indicate which of them is the cause and which is the result.

While it is true that in our analysis soft capital values originate from the 90s and the beginning of this century, so precede the 2012 prosperity indicator. However, it is obvious that the order of countries in terms of education level and interpersonal trust is relatively stable, so fundamentally similar to today's.

In order to pinpoint the direction of this dependency we would have to prove that one of the variables determines the change in time order. The easiest way to do so is to examine this in relation to the dependency between human capital and social capital and economic development measured against GDP per capita growth. It turns out that the level of social capital, analysed with various measures (trust, organisational activity and corruption level, corporate ethics, etc.), to a great extent allows the prediction of the pace of economic growth in the subsequent 12 years (Czapiński, 2011b). However, it should be underlined that this dependency, similar to status relation, is true mainly for developed countries. In less developed human capital (measured by the inhabitants' average number of years in education) is a more important indicator. We verified this in a longer time horizon that included the economic crises from 2008-2012 that affected mainly developed countries. We accepted residents' average years of study from the second half of the 90s as a gauge of human capital, and as the social capital measure, the indicator of general trust in people combined with organisational activity from the *World Value Survey* 1994-1999 and the control of corruption[83] from 1996. We took the logarithm of change in GDP from 1995 to 2012 as a gauge of economic growth for the period.

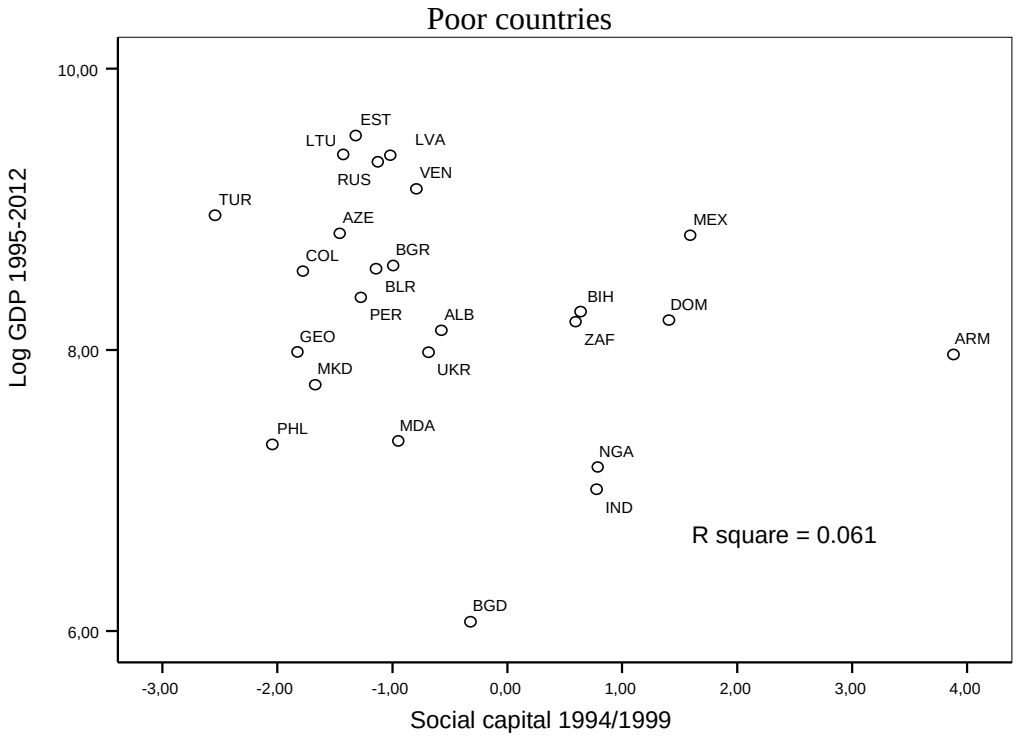
Figure 6.3.11 demonstrates that the level of human capital allows almost 60% prediction, and after exclusion of Japan over 60%, of the rate of economic growth only in the group of more developed countries[39]. In the group of less well developed countries, the predictive value of social capital is zero. This is also the case for the corruption control, which in no way determines the rate of growth in less well developed countries[84], while in the those more developed it is responsible for over half the differentiation of the GDP growth logarithm (table 6.3.2 and figure 6.3.12).

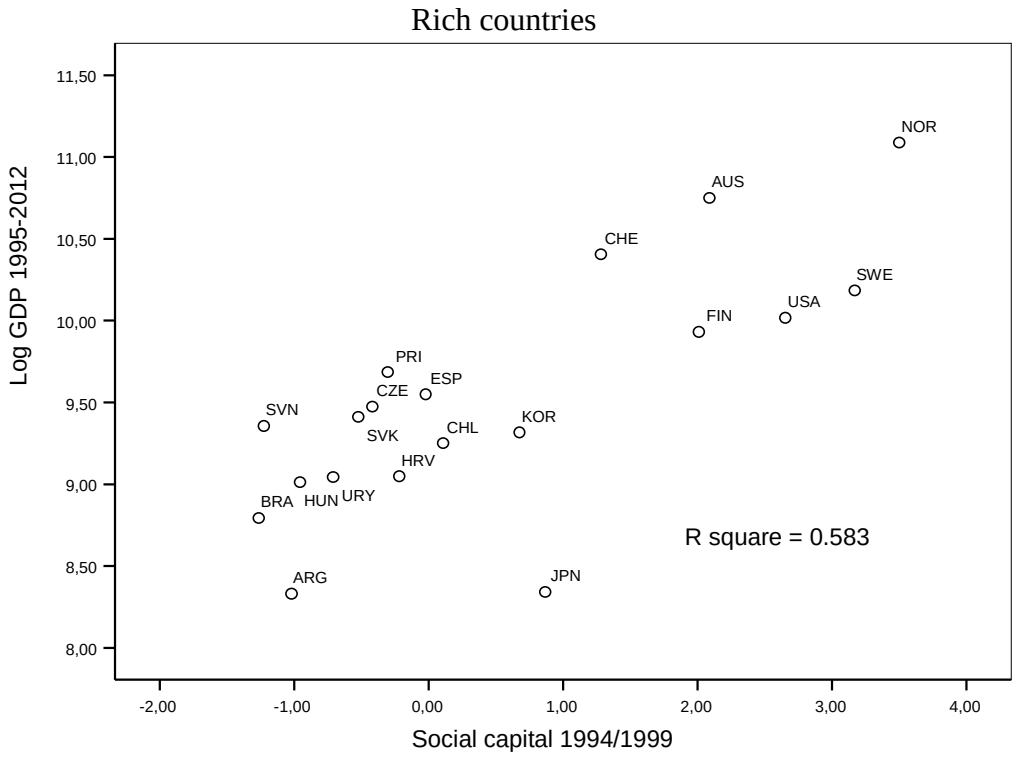
Table 6.3.2. Results of multiple regression analysis of log GDP growth between 1995-2012 on years of study and social capital indicator in poor and rich countries

Country	Step	Predictor	Unstandardized coefficients		Standardized coefficients	t	p	Collinearity statistics	
			B	Standard error	Beta			Toleration	VIF
Poor	1	(Constant)	5.682	0.187		30.398	0.000		
N=70		Years of study	0.402	0.038	0.787	10.592	0.000	1.000	1.000
	2	(Constant)	5.927	0.236		25.098	0.000		
		Years of study	0.384	0.039	0.752	9.865	0.000	.925	1.081
		Corruption control	0.308	0.185	0.127	1.664	0.101	.925	1.081
Rich	1	(Constant)	8.039	0.381		21.078	0.000		
N=36		Years of study	0.183	0.044	0.572	4.123	0.000	1.000	1.000
	2	(Constant)	8.275	0.291		28.442	0.000		
		Years of study	0.086	0.038	0.269	2.258	0.030	.767	1.303
		Corruption control	0.455	0.087	0.627	5.255	0.000	.767	1.303

[83] This indicator originates from World Bank cyclical studies and measures the apparent incidence of corruption in a given country among businessmen, civil servants and politicians - the higher its value, the lower the level of noticed corruption, hence the name corruption control [http://info.worldbank.org/governance/wgi/mc_countries.asp].

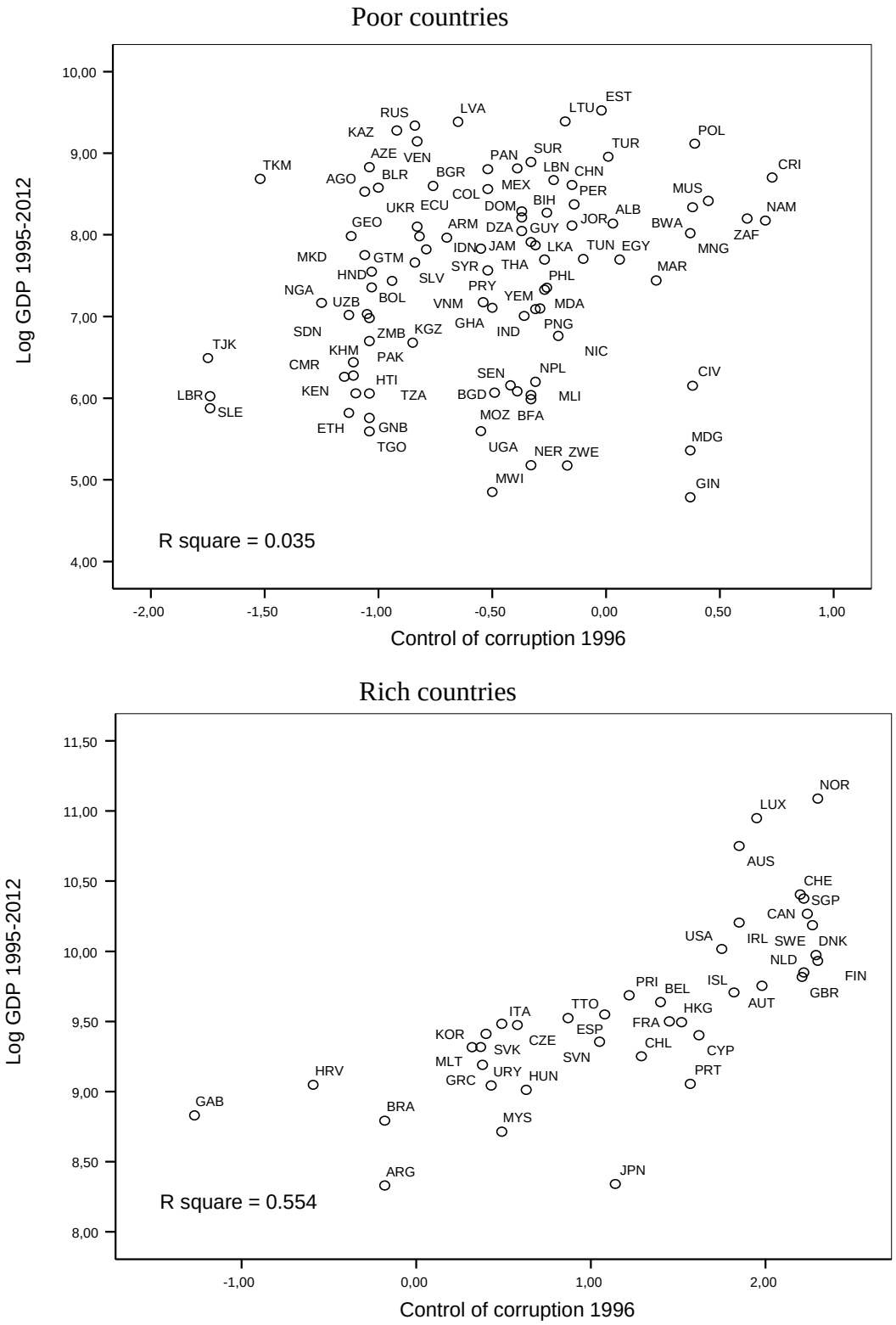
[84] The dividing criteria for less well and better-developed countries was GNP level in 1995 (4000 USD).





Data source: GDP - World Bank, social capital - WVS

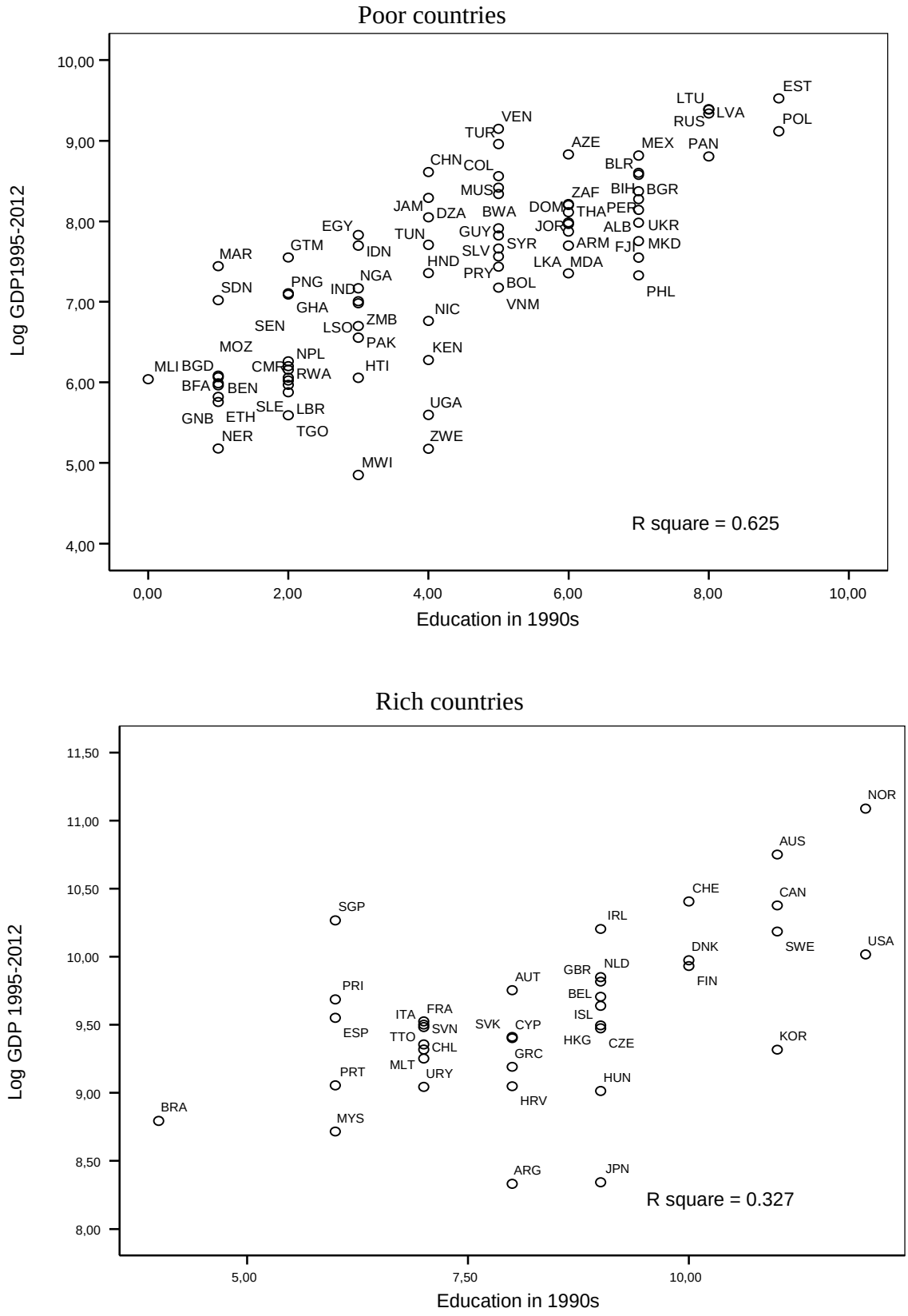
Figure 6.3.11. Regression of log GDP growth between 1995-2012 on level of social capital in 1990s and 1996 in rich (N=18) and poor (N=24) countries



Data source: World Bank

Figure 6.3.12. Regression of log GDP growth between 1995-2012 on control of corruption in 1996 in rich (N=38) and poor (N=87) countries

Human capital, measured by the average number of member's years at school, has a much greater developmental significance than in the less well-developed countries (where it explains over 60% of the differences in the rate of GDP growth over 17 years) than in the more developed, where its predictive power in half as small (figure 6.3.13).



Data source: World Bank

Figure 6.3.13. Regression of log GDP growth between 1995-2012 on educational attainment in 1990s in rich (N=36) and poor (N=74) countries

Because social capital may be correlated with human capital, the question arises what the real developmental reserve of more highly developed countries is. As far as the relation of these two capitals is concerned, in the less well developed countries the correlation of education with social capital is statistically insignificant, while in the more developed it is very strong and positive (r=0.825), the correlation of education with control of corruption is in both groups of countries also positive, but almost twice as high in the more developed (table 6.3.3). It is also worth noting the lack of correlation of corruption control with classically measured social capital (trust and organisational activity) in less well developed countries and a high correlation coefficient between those variables in more well-developed countries. This can result from the small developmental meaning both of corruption, trust and organisational activity of the residents of less well-developed countries.

Due to the high correlation between human and social capital in developed countries, the answered to the question which of these capitals plays a greater role in stimulating economic growth is hampered. Results of multiple regressive analysis suggests that in developed countries social capital has a greater meaning than human, which in most of these countries has already reached a very high level (table 6.3.3), though the degree of VIF (variance inflation factor) over 2 weakens the categorical nature of this statement. However, it does confirm the developmental advantage of social capital over human in developed countries, where the exchange of the trust and organisational activity indicator for that of corruption control, which correlates with the educational attainment and so the inflation measure, is within the norm (table 6.3.4).

Table 6.3.3. Correlation of social and human capital indicators in groups of more and less developed countries

Countries	Indicator	Social capital	Control of corruption
Less developed	Years of study	-0.216	0.269(*)
	Social capital		0.047
	Control of corruption		
More developed	Years of study	0.825(**)	0.548(**)
	Social capital		0.823(**)
	Control of corruption		

* Correlation significant at 0.05 (both sides).
** Correlation significant at 0.01 (both sides).

The data from *Diagnosis* also confirm the dependency between social capital, defined in accordance with the assumed indices (see above), and other dimensions of the quality of life, including the general index of the quality of life (see chapter 9.2) (table 6.3. 4). All those relations are statistically significant. The correlation coefficient with the general index of the quality of life is the highest, which is not surprising since the index of social capital is one of the eight components of the general index of the quality of life. Two correlation coefficients with the indices of the standard of living come second: civilisation level and material well-being.

*Table 6.3.4. Social capital correlation coefficient with other indices of the quality of life**

	Psychological well-being	Physical well-being	Social well-being	Civilisation level	Material well-being	Life stress	Pathologies	General quality of life
Pearson's *r*	0.143	0.019	0.137	0.271	0.230	0.118	0.022	0.531
p	0.000	0.003	0.000	0.000	0.000	0.000	0.000	0.000
N	25029	25584	25963	26154	24035	25541	26109	21720

* For measures of the quality of life, see chapter 9.2.

Similarly as in the analysis broken down by country, we find here a significant connection between social capital and the affluence of Polish subregions and larger cities. In the case of subregions we have the data on *per capita* GDP in 2010 (GUS, 2012). The average level of social capital of the inhabitants of 66 subregions is explained by 35% of the GDP diversification (figure 6.3.8). In the subregion with the highest level of social capital (in Poznań) we observe also decisively the highest after Warszawa GDP per capita.

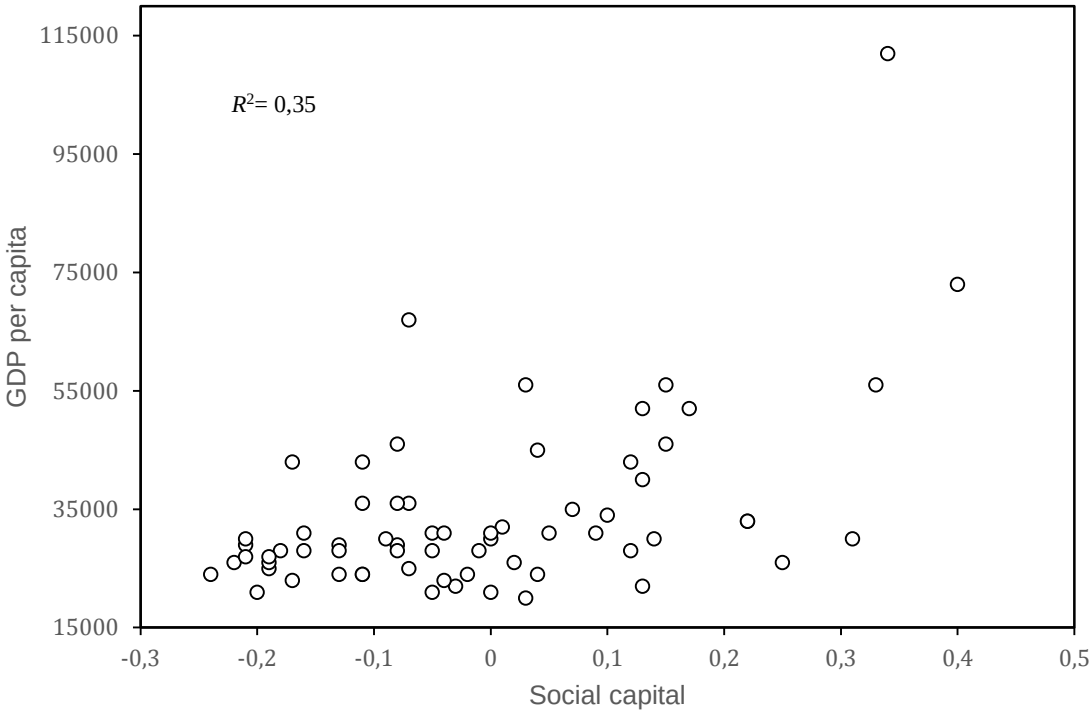


Figure 6.3.14. Social capital in 2013 v. GDP per capita in 2010 in 66 subregions according to NUTS3

Social capital also explains to a similar degree (38%) of regional differences in household per capita income (figure 6.3.15). Once again, Poznan is, with the exception of Warsaw the most prosperous city in terms of social capital.

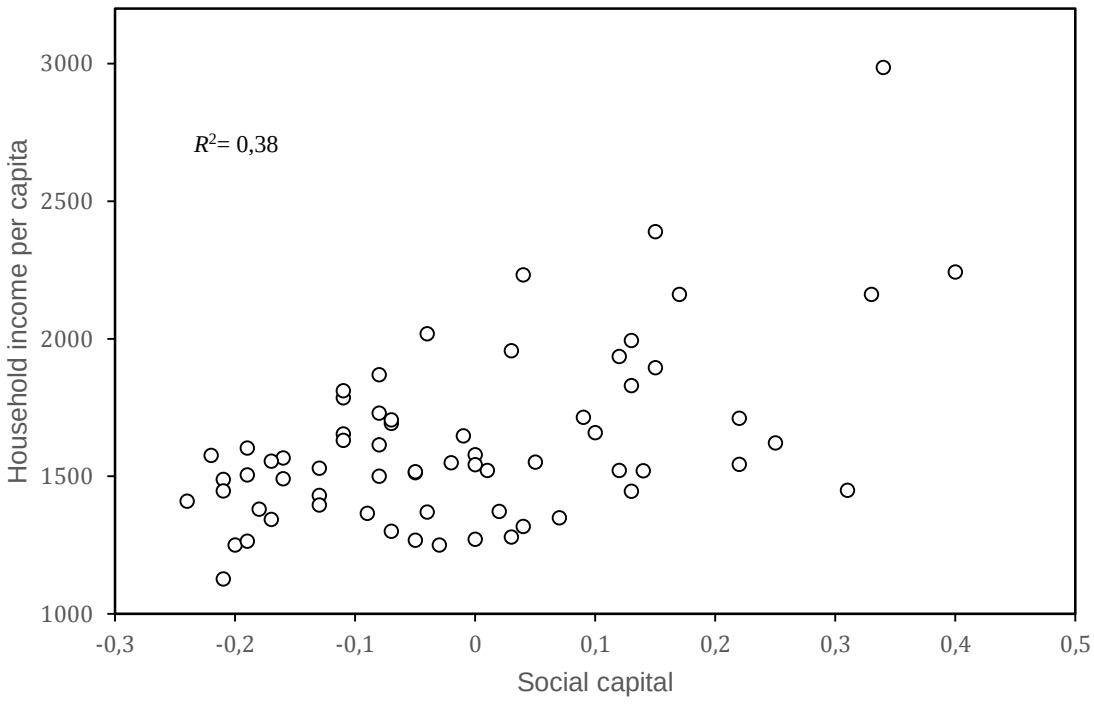


Figure 6.3.15. Social capital and per capita household income for 66 subregions according to NUTS3

There are no relatively up-to-date data on income for cities and towns (apart from a few larger ones which constitute separate subregions), hence we have to adopt a different measure of affluence. The average level of social capital among the inhabitants of 43 cities with a sufficiently large representation in the sample explains 33% of variance in the income of households per capita in such cities (figure 6.3.16). The linear dependency is statistically significant, but there are several cities that differ from the trend. Rzeszów stands out with social capital is absolutely the highest (thanks to the mainly greater tendency to associate than in other towns), but with the well-being of inhabitants at the level of towns characterised by low or medium social capital. After exclusion of Rzeszów from the regression analysis, the percent of explained variation rose to 43%.

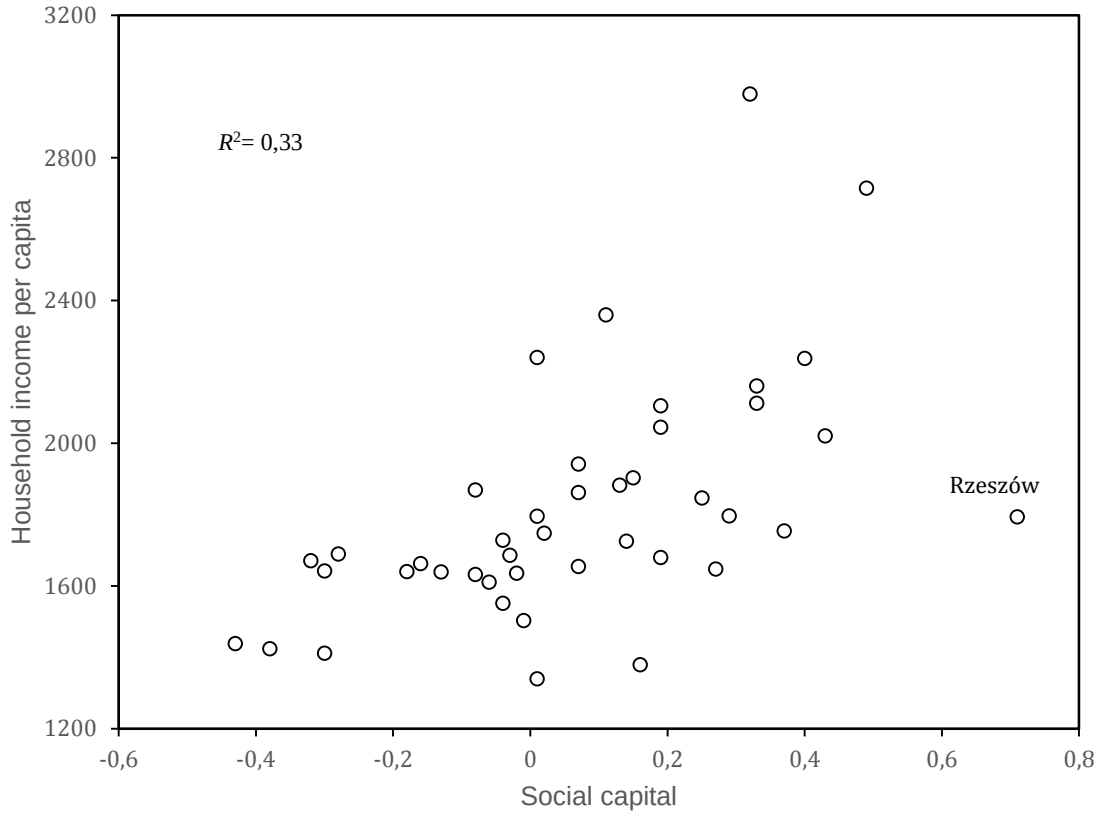


Figure 6.3.16. Social capital vs. per capita household income for 43 towns

Like for international comparisons, social capital better explains differences in the prosperity of the more highly developed regions than of the less well developed. If we take per capita GNP at 30,000 PLN as the criteria level, we can say that social capital in regions above that criteria explains 43% of differences in GNP, and in those below that level it becomes statistically insignificant as a predictor (figure 6.3.17).

Like in international comparisons, the question is whether social capital is condition of prosperity independent of human capital. In terms of the larger towns, human capital measured as the average number of residents' years at school, explains the variation in household income much better than social capital (figure 6.3.18). What is more, simultaneous inclusion of both capitals in the regression equation results in social capital losing all predictive power, while the number of schooling years explains 46% of differences in household incomes.

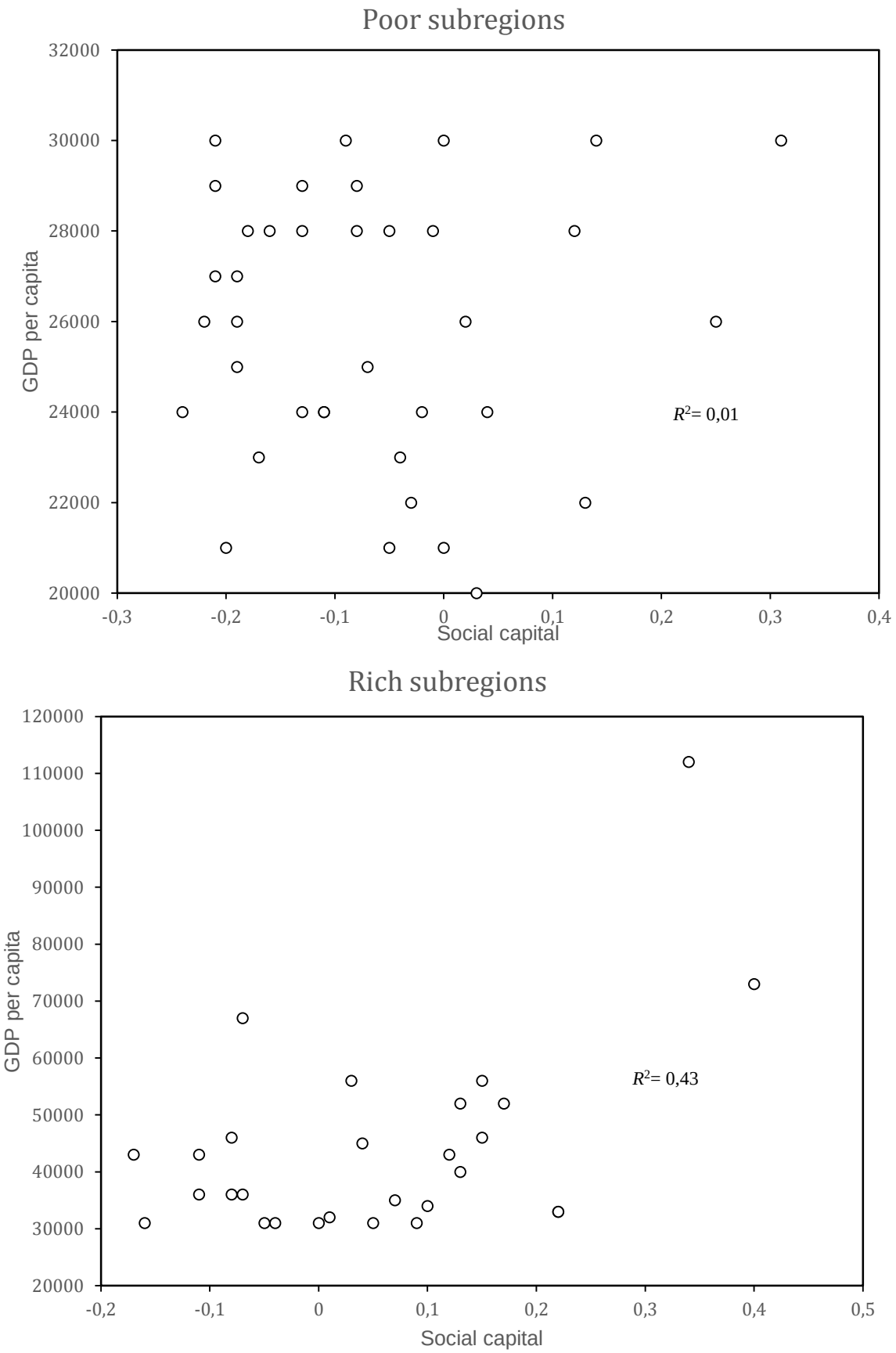


Figure 6.3.17. Social capital in 2013 and per capita GNP in 2010 for 66 subregions according to NUTS3 by more or less well developed region

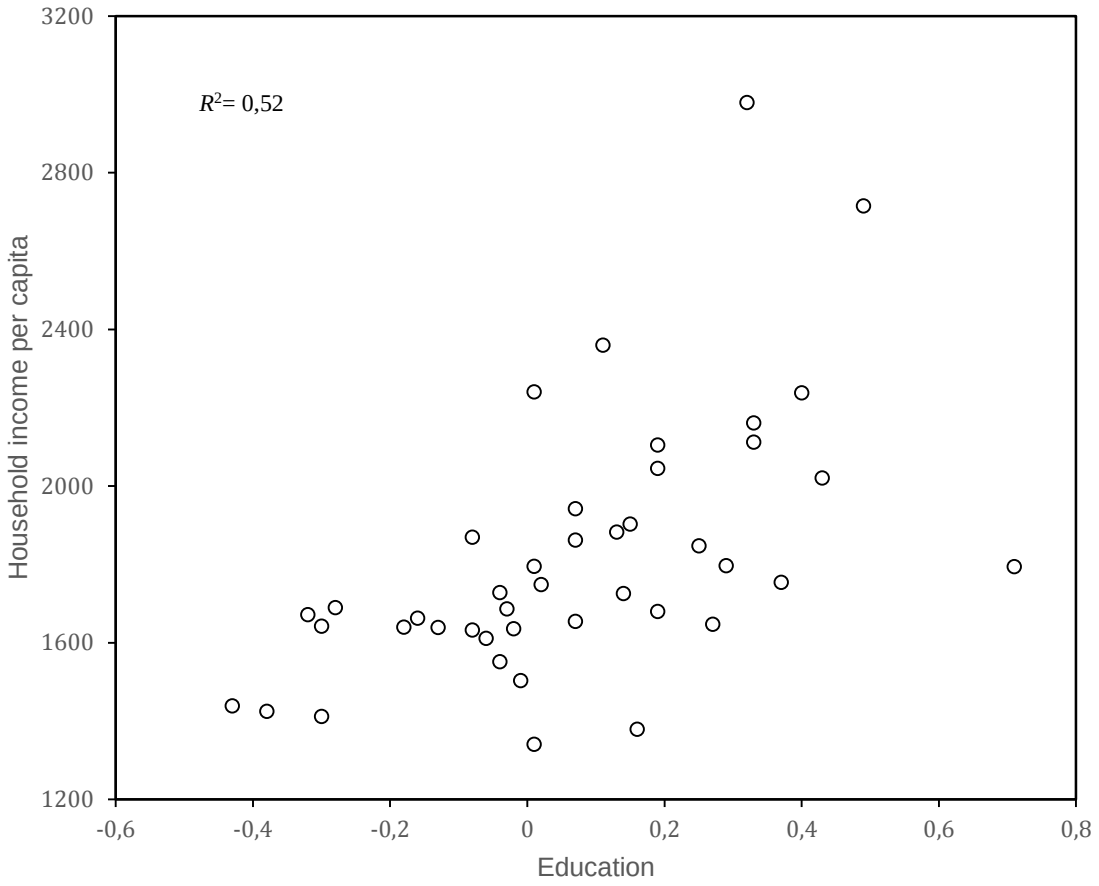
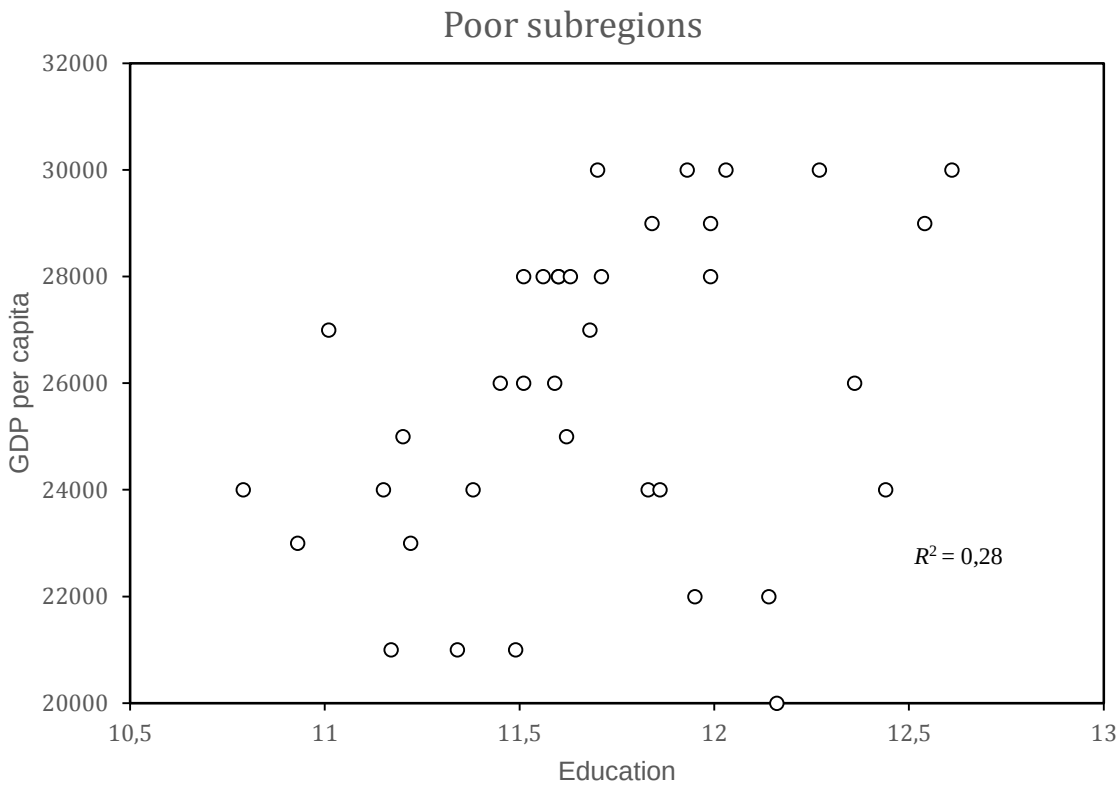


Figure 6.3.18. Human capital and per capita household income for 43 towns

We get a similar effect for subregons, which due to there being a greater number than large cities allows us to verify whether the economic roles of either social or human capital do or do not decide on the level of development achieved. Earlier we already noted that in less well developed regions, social capital does not explain a marked portion of differences in GDP. Perhaps therefore what counts there is human capital, while in the regions that are better developed it is social capital that has the more important role to play.

Figure 6.3.19 proves that human capital is even more important for the explanation of GNP in the better developed subregions than in the less well developed. It's correlation with social capital is, as we remember, also stronger in the better developed countries. After including both capitals in the regression equation, social capital in the better developed regions loses its statistical significance as a factor explaining GNP variance. This may mean that also better developed regions in Poland have not yet achieved the level of innovative economic development at which social capital becomes the important, perhaps the most important, developmental resource independent of the already high enough level of human capital.



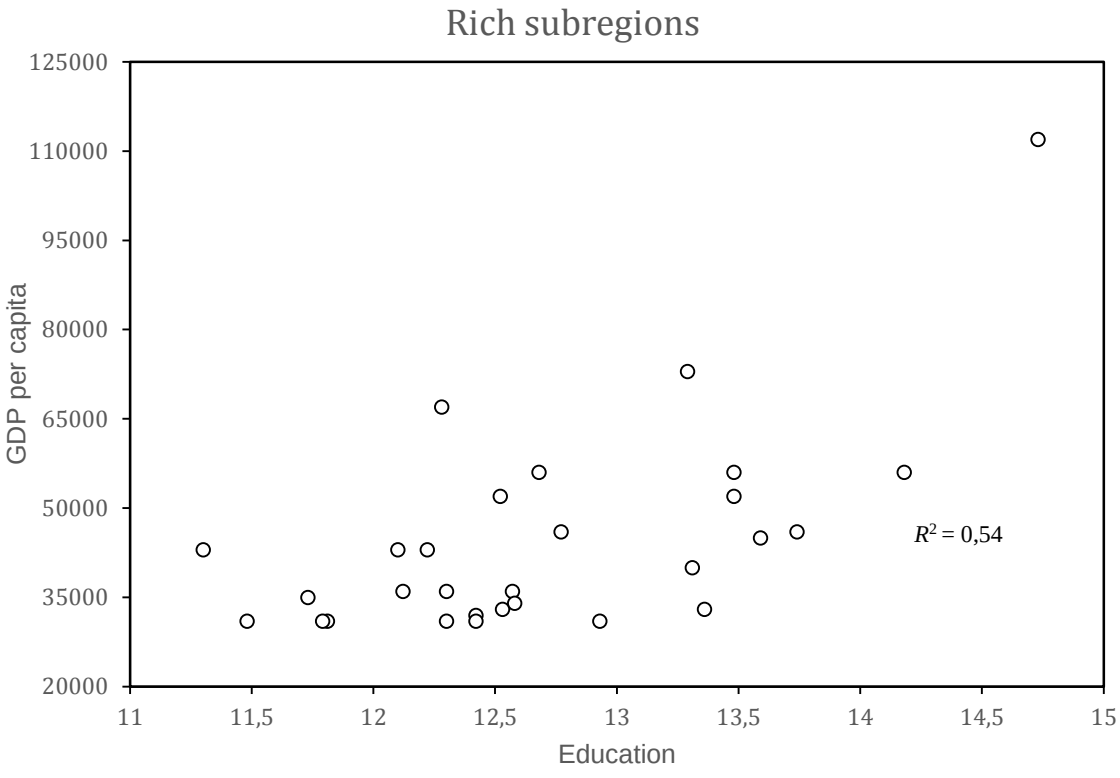
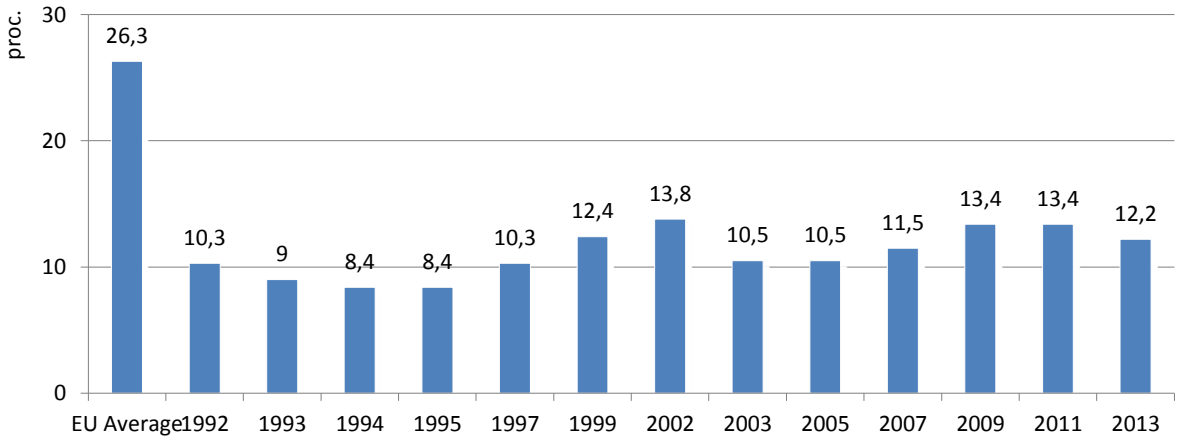


Figure 6.3.19. Human capital in 2013 and per capita GNP in 2010 for 66 subregions according to NUTS3 by more or less well-developed region

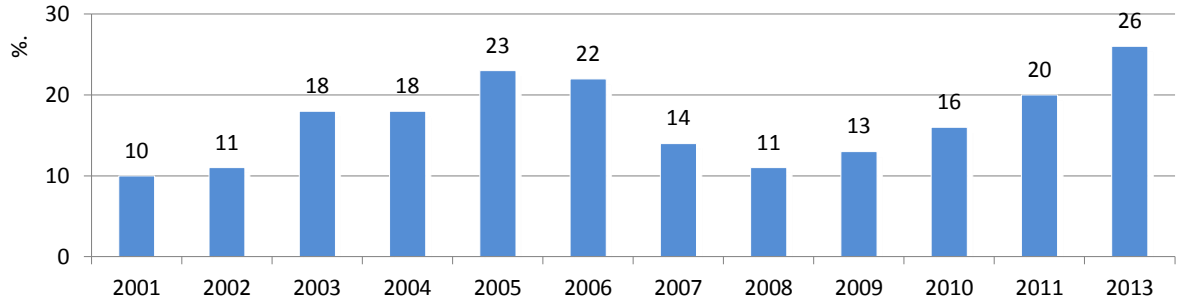
Let us now take a look at how two selected indices of social capital changed in the past years in Poland. The index of social trust changed slightly, but in the entire period from 1992 to 2013 it remained 2-3 times lower than the average in the European Union (fig. 6.3.20.). The percentage of volunteers among Polish adults grew until 2005 and then started to decrease to the level from before 2003, only to increase again to the level from the mid-90s (fig. 6.3.21. It should however be added that the scale of answers in 2013 was not dichotomous (either yes or no), but three-fold (yes, often, yes, rarely and no), which could have influenced a rise in the share of volunteers).

According to the data of the *Polish General Social Survey* (PGSS, 1999), after a temporary growth in 1997 the number of persons satisfied with democracy in Poland started to decrease. In our research, in which we used a different scale for the assessment of democracy than the *Polish General Social Survey*, the percentage of those supporting the opinion that democracy is better than any other form of government is at a very low, and recently still falling level. In 2003 it was 17%, in 2005 21%, in 2007 24%, in 2009 also 24% and in 2011 26.8% and in 2013, 25.5%.



Data source: EU average – ESS - *European Social Survey* 2010, Poland 1992-2002 – *Polish General Social Survey*, 2003-2013 – *Social Diagnosis*

Figure 6.3.20. Percentage of persons trusting other people in Poland between 1992-2013 and average level of trust in the EU in 2008



Data source: 2001-2010 *Wolontariat, filantropia i 1 proc.* (*Voluntary work, philanthropy and the 1%*) Klon/Jawor Association; 2011-2013 - Social Diagnosis

Figure 6.3.21. Percentage of volunteers among Polish adults 2000-2013

From Poland's perspective the general question is what the source of economic development in the Third Republic of Poland is given the continuously low level of social capital. The development of Warsaw, Poznań or Gdynia may be connected with social capital which is higher there than in other agglomerations, however the material level of life has improved rather steadily in the entire population (see chapter 9.3) and also in the regions with the lowest levels of social capital. The hypothetical answer is that we are at the stage of molecular development characteristic of less developed countries, as opposed to the community development that

characterises highly developed countries (Czapiński, 2008, 2011b). A symbol of this opposition is the gap between the improved living conditions in households, furnished with various types of consumer durables (cf. chapter 4.3), and the pace of the infrastructure development, for instance in the case of roads, and all difficulties connected with implementation of public investments. The economic advancement of specific persons and families is dependent on human capital that is developing fast in Poland, and on educational attainment in particular. Collective projects, which require effective cooperation between the central and local government authorities as well as the local community and particular citizens, need social capital to be successful. Mere knowledge and health are no longer enough.

We live in a country of increasingly effective individuals and a continuously ineffective community. The common good, measured for instance as the size of the state budget, is only growing because those who are obliged to pay part of their income to this common coin bank are becoming richer. However, this brings little benefit to public investment. The fact that currently the considerable financial resources from the EU to a certain extent level this asymmetry should not put politicians at ease because soon, when the external supply has dwindled and social capital has not grown, we may face the risk of impeded development.

International studies demonstrate that human capital is more important than social capital in terms of the conditions for development in the poorer countries, to which Poland still belongs. However, after exceeding a certain threshold of affluence[85] it is social capital which becomes more important for development. This explains why so far we have developed economically at a fairly good pace, despite a very low level of social capital. Probably in about 8 years Poland will reach the threshold of affluence above which further investment in human capital will cease to suffice to maintain development. This is approximately the time left to build social capital necessary for further development (Czapiński, 2011b).

done and still do (at present as many as 2/3 of students pay for their education from own pocket), it is impossible to build social capital in this manner. First of all, as Putnam states, social capital is dependent on the historical, long term process of the formation of a civil community, and secondly, under this historical process it is highly important what occurs in the public sphere: in politics, at schools, in local government and on the streets. This in turn to a great extent depends on the elite and on politicians in particular. At present, when looking at the educational system or parliament, it is difficult to indicate examples of a political or, more generally, institutional incentive that would encourage Polish people to trust each other more and feel a greater willingness to cooperate. The passage of time alone will not change this.

To sum up, today growing human capital, which attracts foreign investors and the financial support from the European Union, is a sufficient source of the individual development of Polish people and thus also of Poland as a whole. However, in some short time we will painfully experience the lack of social capital responsible for the development of a community without a considerable external supply.

[85] Level of affluence measured for example in terms of *per capita* GNP is only an indicator, available to most countries, of the level of economic relation complexity, technological advancement, competitiveness and other indicators of level of social development

6.4. Activity and quality of life in later years

Janusz Czapiński, Piotr Błędowski

6.4.1. Socio-demographic characteristics of the elderly

We took 60 years of age as the criteria for elderly in this study. In the whole household panel sample 20.9% of members were of that age or over, and in the individual respondent sample 25%, with 59.3% women (the proportion of women is greater the more advanced the age - in the group over 79, there are twice as many women as there are men at 66.1%).

Most (52.2%) elderly people are married (or in an informal relationship - 0.7%) and living in a single-family household, 27% run a single-person household, 10% live in a multi-family farm, 9.4% are single-parents and the remaining 1.4% live in a non-family multi-person household.

The breakdown of the elderly and younger in the individual respondent sample by professional status is presented in figure 6.4.1. Retirees dominate in the elderly persons' group (76%) and those receiving welfare benefits are in second position (12.9%) with 7% being professionally active.

Every third elderly person is a widower (15%) or a widow (47%), with this share growing with age as over 79% there are already 35% and 79% widowers and widows respectively. 74% of men and 42% of elderly women are married, with 6% either divorced or in separation.

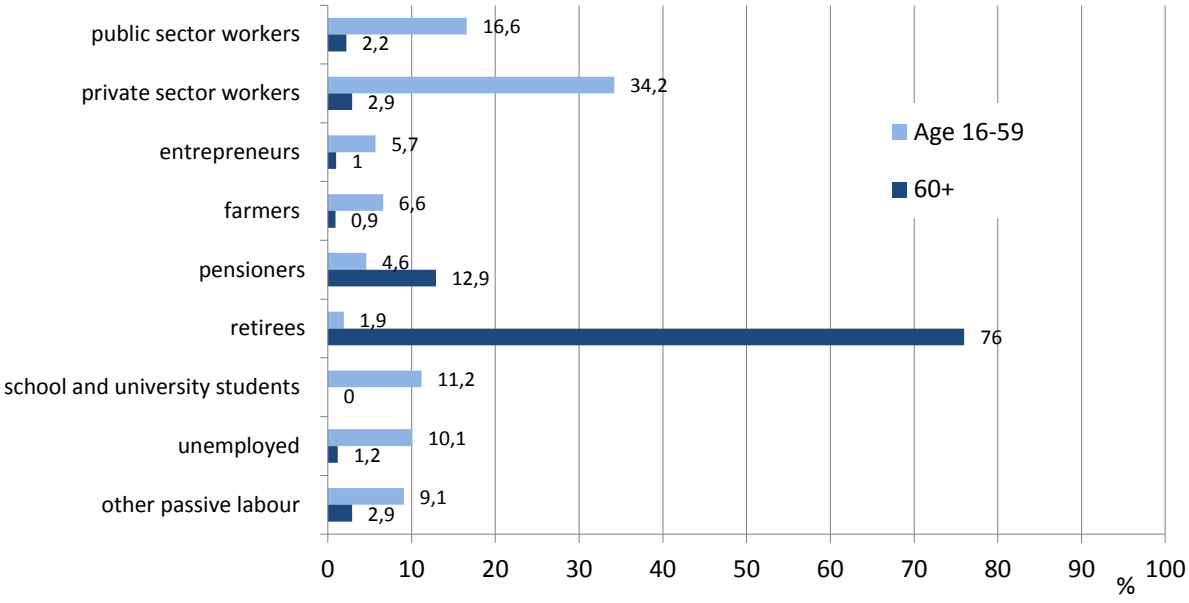


Figure 6.4.1. Percentage distribution of 16-59 year-olds and elderly (60+) by socio-professional status

The share of persons of a higher or post-high-school education is twice as small among the elderly than in the groups of younger respondents (14 to 26%) and there is almost a five-times greater share of persons with basic or lower education (35.6 to 7.5%).

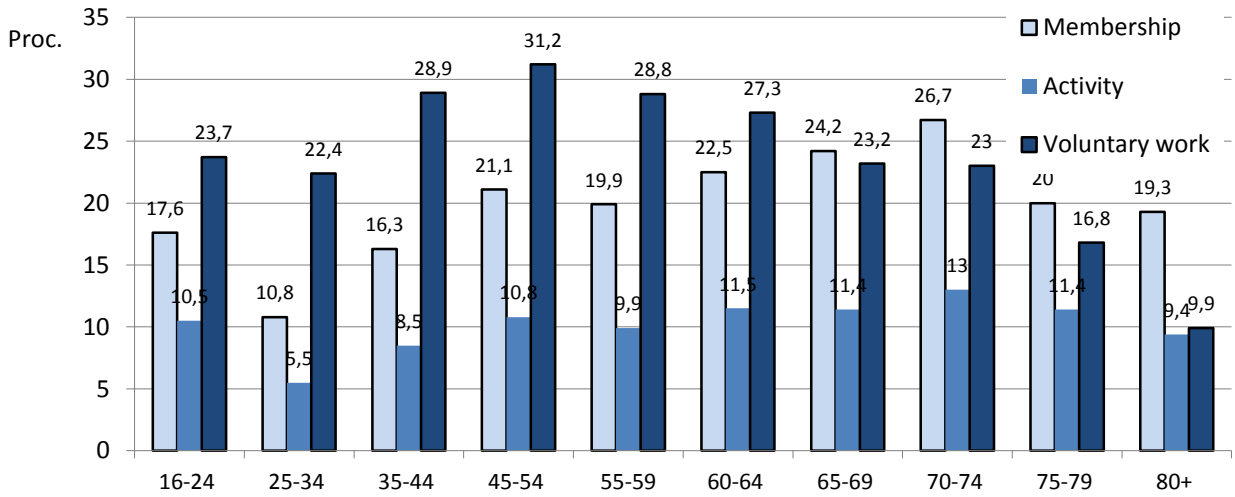
Every fourth elderly person is taken care of by a co-dweller or dwellers, and also every fourth plays the role of carer for another elderly co-dweller (most often a spouse) and half (mainly persons living alone - 86%) do not play any such role. This does not mean that the solitary elderly do not require care as 30% are registered disabled ($^1/_3$ of all disabled), of whom one in three has a high degree of disability.

In the questionnaire there were two questions measuring the concentration of stress linked to care for the elderly (Appendix 1. individual questionnaire, questions 11 and 12). The greatest such stress is experienced by dwellers of 45-59 taking care of those over 70 (figure 6.4.2).

6.4.2. Membership and activity in organisations on behalf of others of the elderly

Due to Poles' social activity being generally so low, the elderly do not stand out very negatively in the context of other age groups. As far as membership of organisations is concerned as well as active participation

in their activities, even the oldest groups (75 or more) do not differ to a statistically significant extent from the remainder. What is significant to the disadvantage of the elderly are differences in terms of voluntary work[86] (figure 6.4.2).



NOTE: membership -- effect of age F(9,25557) =12.821, p <0.000, η^2= 0.004; *post hoc* difference test (Scheffe): only 65-69 and 45-54 year-old groups differ from the 25-34 year olds to a statistically significant extent; activity -- effect of age F(9,25563) =8.711, p <0.000, η^2= 0.003; *post hoc* difference test (Scheffe): only the 16-24 year-old age-group differs from 25-34 year-olds to a statistically significant extent; voluntary work -- effect of age F(9,25499)=24.654, p<0.000, η^2= 0.009; *post hoc* difference test (Scheffe): only all groups of 65+ differ from all groups between 35 and 59

Figure 6.4.2. Percentage of members of at least one organisation who are active of various ages with control for gender and educational attainment

9.4% of the elderly are active in various organisations, which is a very similar result to that of younger groups (9.6%). The greatest organisational activity for the over-60s was in religious organisations, social and interest clubs, housing committees, and universities for the elderly (figure 6.4.3).

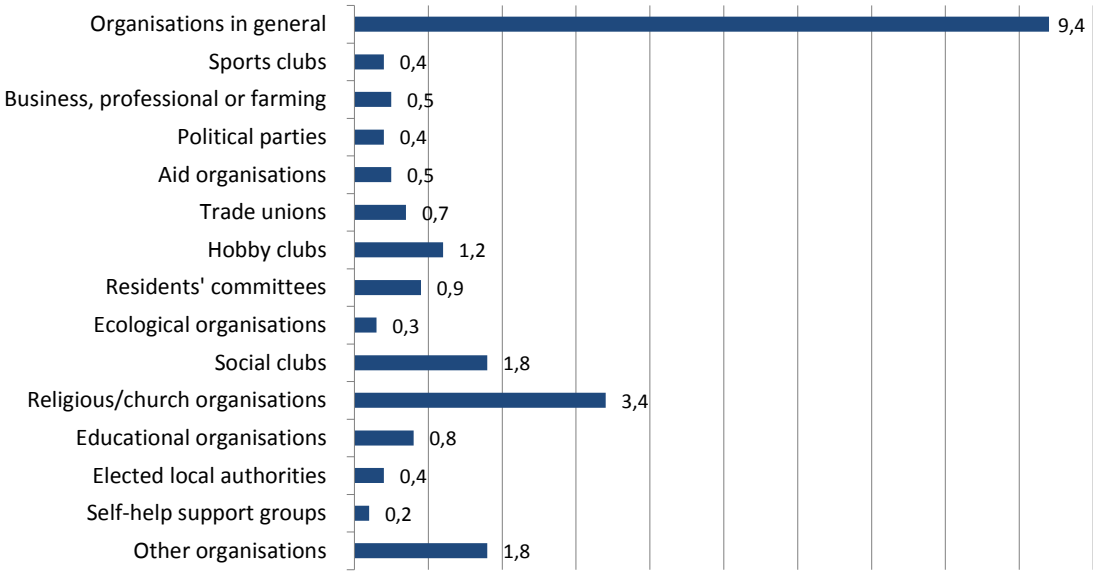
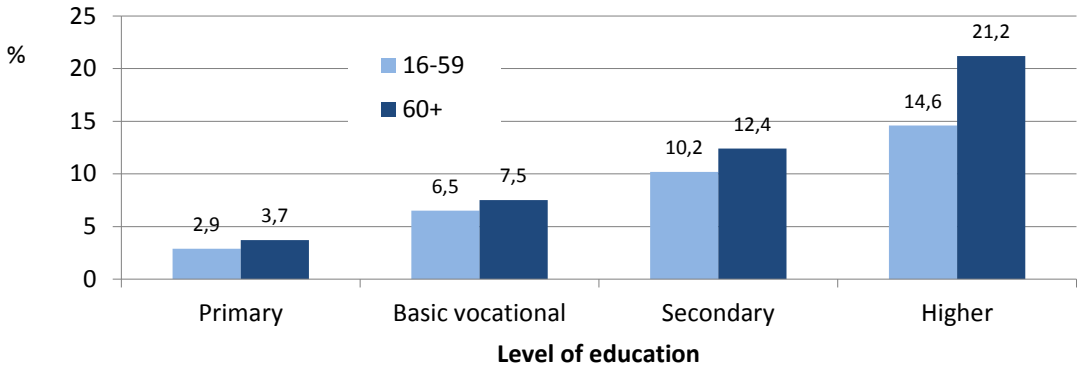


Figure 6.4.3. Percentage of the 60+ active in organisations (some organisations were not included due to small number of persons)

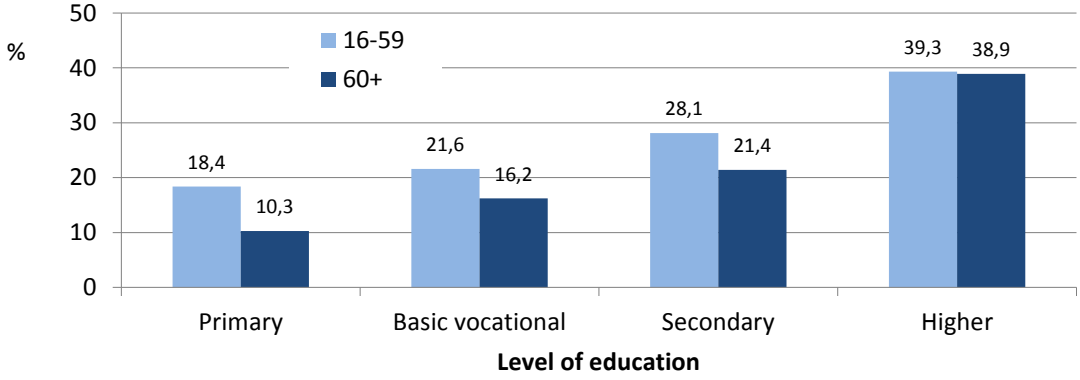
Gender does not differentiate the organisational activity of the elderly, however it does, and very strongly so that it is stronger than in younger groups, the educational attainment (figure 6.4.4). Education also has a significant meaning for voluntary work (figure 6.4.5).

[86] Individual questionnaire item: "Have you in the last year been engaged in any unpaid/voluntary work or provided any service outside the family or on behalf of any social organisation?"



NOTE: effect of age F(1,25635) =32.989, p <0.000, η^2= 0.001; effect of educational attainment F(3,25635) =157.329, p <0.000, η^2= 0.018; effect of interaction of age and level of education F(3,25635) =7.050, p <0.000, η^2= 0.001

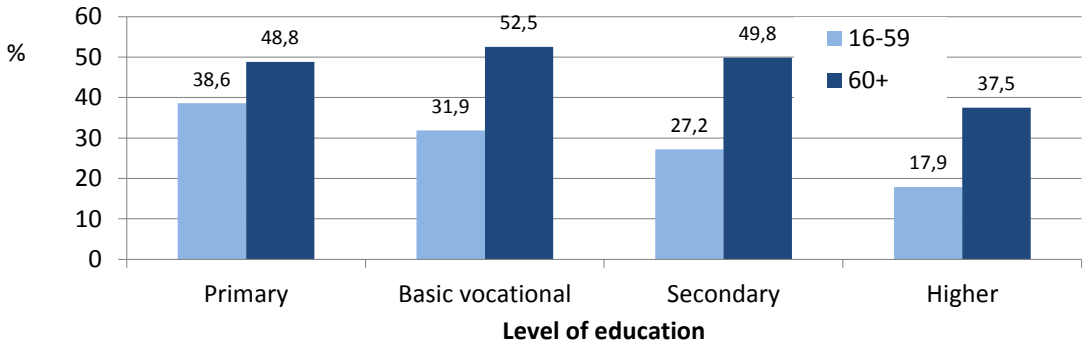
Figure 6.4.4. Percentage of the 16-59 and 60+ active in organisations by educational attainment



NOTE: effect of age F(1,25563) =55.089, p <0.000, η^2= 0.002; effect of educational attainment F(3,25563) =202.429, p <0.000, η^2= 0.023; effect of age and level of education F(3,25563) =4.918, p <0.005, η^2= 0.001

Figure 6.4.5. Percentage of 16-59 and 60+ engaged in voluntary work by educational attainment 6.4.3. Other kinds of activity by the elderly

The elderly spend most of their free time watching television - on average this is over 60% more time spent than younger people. In this case education does have a significant meaning (figure 6.4.6).



NOTE: effect of age F(1,25563) =55.089, p <0.000, η^2= 0.002; effect of educational attainment F(3,25563) =202.429, p <0.000, η^2= 0.023; effect of age and level of education interaction F(3,25563) =4.918, p <0.005, η^2= 0.001

Figure 6.4.6. Percentage of 16-59 and 60+ watching TV more than 3 hours a day by educational attainment

The elderly do any kind of sport twice as rarely as younger people (figure 6.4.7). Most popular (especially among men), and more so than for younger people, who do not avoid physical exercise, is cycling, as is nordic walking (here with running and jogging) for both the elderly and younger groups.

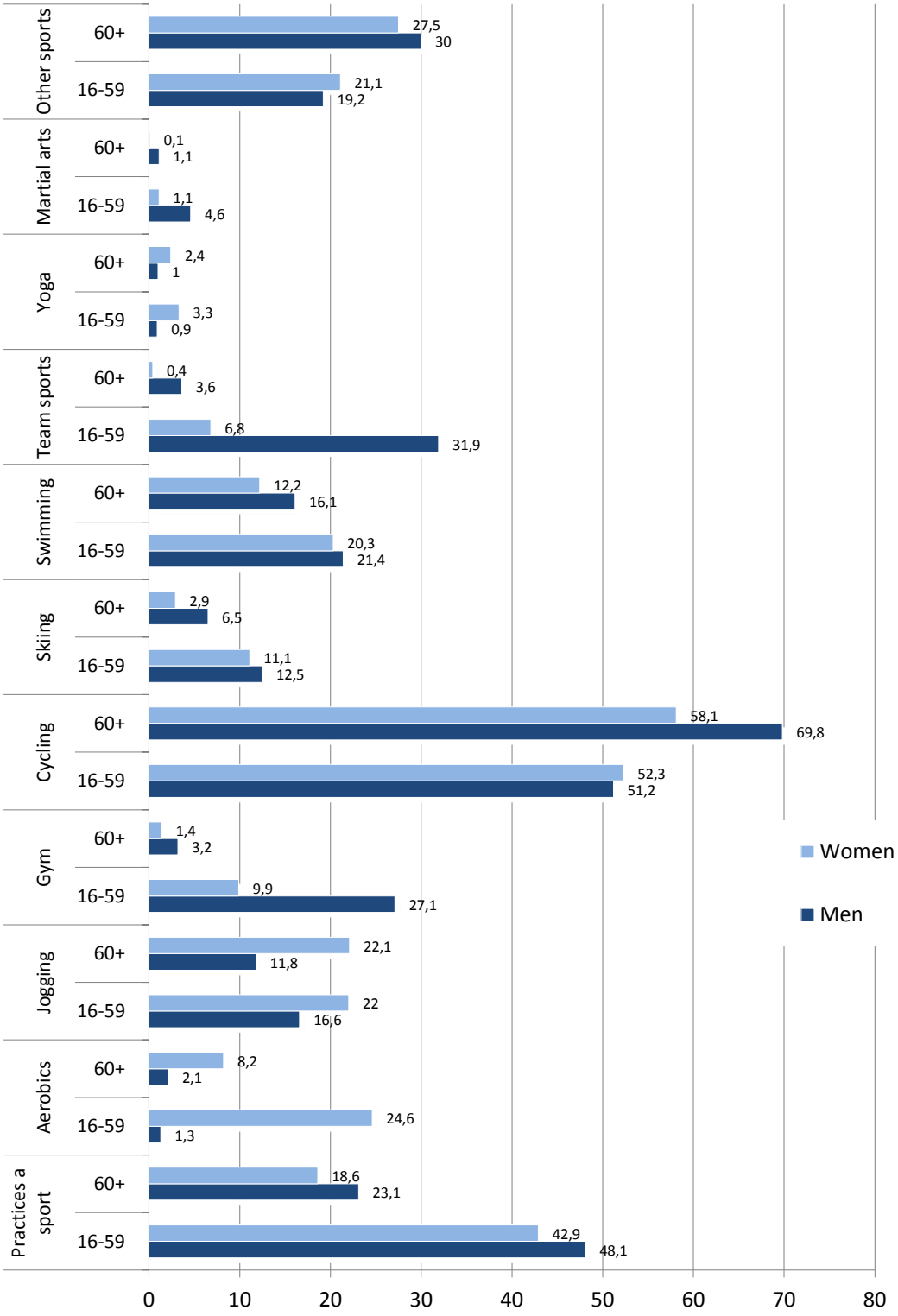
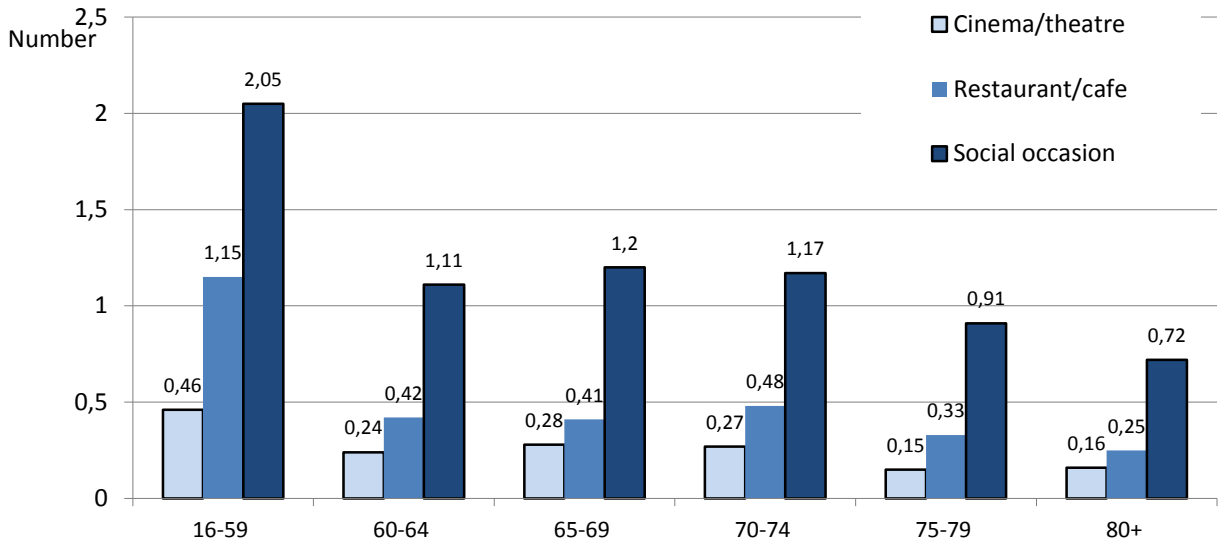


Figure 6.4.7. Percentage of 16-59 and 60+ practicing a sport and those practicing particular kinds of sport

Elderly people much more rarely go to the cinema, theatre or concerts. They also less often go out to restaurants, cafes or pubs or take part in social meetings (figure 6.4.8). These differences do no depend on gender, and the only difference affected by education is frequency of eating out (the higher the education the *lower* the frequency).

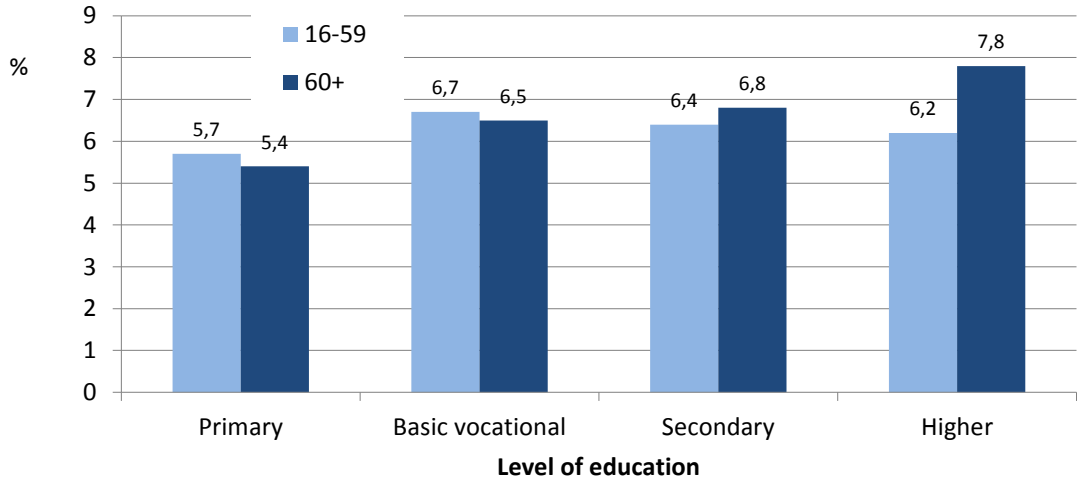


NOTE: cinema/theatre effect of age F(5,25050)=31.489, p<0.000, η^2=0.006; restaurant/cafe effect of educational attainment F(5,25122) =88.429, p<0.000, η^2= 0.017; social occasion effect of age F(3,25295) =71.918, p <0.000, η^2= 0.014

Figure 6.4.8. Number of times per week at cinema, theatre, concert, restaurant, cafe, pub or social occasion for six age groups with control for educational attainment and gender

6.4.4. The social relations and attitudes of the elderly

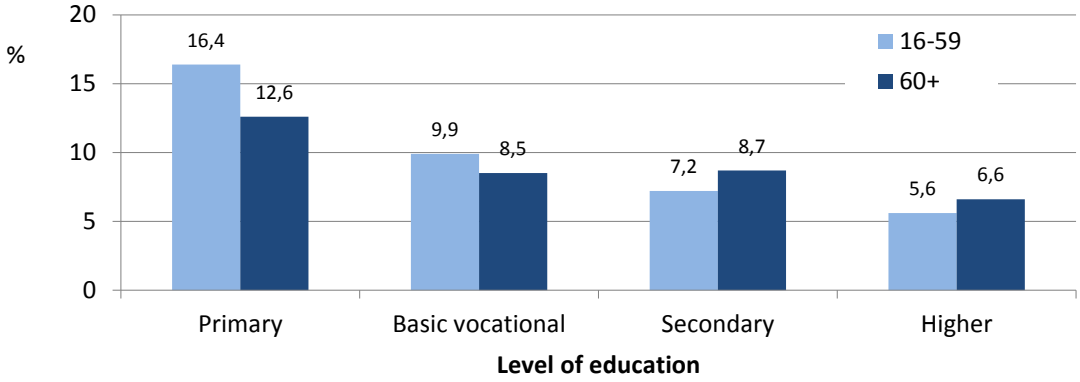
The elderly not only have just as many friends as younger people, they have more, especially in the higher and post-high-school education group (figure 6.4.9). However, at the same time, 7.3% of women and 7.4% of men report they do not have a single friend, though this percentage does fall as education level rises. In the group with basic or incomplete education 11% are friendless, while those with post-high-school and higher the figure falls to 4.1%. The relation between educational attainment and number of friends is statistically significant (p<0.000).



NOTE: effect of age F(1,25412) =11.932, p <0.005, η^2= 0.000; effect of educational attainment F(3,25412) =30.228, p <0.000, η^2= 0.004; effect of age and level of education interaction F(3,25412) =14.378, p <0.000, η^2= 0.002

Figure 6.4.9. Average number of friends for 16-59 and 60+ by educational attainment with control for gender

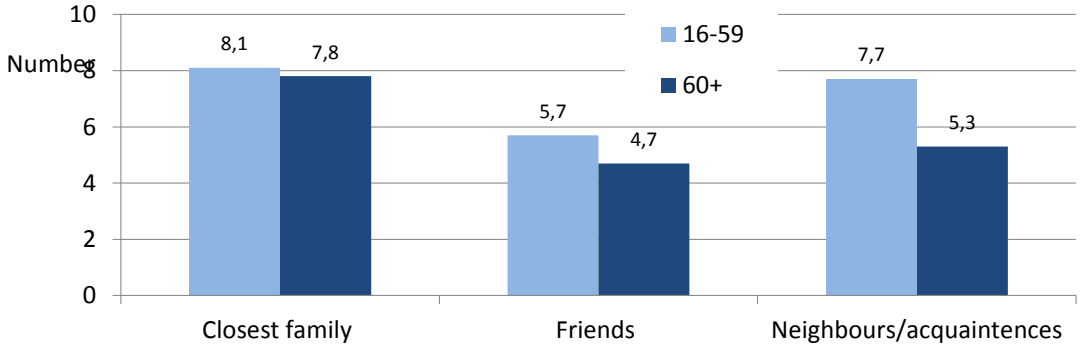
The elderly feel lonely slightly more often than the younger respondents (22% and 19% respectively, F(1.25375) =26.932, p <0.000, η^2= 0.001 with gender and education controlled), but they do not feel less often loved or trusted, which is also true for the less well-educated. The elderly of the *better* educated group more often feel unloved and not trusted (figure 6.5.10).



NOTE: effect of age not significant; effect of educational attainment F(3,25487) =54.548, p <0.000, η^2= 0.006; effect of interaction of age and level of education F(3,25487)=6.978, p <0.000, η^2= 0.001

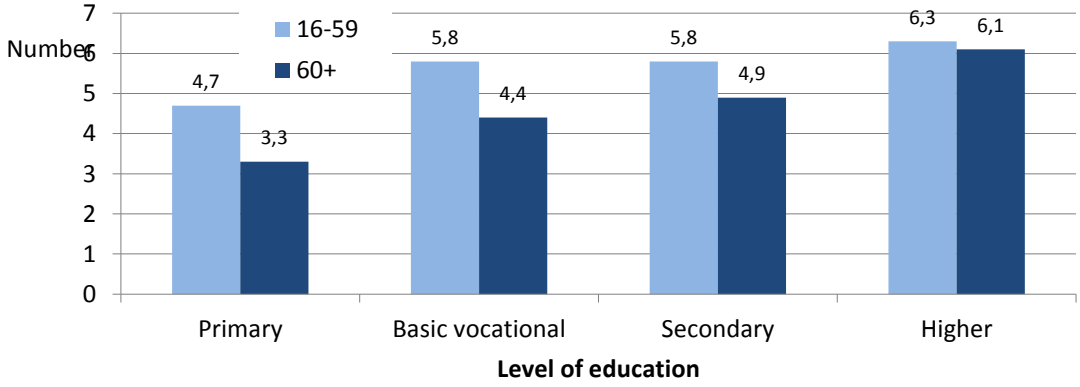
Figure 6.4.10. Percentage of 16-59 and 60+ who do not feel loved or trusted by educational attainment with control for gender

The elderly maintain regular contact with a smaller number of family members, friends and acquaintances (figure 6.4.11). In the case of friends, the number of contacts the elderly have depends unusually strongly on the educational attainment as those with higher education keep a similar number of regular contacts with friends as do younger people (figure 4.6.12).



NOTE: effect of age on the closest family F(1,25412) =7.948, p <0.01, η^2= 0.000; for friends F(1,25401)=99.678, p <0.000, η^2= 0.004; for acquaintances F(1,25242)=266.805, p <0.000, η^2= 0.010

Figure 6.4.11. Numbers of closest family members, friends and acquaintances (neighbours) with whom 16-59 and 60+ maintain regular contact



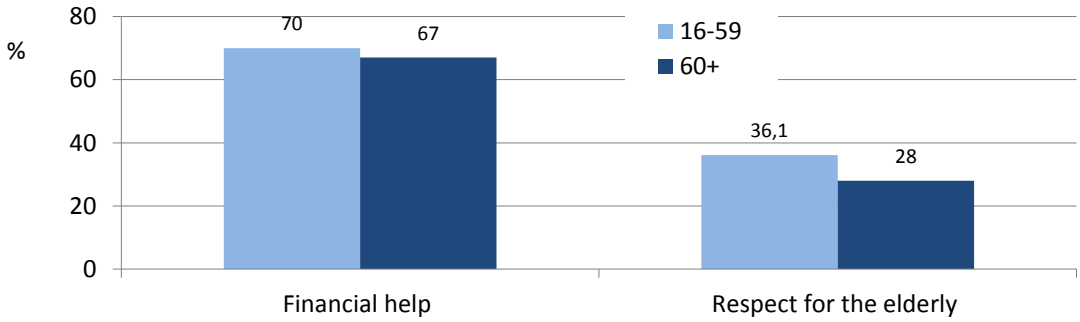
NOTE: effect of age and educational attainment interaction F(3,25401)=6.338, p <0.000, η^2= 0.001

Figure 6.4.12. Number of friends with whom 16-59 and 60+ maintain regular contact by educational attainment with control for gender

To a statistically significant degree, the elderly are happier with their family relations than younger people (F(1.25480)=24.588, p <0.000, η^2= 0.001), but less happy with their relations with friends (F(1.25005)=17.845, p <0.000, η^2= 0.001). Almost 1/4 of the elderly are very happy with their family relations, and nearly half are happy with no statistically significant difference in terms of gender, though the share of very happy, happy and quite happy women with their family is around 1p.p. higher. Neither does age have a significant effect on the rating of family relations. However, the factor that does have a significant effect on the elderlies' family relations is education (p <0.000), as those with post-high-school education are more often happy with their family relations and to a minimal extent (0.1%) very happy.

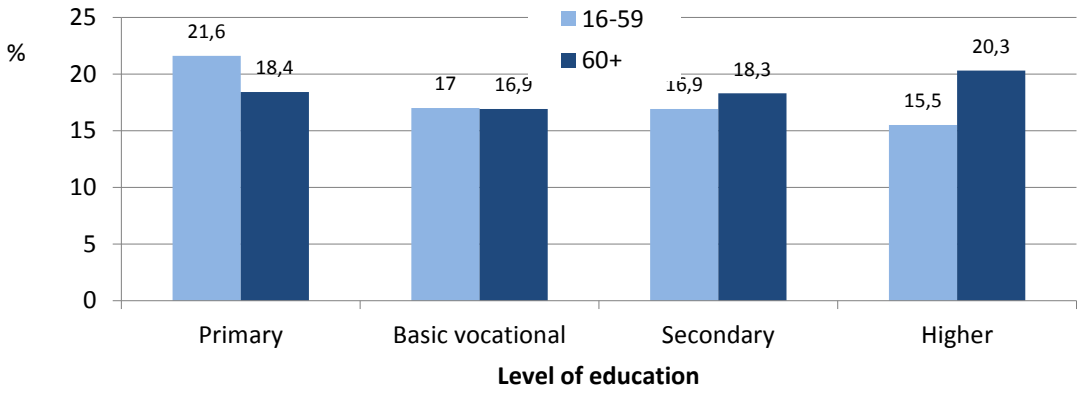
The elderly are more tolerant towards homosexual persons (F(1.25568)=23.185, p <0.000, η^2= 0.001), though lightly less often trust each other (F(1.25600)=4.385, p <0.05, η^2= 0.000).

There is a small, though statistically significant difference between the elderly and younger groups as far as financial support of elderly parents. Also the two groups differ fundamentally in the belief that the elderly are respected in Poland (figure 6.4.13). Paradoxically, the elderly are more rarely convinced that the financial obligation to support parents lies with the children. Also, the elderly see less respect for themselves than the younger believe. On the subject of placing parents in care homes, views differ between the elderly and the younger groups according to education level (figure 6.4.14). As far as the elderly with higher education definitely more often agreeing to having their parents placed in care homes, than among those with basic education it is the younger groups that accept this view more often.



NOTE: effect of age on financial help F(1,25596)=10.688, p<0.01, η^2=0.000; respect for the elderly F(1,25581)=111.678, p<0.000, η^2= 0.004

Figure 6.4.13. Percentage of 16-59 and 60+ who agree that children ought to contribute financially to their elderly parents' welfare, and that the elderly are respected in Poland with control for gender and educational attainment



NOTE: effect of age and educational attainment interaction F(3,25552)=6.160, p <0.000, η^2= 0.001

Figure 6.4.14. Percentage of 16-59 and 60+ who approve of housing their parents in homes for the elderly with control for gender

Another form of elderly person's activity is contacts with friends and groups of friends. These contacts are generally rarer than in the case of young people and for natural reasons their intensity falls with age. Generally, among the elderly it is women who maintain these contacts and are more often pleased with them (figure 6.4.15). These differences are statistically significant (p <0.000).

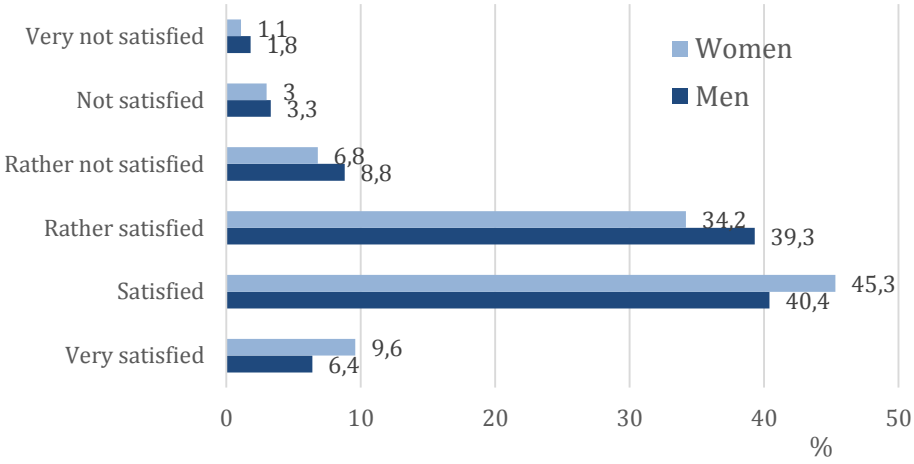


Figure 6.4.15. Percentage of elderly satisfied with the contact they have with their group of friends by gender

Elderly people's educational attainment significantly effects (p <0.000) their assessment of contacts with friends. The better educated are more often pleased with their contacts, and the fact that friends are chosen is reflected in the disproportion between the shares of satisfied and dissatisfied with their social contacts in every education level group.

It is also worth emphasising that age is a significant differentiating factor (p<0.000) for reactions to matters concerning the local community. Activity and readiness to react to the decisions and activity of local authorities falls, as 60-64 year olds who informed that these decisions and activities often annoyed them were almost twice as many as 80 year olds or more (11.2% vs 6%). Also with age the share of respondents who claimed that these decisions never bothered them increased (42.2% and 58.1% respectively). Another factor that differentiated the attitudes of the elderly in terms of reacting to local initiatives was gender (p<0.000), as men more often reacted negatively to local activity (55.8% men compared to 50.1% women who reported that local decisions and activities annoyed them often or sporadically).

In answer to the question whether in the last two years elderly respondents were involved in activities on behalf of the local community, elderly respondents demonstrated a lower degree of activity than the younger. However, every seventh elderly man (14.6%) gave a positive answer, while the activity of women on behalf of the local community was significantly lower (9.4%). Education level most strongly differentiated these activities (p<0.000), with the share of the elderly with a higher education getting involved in local initiatives six times higher than those with only a basic education (figure 6.4.16)

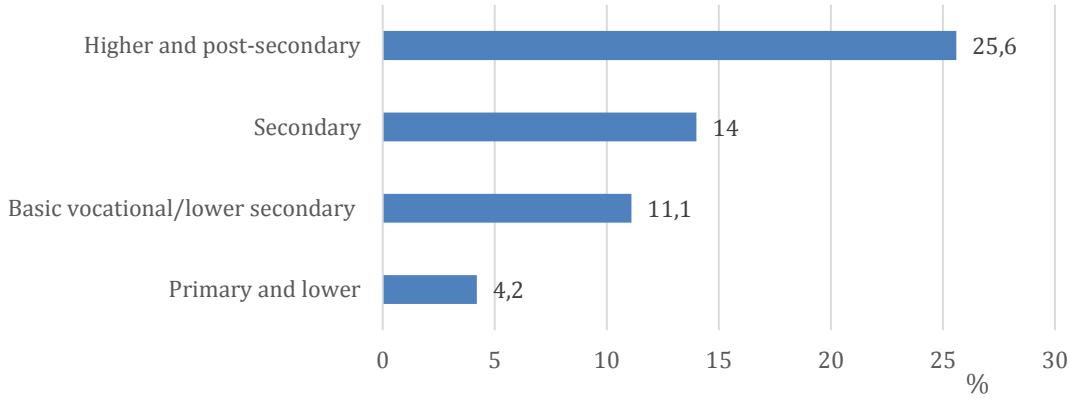


Figure 6.4.16. Percentage of elderly involved in activity on the part of their local community by educational attainment

6.5. Political activity and identification

Janusz Czapiński

In the *European Social Survey* 2010, the Poles ranked below the European average in terms Political interest and involvement. Our results concerning electoral participation, be it parliamentary, local government or presidential, were even worse. Even in the case of the turnout for the European Parliament elections in 2009, we ranked third to last position despite being among the greatest EU enthusiasts and trusting the European Parliament as the institution almost twice as much as the Polish national parliament as results from this year's edition of *Social Diagnosis* (see chapter 9.1) indicate. Even if we leave out the countries where participation in elections is a statutory obligatory (such as Belgium and Luxembourg), the political activity of Polish people and – in general – their civil activity (as shown by the indices of social capital) is still very low. In this respect, we are much more similar to the countries that also experienced real socialism than those from the north-west Europe, and Scandinavian countries in particular.

Declared involvement in elections is of course considerably higher. In the *European Social Survey*, like in the subsequent editions of *Social Diagnosis*, the difference between the declared and the actual participation in elections (this most important expression of civil existence) amounts to 20 pp. In the 2011 edition of *Social Diagnosis*, more than 66 per cent of respondents declared that they had taken part in the 2010 local government elections, while the data from the National Electoral Commission indicate the turnout at 47.3 per cent. In this year's edition 64.6% claimed they voted in the parliamentary elections of 2011, while the real voting frequency was 48.92% of those entitled to vote.

Only 0.3% of 16 year olds and over stated they were they were active on behalf of a political party, though it is worth noting that only 10% of Poles declared activity for any kind of organisation whatsoever.

Just like two years ago, in this year's edition of *Social Diagnosis* we asked respondents to indicate the political party with which they identify the most (Annex 1, individual questionnaire, Question 98). The distribution of answers is shown in fig. 6.5.1 and may be treated as an indicator of political identification. They show that more than half of Poles aged 16+ cannot find (49.2%), or have trouble finding (14.3 per cent), a political representative for their beliefs or interests. This means that more than a half have no political identity. Among these who in March and April indicated their representatives, 33.8% per cent identified with the Civic Platform (PO), 35.5% Law and Justice (PiS), 7.4% the Democratic Left Alliance (SLD), 7.4% with the Polish Peasant's Party (PSL), 7.1% with Ruch Palikota, 2.4% Solidarna Polska, 1.2% with Poland Comes First (PJN) and 2.9% (table 6.5.1). Compared to 2011, a lot has happened to the structure of support, as the Civic Platform and SLD have shown marked losses[87], PiS has gained[88] and PSL has remained at the same level.

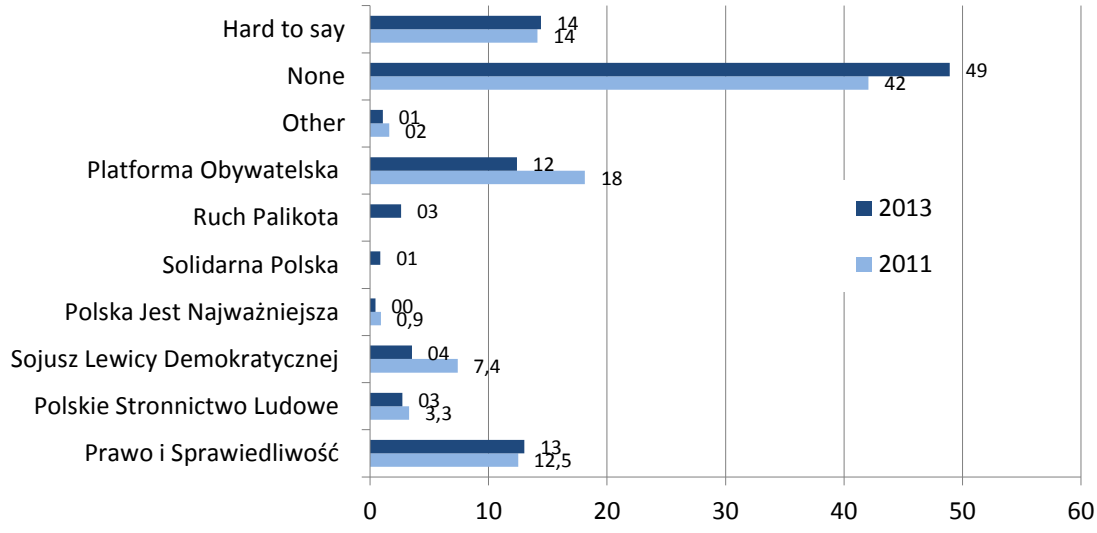
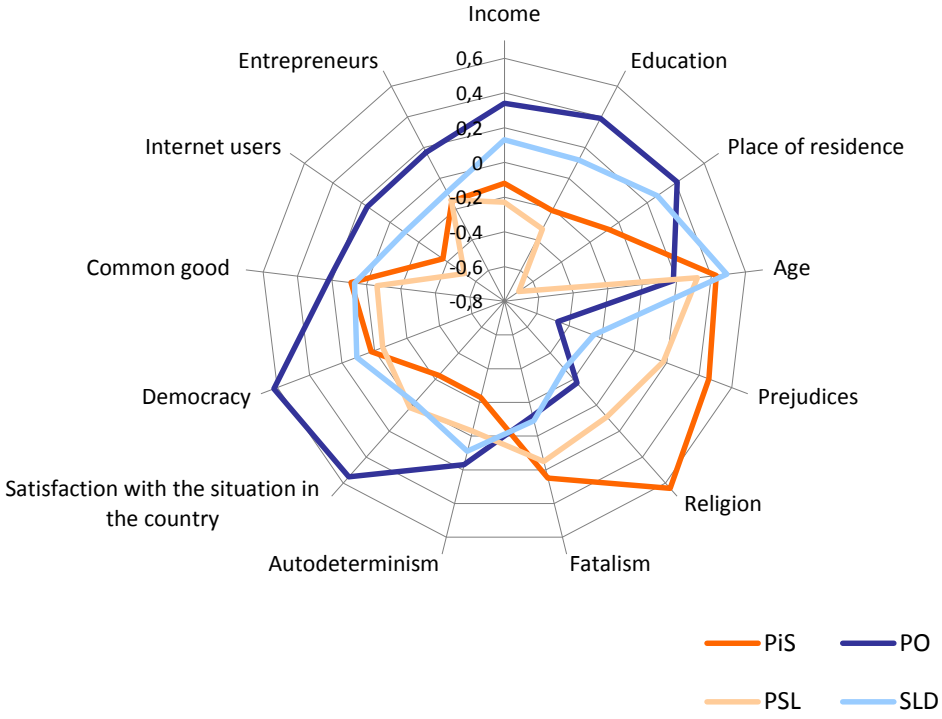


Figure 6.5.1. Percentage distribution of answers to " Which party do you feel closest to?" in 2011 and 2013. (no PJN and RP in the choice of answers in 2011)

[87] A great part of then SLD supporters voted for Ruch Palikota in the parliamentary elections and today's level of SLD support has yet to recover fully, though it is greater than its election result.

[88] This is a relative gain resulting from the marked 7 p.p. fall in Poles who declared identification with any party.

2013



2011

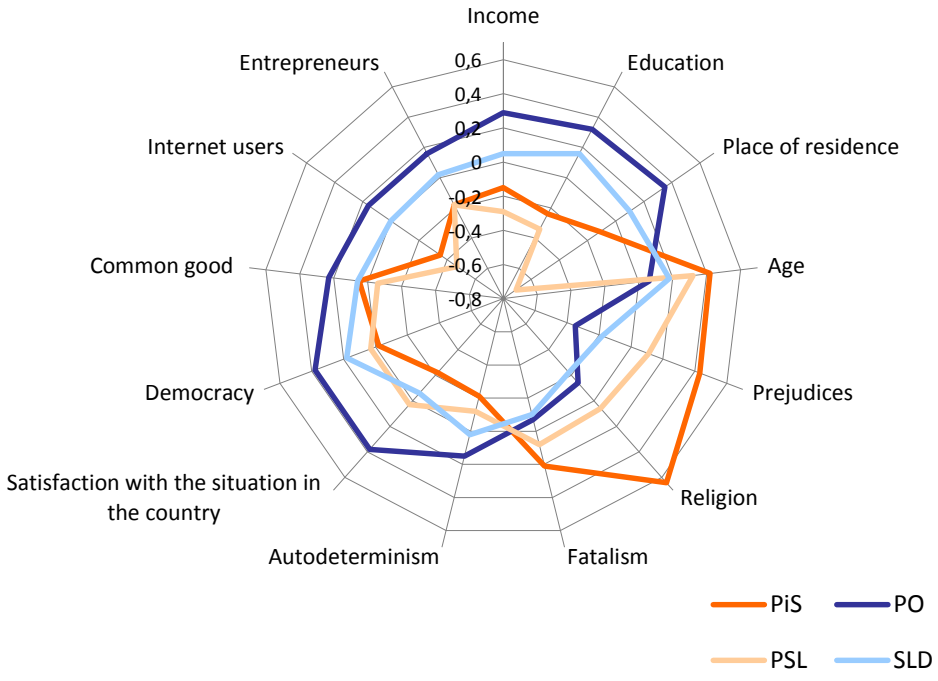


Figure 6.5.2. Age, level of education, personal income, place of residence class, entrepreneurship, percent of internet users, positive attitude to democracy, sensitivity to the common good, autodeterminism and fatalism[89]*, religiousness (frequency of religious practice and indication of God as a condition of a successful*

[89] Autodeterminism is the ascribing of last year's course of events to one's own agency, and fatalism is the belief that the course of matters depended on fate (provenance).

life), satisfaction with the situation in the country, level of prejudice against homosexuality and foreigners among supporters of the four main parties (standardised values) in 2011 and 2013

Political identification or its lack depends on socio-demographic features and life situation. Some of the most important determining features are age, level of education and personal income level.

The relation between the age and identification with PiS, PSL and SLD is visibly linear (the older the age group, the more often these parties are indicated), similarly to that between age and identification with an other party or the lack of such identification, which is reversely linear (the older the age group, the lower the percentage of answers). However, there is no clear dependency between age and identification with PO, although there is a considerable difference between the two groups at the opposite extremes (in the oldest age group, 21% indicated this party and in the youngest less than 13%). Only in the 25-44 age group were there more PO voters than PiS.

In the case of educational level, the dependency pattern is similar with some exceptions. Identification with PiS and PSL decreases, while identification with PO and SLD increases with level of education. The higher the education, the less difficult it is for respondents to indicate political identification.

The smaller the place of residence, the smaller the percentage of PO supporters and the supporters of "other parties", and the higher the percentage of PiS and PSL supporters, as well as of persons who do not identify with any party or cannot decide which one to choose.

Political involvement in a democracy is strongly connected with the attitudes towards democracy. Only the supporters of PO have unambiguously positive attitude towards democracy. The supporters of all other parties and the persons without political identification perceive the democratic system more sceptically or even negatively.

The characteristics of the supporters of four main political parties in terms of the socio-demographic variables (age, level of education, place of residence size and personal income level), selected indices of value system (religious belief, respect for the common good, acceptance of democracy), social attitudes (the level of prejudice towards homosexuals and foreigners), entrepreneurship and attitude to control over own life (self-determinism v. fatalism) generally indicate two large groups that differ significantly and two smaller subgroups (fig. 6.5.2). Those two large groups are the supporters of PO and PiS. The supporters of SLD in many ways are similar to the supporters of PO and PiS supporters are characterised by many features shared with PiS supporters. This was the case in 2011 as it is this year. The only difference concerns PO and SLD voters, as the average age of SLD voters increased from 48 to 55, which is 4 to 6 times more than for the voters of the remaining parties. Current PO supporters are even more pro-democratic and satisfied with the country's situation than they were in 2011 (Table 6.5.2).

Table 6.5.1. Percentage of respondents accepting various explanations for the Smoleńsk disaster by political identification

	Most likely cause of the Smoleńsk disaster					
Political identification	Pilot/air traffic control error	Assassination /plot against the president	Pressure on the pilots	General poor organisation	Other reason	Difficult to say
PiS	12.0	48.9	10.7	29.5	4.1	18.8
PSL	21.1	17.1	27.8	30.9	4.4	21.6
SLD	37.5	7.3	41.1	27.9	4.0	17.4
PJN	33.1	24.6	13.6	28.0	9.3	18.6
Solidarna Polska	14.7	28.0	15.6	46.2	8.0	22.2
Ruch Palikota	27.2	17.8	34.1	23.1	5.6	18.8
PO	45.0	4.5	43.1	24.7	4.7	16.4
Other party	22.3	18.3	23.3	36.6	14.0	22.9
No party	17.7	13.1	23.1	26.1	5.3	35.1
Difficult to say	15.5	11.5	20.8	22.5	4.1	45.6
General	21.1	16.7	24.6	26.2	5.0	30.5

A specific test of the correspondence between a party's message and its supporters' beliefs is the distribution of the opinions on the causes of the Smoleńsk catastrophe among the groups of different political identification. The belief that the catastrophe was a conspiracy to assassinate the President of the Republic of

Poland can be treated as the most conclusive. The PiS leaders have more or less openly propagated this theory, while that of other political parties supported less "conspiracy-like" causes. The distribution of the respondents' answers on the most probable cause of the Smoleńsk catastrophe broken down by political identifications is presented in table 6.5.1. Indeed, the highest support for the conspiracy theory is the PiS supporter group. However, what may be a surprise is that even in this group, only half accept the conspiracy theory (in 2011 there was even less at 39%) despite the fact that two different causes could be indicated.

Belief in the conspiracy theory of the Smolensk air disaster is currently slightly more widespread than two years ago, though the disorientated that could not indicate any cause also increased in number.

Table 6.5.2. Percentage of respondents accepting various explanations for the Smoleńsk disaster in 2011 and 2013 in panel samples

Causes of disaster	Year of study	
	2013	2011
Pilot/air traffic control error	20.4	21.7
Assassination/plot against the Polish President	16.4	12.3
Pressure on pilots to land regardless of the conditions	25.4	36.0
General poor organisation	26.9	32.2
Other reasons	4.9	6.1
Hard to say	29.7	25.5

6.6. Attitude to financial institutions

Tadeusz Szumlicz

Since the political transformation of 1989, the importance of financial institutions has naturally grown to a marked extent, not only for businesses on the market, but also for households, which manage their personal finances with these institutions to an ever greater extent, and which are significantly dependent on them in an economic sense. Therefore, questions of trust[90] are fully justified and may be fully expected to meet with at least satisfactory replies especially in crisis situations such as these. On the one hand, the economic crisis does indeed manifest itself as a clear fall in trust in financial institutions, while on the other, least interesting is the confrontation of the trustworthiness of financial institutions with social trust in state institutions, as in times of economic crisis the state is expected to be more active and to intervene in the appropriate manner.

That trust in financial institutions in Poland remains insufficient is not open to question. However, it should be noted that their trustworthiness was rising up to 2007, as proven by the results of successive *Social Diagnosis* that measured Poles' trust in banks, insurers, investment funds, stock markets, privately managed the Open Pension Funds (OFE) and the public ZUS (the Social Insurance Institution), taking account opinions of these institutions in terms of gender, age, level of education, prosperity and professional status.

There is now a specific opportunity to present this trust from before and after the crisis as the tendency can be defined in a significantly long time period. Let us therefore compare the trust financial institutions enjoyed up to 2007, that is from the point of view of the "rhythm" of *Social Diagnosis* from before the financial economic crisis[91] and the current state of these institutions.

In 2007, when asked about the institutions used most often and trust in banks, the answers were as follows: yes 54% (2005 46%, 2003 44%), no 16% (2005 20% and 2003 21%). 30% of those surveyed did not express an opinion. Among those who did, the level of trust increased to a marked degree in 2007 to 77% when in 2005 it was 70% and in 2003 68%.

When asked about life insurance companies, the share of positive answers in 2007 was 26%. In previous years this share was smaller at 23% in 2005 and 20% in 2003. 27% of answers were negative in 2007 (2005 30% and 2003 31%). A very large group of respondents, over 47%, could give no answer on the subject (2005 47%, 2003 49%). Considering those who did have an opinion, the degree of trust in life insurers was higher than in previous years at 49% (2005 43% and 2003 39%).

As for trust in asset insurers, the share of positive answers in 2007 was 15% (2005 12%, 2003 11%) and negative 28% (2005 and 2003 30%), with also a large group without an opinion at 57% (2005 58% and 2003 59%). Taking into account those that did express an opinion, the degree of trust in asset insurers increased to quite a marked degree, though was still low at 34% (2005 28%, 2003 27%).

However, when asked about trust in the stock market, the answers were even more negative, as only 8% of respondents declared trust in the institution (2005 7%, 2003 5%), and a lack of trust at 28%. (2005 29%, 2003 28%). However, as many as 64% of respondents did not have an opinion (like in 2005, and 2003 67%). Of those who did have an opinion, 22% trusted the stock exchange (2005 19%, 2003 15%).

For the Open Pension Funds, the answers in 2007 were not much more positive than in previous years as 16% of all respondents declared trust (2005 and 2003 13%) while 29% declared a lack of trust (30% in previous years). 55% of all those surveyed did not have an opinion on Open Pension Funds (57% in previous years). Among those who did express an opinion, the level of trust increased to 35% from 30% in previous years.

The 2007 *Social Diagnosis* first asked respondents about the national insurer ZUS, the parafinancial institution that handles the Social Insurance Fund (FUS). The answers were interesting when compared to those for strictly financial institutions, as 25% of all respondents declared trust and 39% a lack of trust. 36% did not declare an opinion, and of those who did, the level of trust in ZUS was 39%.

So it is apparent that the level of social trust in financial institutions in 2007 was generally low, though it should be noted that the credit of these institutions quite clearly improved in 2003-2007.

[90] Trust is "the expressed expectation towards a partner that their reactions will be beneficial as far as we are concerned. In other words, in times of uncertainty we place a bet on what our partner will do. Here we accept that our interest is in "institutional trust in established organisational entities that engage large numbers of anonymous participants (e.g. universities, banks, stock exchanges), about institutional trust towards great organisations and indirectly masses of anonymous functionaries and representatives of these organisations that fulfil within them socially differentiated roles". P. Sztompka, *Socjologia. Analiza społeczeństwa,* Kraków, Wydawnictwo Znak 2005, .s. 312 i 326.

[91] We treat 2007 or 2008 as the beginning of the financial crisis

Tables 6.6.1-6.6.7 presents in great detail the state of trust in financial institutions according to *Social Diagnosis* 2013. We shall first look at the general results, compare them above all to those from 2007 before the crisis in which, as highlighted above, we noted a marked growth in trust in financial institutions.

However, we have to precede these comparisons with at least two methodological considerations. First, since *Diagnosis* 2011 there have been questions about trust in the Bank of Poland (NBP) and in the question on banks the term "commercial" has been added, which seems to have significantly changed the answers about trust in banking institutions. Second, in 2013, a wider scale was introduced so that instead of 1.) yes, 2.) no and 3.) I have no opinion, four possible answers were introduced: 1.) yes, a lot, 2.) yes, somewhat (moderate), 3.) no and 4.) I have no opinion, which has hampered comparison of 2013 results with previous years. It would seem that the answer "yes, a lot" occurs relatively rarely, and in answers "yes, moderate" there is probably a degree of answers that would have earlier been "no". In other words, the sum of "yes, a lot" and "yes, moderate" answers increases trust resulting from only the answer "yes" earlier. Let us now return to the discussion a comparison of the *Diagnosis* data.

In 2013 answers about trust in commercial banks were 38% for "yes, a lot" and "yes, moderate", 28% for "no" and 34% of respondents did not have an opinion. Among those who did have an opinion, positive answers amounted to 57% (see table 6.6.1).

For life insurers the share of positive answers in 2013 was 31%, negative 34% and 35% had no opinion. Therefore of those with an opinion, the degree of trust in life insurers was 47% (see table 6.6.2).

As for asset insurers the share of positive answers in 2013 was 27%, negative 34% and no opinion 39%, so 45% of those with an opinion trusted asset insurers (table 6.6.3).

The stock market remains mistrusted as 16% of all respondents said they either trusted it a lot or to a moderate extent in 2013, while 34% reported a definite lack of trust. As much as 50% had no opinion so of those who did the level of trust in the stock exchange was 32% (table 6.6.4).

Open Pension Funds (OFE) did not fare any better, with trust among all respondents at 20% (1% for "yes, a lot") and a lack of trust 39%. No opinion levels were at 41% and 34% with an opinion trusted the OFE.

For ZUS, general levels of trust were at 36% and mistrust at 45%. Only 19% had no opinion therefore the level of trust in ZUS among those who did was 44% (table 6.6.6).

In 2013, the National Bank of Poland received a vote of confidence from a total of 62% of respondents and only 12% were of the opposite opinion. 26% had no opinion so 84% of actual opinion was positive (Table 6.6.7). When this question was first posed in 2011, there were fewer positive answers at 74%.

Considering the results of *Social Diagnosis* 2013, one can modestly say that only the change in opinion expression scale, which "artificially" increased the ratings, allowed an improvement in the trust of certain financial institutions on 2007. To a marked degree this concerns asset insurers (45% trust in 2013 compared to 34% in 2007), stock market (32% in 2013 to 22% in 2007), to a lesser degree ZUS (44% in 2013 to 39% in 2007). However trust in the following clearly fell (especially in the light of the methodological change): life insurers (47% trust in 2013 compared to 49% in 2007), though a relatively high level was maintained even higher than that of asset insurers. Especially interesting were the low scores for the OFE (34% in 2013 to 35% in 2007). The institution that seemed to provide the most important argument for social support of this radical pension reform scheme at the outset is currently facing a clear crisis of confidence, which certainly is influenced by the sharp discussion about the role of capital financing in the pension system. It is however worth considering levels of trust in OFE in previous studies: 2003 30%, 2005 30%, 2007 35%, 2009 18%, 2011 22%, 2013 34%. These probably place in question the initial level of support for changes in the pension system[92].

The level of trust in financial institutions is differentiated when we consider the specific demographic and professional features of respondents to specific questions. The middle-aged (25-44) have a generally higher than average level of trust in each financial institution, as do residents of towns of over 100 thousand, those with at least middle income, the most well-off, private entrepreneurs and those working in the public sector. It should however be noted that at the start of the economic crisis there was a dramatic fall (*Social Diagnosis* 2009 data) in trust among the professional groups that use the services of financial institutions and normally express higher than average trust in them.

A spectacular research operation in the description of trust in financial institutions is establishing the cases in which the fact of trust is statistically higher than the lack of trust. This applies to trust in:

[92] Szumlicz (2005, p. 190)

- the National Bank of Poland
- commercial banks, with the exception of 60-64 year olds and 65 and above, those with basic and lower education, those of the lowest income and farmers, those receiving welfare benefits and pensioners
- life insurers, but only from the 25-34 year olds, those with higher education, those with the highest income and private sector workers,
- asset insurers, but only from those of the highest income and private entrepreneurs,
- trust in the Social Insurance Institution (ZUS), but only from the 60-64 year olds and 65 and over, those with basic education and receiving welfare benefits and pensioners.

So it is apparent that the prevalence of mistrust over trust concerns all respondent groups (by gender, age, education, prosperity and professional status) in the case if the stock exchange and Open Pension Funds (OFE), but also the majority of groups for life and asset insurers.

The lack of trust in financial institutions is a serious social problem as the notion that trust is the most important factor of social life, from both the theoretical and practical point of view, is rather obvious. However, the mistrust in financial institutions is explained in diametrically different terms. On the one hand, a lack of experience in using the services of financial institutions is considered a cause, despite the passing of twenty years since the beginning of the transformation. On the other hand the greed of financial institutions seeking a good profit is noted. Cultural aspects of trust should not be overlooked, including problems with the culture of trust, or the general trust strengthening social ties, which permeates the entire collectivity and is treated as an obligatory rule of behaviour (metaphorically, the climate or atmosphere of social trust), which in situations of crisis is certainly placed in question.

In this context it is worthwhile drawing attention to trust in state institutions, which have regulatory (conditions to gain permission to operate) and supervisory (execution of correct market functioning like stability, security and transparency, forming trust in the financial market and securing the protection of market actors' interests [93]) instruments with respect to financial institutions.

Table 6.6.1. Trust in commercial banks (% answers)

Socio-demographic group	YES, a lot	YES, somewhat	NO	No opinion
General	4.7	33.4	28.3	33.6
Gender				
Men	5.1	35.1	29.6	30.2
Women	4.4	31.8	27.1	36.7
Age				
up to 24	4.2	27.6	18.9	49.3
25-34	6.8	44.0	22.5	26.7
35-44	5.8	41.2	27.0	26.0
45-59	4.1	31.8	32.0	32.1
60-64	3.5	27.8	34.2	34.5
65+	3.2	22.1	34.6	40.1
Education				
Basic	2.2	18.3	31.6	47.9
Middle	4.0	30.7	29.6	35.7
Higher	8.1	49.6	22.8	19.5
Income per capita				
Lower quartile	3.2	22.8	31.3	42.7
Middle 50%	4.2	31.5	29.9	34.4
Upper quartile	7.5	46.9	22.5	23.1
Social and professional status				
Public sector	6.7	42.6	27.0	23.7
Private sector	5.6	43.1	25.0	26.3
Private entrepreneurs	7.6	47.8	24.9	19.7
Farmers	4.0	26.8	34.6	34.6
Pensioners	3.7	20.1	32.9	43.3
Retirees	3.5	24.6	34.4	37.5
School and university students	4.2	25.9	17.2	52.7
Unemployed	2.3	26.9	29.2	41.6
Other inactive labour	4.1	27.4	28.6	39.9

[93] Act of Parliament 21st July 2006 on financial market regulation (Dz.U. 2006 nr 157 poz. 1119 z późn. zm).

Table 6.6.2. Trust in life insurance companies (% answers)

Socio-demographic group	YES, a lot	YES, somewhat	NO	No opinion
General	1.5	29.4	34.3	34.8
Gender				
Men	1.4	30.5	35.8	32.2
Women	1.5	28.4	32.9	37.2
Age				
up to 24	1.8	21.8	29.1	47.3
25-34	1.3	35.1	35.9	27.7
35-44	1.3	33.5	38.7	26.5
45-59	1.4	31.8	35.7	31.1
60-64	1.6	27.2	34.5	36.7
65+	1.5	21.6	29.4	47.5
Education				
Basic	1.3	17.0	27.6	54.1
Middle	1.4	29.0	33.9	35.7
Higher	1.6	38.3	38.8	21.3
Income per capita				
Lower quartile	1.3	21.9	33.1	43.7
Middle 50%	1.6	29.1	33.6	35.7
Upper quartile	1.6	37.8	36.7	23.9
Social and professional status				
Public sector	1.0	37.6	39.0	22.4
Private sector	1.3	35.8	35.7	27.2
Private entrepreneurs	2.1	36.3	39.6	22.0
Farmers	1.7	23.9	33.8	40.6
Pensioners	1.8	21.6	28.6	48.0
Retirees	1.6	24.4	31.6	42.4
School and university students	1.9	19.3	27.9	50.9
Unemployed	0.9	25.5	36.7	36.9
Other inactive labour	1.5	26.0	33.3	39.2

Table 6.6.3. Trust in wealth insurance companies (% of answers)

Socio-demographic group	YES, a lot	YES, somewhat	NO	No opinion
General	1.3	25.9	33.9	38.9
Gender				
Men	1.5	27.5	35.4	35.6
Women	1.2	24.5	32.6	41.7
Age				
up to 24	1.8	18.8	28.9	50.5
25-34	1.1	30.5	36.4	32.0
35-44	1.3	31.8	36.6	30.3
45-59	1.5	27.3	35.7	35.5
60-64	1.2	23.8	33.9	41.1
65+	1.2	18.7	29.2	50.9
Education				
Basic	1.0	15.2	28.0	55.8
Middle	1.3	24.8	33.8	40.1
Higher	1.5	35.6	37.6	25.3
Income per capita				
Lower quartile	1.2	19.1	32.5	47.2
Middle 50%	1.4	24.4	33.8	40.4
Upper quartile	1.5	35.3	35.5	27.7
Social and professional status				
Public sector	0.9	31.8	38.9	28.4
Private sector	1.4	31.0	35.9	31.6
Private entrepreneurs	1.7	37.0	37.9	23.4
Farmers	1.5	25.2	33.0	40.3
Pensioners	1.6	17.3	29.8	51.3
Retirees	1.3	20.9	31.1	46.7
School and university students	1.8	17.1	27.2	53.9
Unemployed	0.7	23.7	34.2	41.4
Other inactive labour	1.7	22.8	33.2	42.3

Table 6.6.4. Trust in the stock exchange (% answers)

Socio-demographic group	YES, a lot	YES, somewhat	NO	No opinion
General	1.0	14.7	34.3	50.0
Gender				
Men	1.4	17.6	35.8	45.2
Women	0.5	12.0	33.0	54.5
Age				
up to 24	1.6	16.3	30.4	51.7
25-34	1.4	20.0	37.4	41.2
35-44	1.4	17.6	39.2	41.8
45-59	0.6	14.2	36.6	48.6
60-64	0.6	11.5	31.7	56.2
65+	0.5	6.9	26.5	66.1
Education				
Basic	0.2	5.2	26.7	67.9
Middle	0.7	13.4	34.2	51.7
Higher	2.0	24.2	38.9	34.9
Income per capita				
Lower quartile	0.6	8.8	33.6	57.0
Middle 50%	0.7	13.2	33.2	52.9
Upper quartile	1.8	23.2	37.4	37.6
Social and professional status				
Public sector	0.7	19.1	40.6	39.6
Private sector	1.3	19.6	37.1	42.0
Private entrepreneurs	2.3	22.3	41.1	34.3
Farmers	0.5	9.6	33.3	56.6
Pensioners	0.8	5.5	28.6	65.1
Retirees	0.6	8.7	29.1	61.6
School and university students	1.6	17.9	25.6	54.9
Unemployed	0.7	13.5	36.2	49.6
Other inactive labour	0.6	11.4	35.2	52.8

Table 6.6.5. Trust in the Open Pension Funds (% answers)

Socio-demographic group	YES, a lot	YES, somewhat	NO	No opinion
General	1.0	18.6	38.7	41.7
Gender				
Men	1.3	19.6	41.2	37.9
Women	0.8	17.6	36.4	45.2
Age				
up to 24	1.5	18.1	29.9	50.5
25-34	1.3	25.7	43.3	29.7
35-44	1.6	24.3	43.5	30.6
45-59	0.8	19.3	42.4	37.5
60-64	0.6	10.0	39.2	50.2
65+	0.5	7.9	29.1	62.5
Education				
Basic	0.6	9.1	27.1	63.2
Middle	1.0	18.0	38.0	43.0
Higher	1.3	25.9	47.5	25.3
Income per capita				
Lower quartile	0.9	14.7	34.2	50.2
Middle 50%	1.1	17.4	37.8	43.7
Upper quartile	1.2	24.3	45.6	28.9
Social and professional status				
Public sector	0.9	27.6	47.1	24.4
Private sector	1.5	26.0	43.0	29.5
Private entrepreneurs	2.2	24.4	48.4	25.0
Farmers	0.9	12.7	35.2	51.2
Pensioners	0.6	9.9	32.7	56.8
Retirees	0.5	8.4	33.0	58.1
School and university students	1.0	15.6	28.7	54.7
Unemployed	0.5	17.1	37.6	44.8
Other inactive labour	1.3	16.7	36.5	45.5

Table 6.6.6. Trust in national insurance (% answers)

Socio-demographic group	YES, a lot	YES, somewhat	NO	No opinion
General	3.5	32.1	45.1	19.3
Gender				
Men	3.0	30.0	48.6	18.4
Women	4.1	34.0	41.9	20.0
Age				
up to 24	1.4	17.7	43.2	37.7
25-34	1.5	26.0	53.1	19.4
35-44	2.0	25.4	55.4	17.2
45-59	2.8	32.1	48.4	16.7
60-64	5.5	46.4	35.4	12.7
65+	9.0	48.8	26.7	15.5
Education				
Basic	5.9	37.6	31.9	24.6
Middle	3.3	31.3	44.3	21.1
Higher	2.6	30.9	55.4	11.1
Income per capita				
Lower quartile	3.5	28.1	42.3	26.1
Middle 50%	4.1	34.3	42.8	18.8
Upper quartile	3.0	33.0	51.4	12.6
Social and professional status				
Public sector	2.0	30.1	55.1	12.8
Private sector	1.4	27.3	54.9	16.4
Private entrepreneurs	1.2	27.9	59.8	11.1
Farmers	2.8	26.4	35.7	35.1
Pensioners	6.6	40.0	33.4	20.0
Retirees	8.5	49.1	28.5	13.9
School and university students	1.4	15.2	43.0	40.4
Unemployed	1.4	24.9	48.9	24.8
Other inactive labour	3.5	27.3	44.6	24.6

Table 6.6.7. Trust in the National Bank of Poland (% answers)

Socio-demographic group	YES, a lot	YES, somewhat	NO	No opinion
General	15.3	46.7	12.1	25.9
Gender				
Men	16.4	47.1	13.5	23.0
Women	14.4	46.2	10.8	28.6
Age				
up to 24	9.9	35.7	11.4	43.0
25-34	15.1	50.6	11.9	22.4
35-44	15.9	50.3	11.9	21.9
45-59	16.2	49.9	12.0	21.9
60-64	18.8	47.6	10.4	23.2
65+	15.9	40.6	13.9	29.6
Education				
Basic	8.3	35.6	17.1	39.0
Middle	13.8	46.7	12.3	27.2
Higher	23.6	53.2	8.5	14.7
Income per capita				
Lower quartile	10.6	39.2	15.4	34.8
Middle 50%	14.7	47.6	11.6	26.1
Upper quartile	22.8	51.1	9.3	16.8
Social and professional status				
Public sector	19.4	54.5	8.8	17.3
Private sector	16.5	50.8	11.5	21.2
Private entrepreneurs	18.9	56.5	10.9	13.7
Farmers	11.4	48.3	14.3	26.0
Pensioners	12.9	39.6	14.5	33.0
Retirees	17.4	44.1	12.4	26.1
School and university students	10.8	33.4	8.6	47.2
Unemployed	9.2	42.0	15.2	33.6
Other inactive labour	11.4	40.9	15.5	32.2

In this context it is worthwhile drawing attention to trust in state institutions, which have regulatory (conditions to gain permission to operate) and supervisory (execution of correct market functioning like stability, security and transparency, forming trust in the financial market and securing the protection of market actors' interests 15) instruments with respect to financial institutions.

It turns out that trust in the basic state institutions in 2009, so at the beginning of the crisis, was incredibly small (table 6.6.8). Of those who expressed an opinion, only 11% declared trust in the parliament and 18% in both the presidency and the government.

However, according to the last Diagnosis of 2013 (see table 6.6.9), trust in the basic state institutions had risen, though this, taking into consideration the already highlighted changes in the rating scale, which in this case is even more relevant than in the case of financial institutions, should not be treated with too much optimism. Summing the "yes, a lot" and "yes, moderate" answers, gives 33% trust in the parliament, 59% in the president and 33% in the government of those prepared to state their opinion on the matter. Additionally, we can report that 63% of respondents with an opinion trusted their neighbours according to these methods of measurement.

Table 6.6.8. Trust in state institutions in 2009 (%)

Institution	YES	NO	No opinion
Parliament	8.0	62.6	29.4
President	13.1	58.0	28.9
Government	12.9	58.2	28.9

Table 6.6.9. Trust in state institutions 2013 (%)

Institution	YES, a lot	YES, somewhat	NO	No opinion
Parliament	1.5	25.2	54.9	18.4
President	7.8	41.0	34.0	17.2
Government	1.9	26.2	56.2	15.7
Courts	5.6	45.0	29.7	19.6

Therefore it is difficult to consider trust at the level of 33% in key state institutions (parliament and government) satisfactory, as this is at the level of the worst rated financial institutions (stock exchange and OFE) in terms of social trust.

Building the reputation of institutions, which on the one hand are state, and on the other financial, institutions the operations of which are consessioned, certainly takes time. However, it would be interesting to establish whether there is any relation between trust in financial institutions and public institutions of a political character as the economic crisis and lessening trust in financial institutions paradoxically also undermines trust in state institutions, the efficient functioning of which in times of crisis is especially required. A culture of mistrust may present an obstacle ("a widespread and general suspicion of people and institutions requiring a constant monitoring and control of their activity out of fear of fraud, abuse, falsehood, incompetence, collusion and conspiracy [16]), and a thorough, competent consideration of its causes ought to be in the interest of financial institutions.

7. Poles and communication technology - access conditions and modes of use

Dominik Batorski

The development of information and communication technologies and the widespread nature of their use is contributing to the transformation of ever more spheres of life. The mobile phone is a tool used every day for the vast majority of Poles. Though the number of internet users is rising more slowly than in previous years, the web is still an ever more important instrument of access to information and communication both in professional and private life. As a result, it is an ever more significant factor of social and economic changes in Poland. This chapter of the *Social Diagnosis* is devoted to the development status of information society in Poland and the conditions, ways, and consequences of using new information and communication technologies.

7.1. New technologies in households

7.1.1. Computers and access to the internet

Computers and internet access are ever more widespread, though the increase in the numbers of equipped households is ever slower (figure 7.1.1). In the first half of 2013, there were computers in 70% of households and internet access in 66.9%. The slowing increase is related to steady market saturation, and as we shall discuss, the households who do not have a computer or internet access yet are generally not interested in these technologies and are not motivated to use them.

Having a computer is now almost completely linked to internet access, as for a very large group of users use of the internet is the main aim of having and using computers. Now merely 5% of computerised households have no internet access. Four years ago it was 15 %, and in 2003 only every second household with a computer had access to the internet.

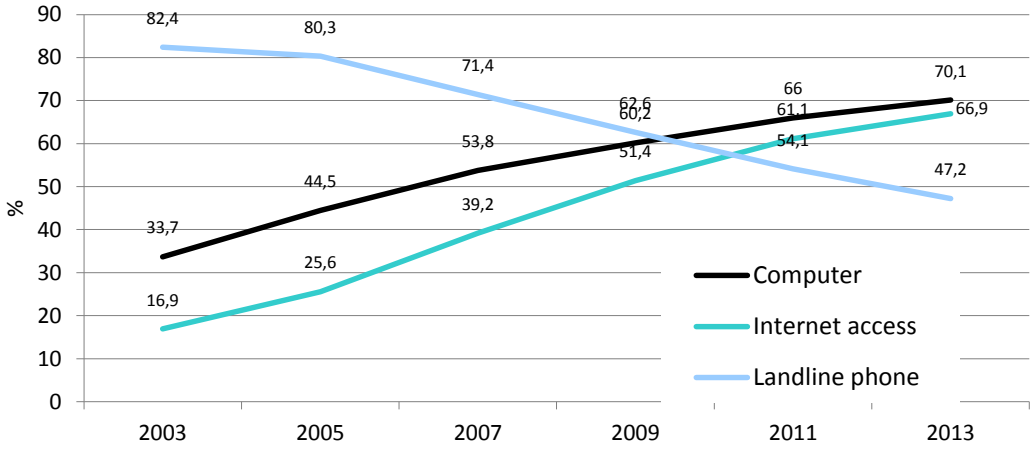


Figure 7.1.1. Households with a computer, internet access and landline phone in 2003-2013

Only some of the households that do not have computers and access to the internet cite financial considerations for such absence. Currently, 7.7 % of all households do not have a computer for financial reasons, and 7 % have no access to the internet because of that.

Despite the small growth in the number of equipped households, these increases are clearly lower than in previous years, which confirms the thesis that importance of financial factors for having a computer or internet access is ever more minor. This is slightly different in the case of newer technologies like tablets of electronic book-readers as 22% of households mentioned financial limitations as a reason for not having a tablet and 15% for e-books.

Among households equipped with computers, laptops (49.3%) have for the first time superseded desktops (46.9%). The rise in number of portable computers is notable, while the number of households with a desktop computer is steadily falling (more or less since 2010). Two years ago, 39 % of households had laptops, in 2009 every fourth and in 2007 home, in one in ten households.

The slower increase in the number of computers is also visible in the falling tempo of the rise of home computer numbers. Currently, 30.8% of households have more than one computer, two years ago it was 27.8%, while in 2009, 17%, and in 2007 only 10%. In 5.2% of households there are three or more computers. In almost 15% of households there are at least as many computers as people living in the household. In computerised households, there are 2.5 people per one computer on average (two years ago it was 2.7% and in 2007 it was 3.5).

As in previous years, computers are more common in multi-person households, and the least common in single-person households. As many as two thirds of the latter do not have a computer at home, 45 % of two-person households do not have a computer. Meanwhile, computers are in 86 % of households where three people live and in up to 92 % of households where four or more people live. These differences mean that already 78.7 % of Poles aged 16 and above have a computer at home to the internet, so that now 70.5 % of Poles aged 16+ have a computer (figure 7.2.3). This is 3 p.p. more than in 2011, and earlier the increases were much greater (6-8p.p in two years). 75.7% of Poles at the age of 16+ has internet access. Two years ago it was about 5 percentage points less and in 2009 16 p.p. less than currently. If we take into account children under 16 years of age, it turns out that 78.4% of the population have internet access at home.

However, not all households with ICT actually use them.

For a very large and still growing group of people, the reason for not using computers and the internet is not the lack of access, though the lack of motivation for unassisted use (they can often ask other household members for help or for checking something). What also matters is the lack of knowledge about the possible uses of the internet, and the lack of skills.

A majority of households (53.7%) connects with the web with a broadband connection, while 11.7% (17.6% with access) uses a fixed link to have access through a mobile operator. The popularity of mobile access is on the rise, though the share of landline operators in providing access to the internet is decreasing - currently only 30% of connected households.

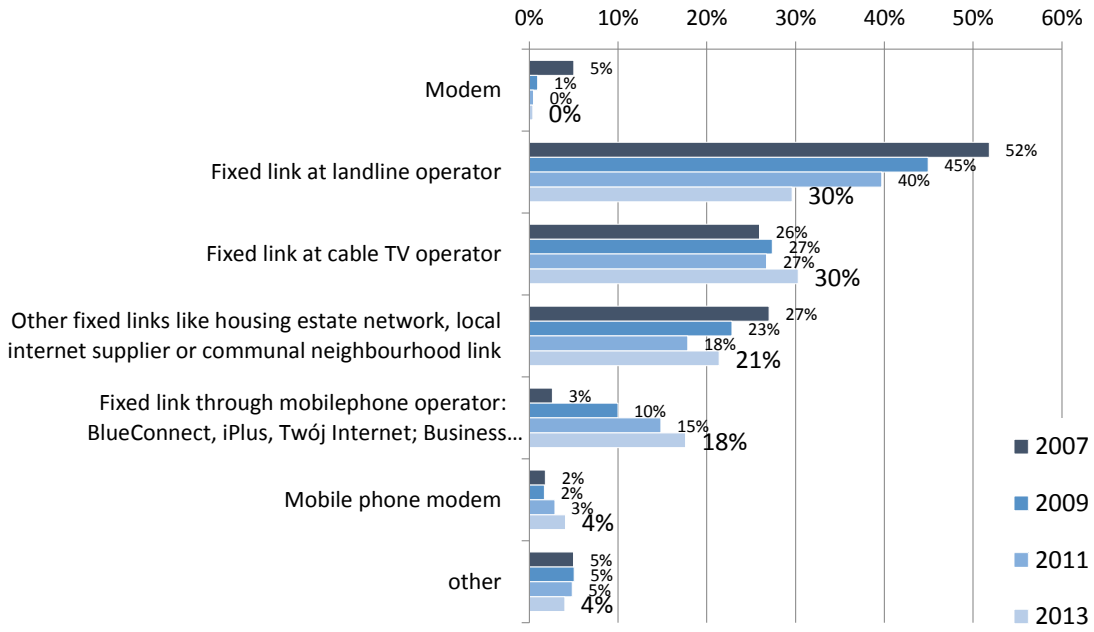


Figure 7.1.2. Forms of household internet connection between 2007-2013

Mobile access continues to become ever more widespread. A growing percentage of households use cell phones to connect to the internet, currently it is 11.7% of all households, or 17.6% of those with access to the internet. The growth in the number of such households in recent years has been very large. More often than not this kind of access is not linked to increased mobility and is only a substitute for a fixed link when it cannot be installed in a given household. As a result as much as for 81% of those using this type of access it is the only way to connect to the internet. Thus, the large number of households connecting to the internet in this way is indirect evidence of the poor availability of the internet in many areas. On the other hand, the spread of

wireless access, along with an increase in the prevalence of laptops, may in time lead to a more mobile internet usage. The situation is somewhat different for internet access via mobile phones, which is an additional and supplementary means.

Broadband connection bandwidth at homes and the dynamics of its changes in 2007-2013 is shown in Figure 7.1.3. The quality of network access is relevant for the availability of the internet. Though most popular are connections with a bandwidth from 2 to 6Mb/s, connections with a much higher bandwidth are rapidly becoming more popular.

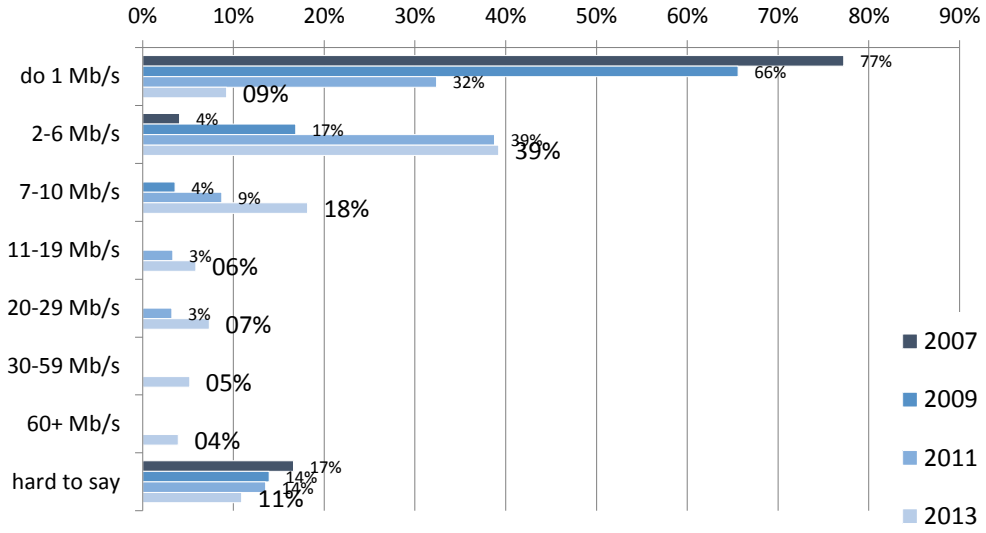


Figure 7.1.3. Broadband internet connection bandwidth between 2007 and 2013.

Information/communication technology are not only ever more widespread, they are used in ever more places and situations. Now not only in the home, at work or at school, but often when on the move. Of course this is due to the spread of mobile solutions - mobile phones (which over 87% of Poles now have) and portable computers, which from this year Poles have more often than desktops. Of key importance though is the rise of the smartphone, now owned by over 25% of those over 16, though taking into account operators' statistics, this number may be underestimated. The number of tablets present in almost one in ten households is also rapidly growing. Of course these means are not always linked to mobile internet access, but also the use of the latter is clearly more frequent than two years ago and earlier.

7.1.2. Internet fails to attract away from television

The spread of computers and the internet in no way means a worse time for television. In the last years, we have seen a large increase in the number of households with LCD or plasma TV sets. The increase is significantly faster than the increase in the availability of computers and the access to internet (figure 7.1.4)... In 2007, such TV sets were in every fifth household only, and over 64% in 2013. Households with paid satellite or cable TV is rising (currently at 72%), though not as fast as earlier. 59% have DVD players, which is slightly more than two years ago, and like in 2011, 18% have a home cinema set. Without doubt, Poles make sure they can view TV as they invest both in sets and access to channels, whether by satellite or cable network.

For many Poles, television is a much more significant medium than the internet, so it is no accident that more households equip themselves with television viewing technology than the means to use the internet. This is clearly apparent also in the time Poles spend on using various media. Television viewing time is not falling, and the share of those with at least two viewing hours a day has been rising steadily since 2007 from 55% to 59% in 2013. Meanwhile, those using the internet over two hours a day amount to 18.6%.

It is true that there are ever more people who do not watch any television at all, as the share rose from 2.6% in 2007 to 4.3% of 16+ in 2013. Of internet users, 5.2% do not watch TV, and those who spend the most time on the internet definitely do not watch TV most often.

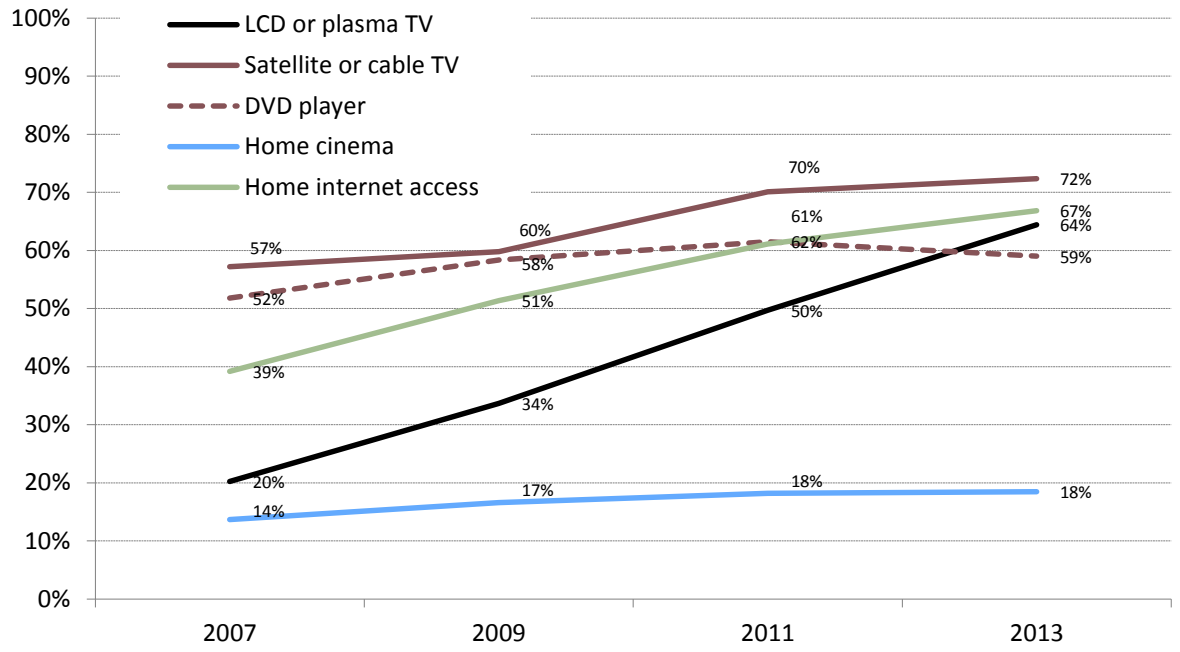


Figure 7.1.4. Television and other audio-visual equipment in households in 2007-2013

It is worthwhile analysing how, despite the spread of the internet, television viewing time is also increasing and which social groups find over two hours a day to do so, after all there are only 24 hours in a day. As presented in figure 7.1.5, the effect is a result of various behaviours of those who use and do not use the internet. The first spend ever less time watching TV, while those who do not use the internet view ever more. The changes in figure 7.1.5 result also from the flows taking place between both groups, as those who spend less time watching TV are beginning to use the internet. It is also worth noting that while internet users spend a lot less time watching TV, it remains an important medium for most of them and only a small group of them do not view at all or only to a small degree.

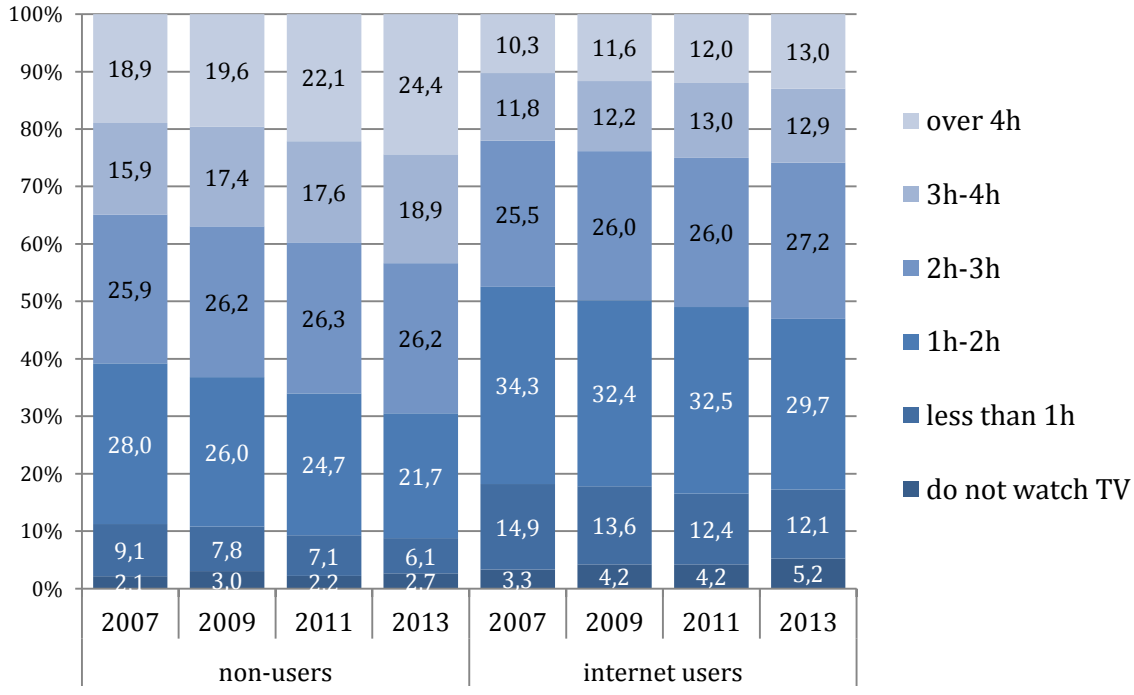


Figure 7.1.5. Time spent watching TV per day among internet users and non-users between 2007-2013

Additional effects may be observed by analysing changes in specific person's behaviour between 2011 and 2013. Viewing time is rising among those who do not use the internet and those who once did but no longer do so. However, among those who have only just started using the internet (a had not yet in 2011), there is more or less the same number who view slightly more TV as those viewing less. Viewing time has fallen, though not significantly, for internet users of over two years standing. At the same time, apart from the flows between groups mentioned earlier, figure 7.1.5 shows that those who do not the internet watch ever more television and do use it watching slightly less.

Media use time is strongly linked to age, though among the young, who most often and intensively use the internet, there is no sign of a decisive abandoning of television. Nearly half of those between 16-24 watch television on average at least 2 hours a day, with higher viewing times in the older groups. As a result, those who devote more time to using the internet than watching TV are no more than 15% of all Poles, with visibly even more school and university students watching TV than using the internet. At all ages, there are more TV viewers than internet users.

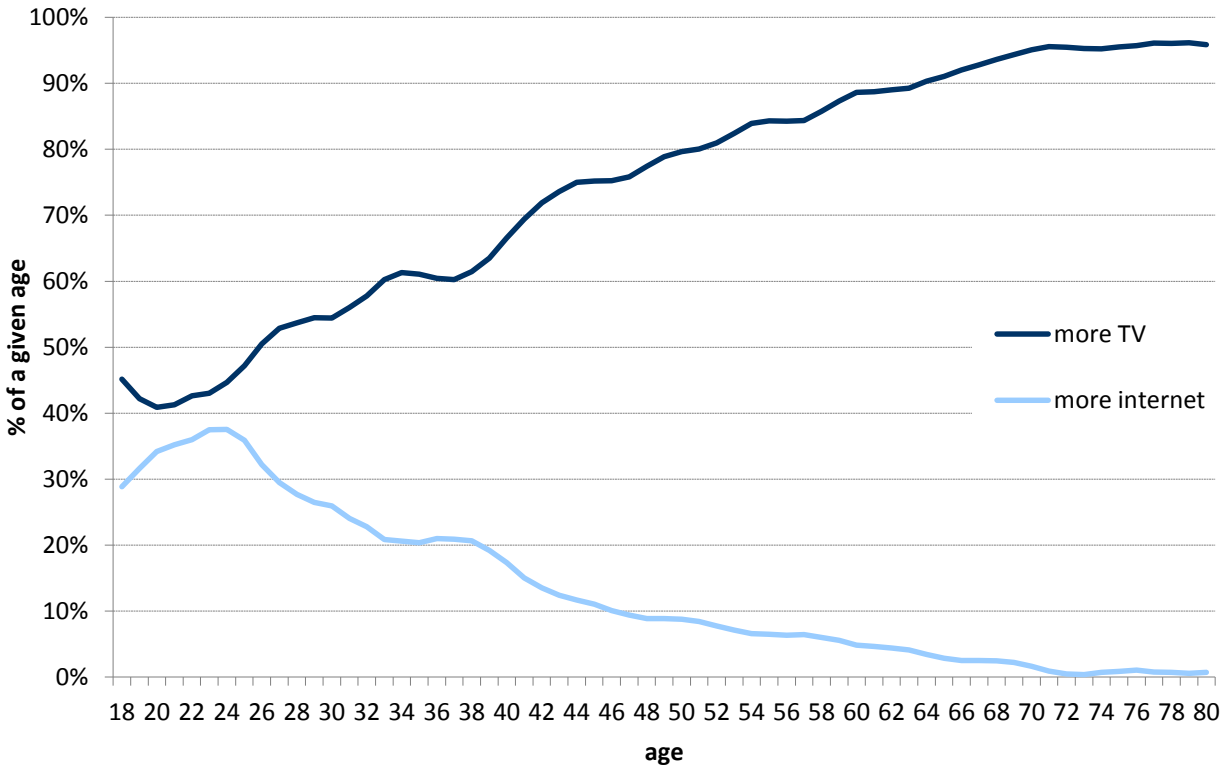


Figure 7.1.6. Percentage spending more time on the internet than watching TV and those spending more time watching TV than on the internet by age

The results presented here show that up till now, the internet is no competition for television, with viewing remaining at a high level. Though users spend clearly less time on TV, it is still usually more time than they do online, and only for a small group is this time clearly less than two years ago. Even among the watchers of videos and TV online material traditional television viewing is large, though slightly smaller than among other groups. Only not quite 20% watch up to one hour of TV a day or none at all, while over half views an average at least two hours a day.

For the time being, the spread of internet in Poland does not appear to pose a significant threat to TV stations and cable and satellite platform operators. This state of affairs could however change when content originating online begins to compete for big scream time. At the moment, few use TV sets to watch films and other online content, and much more common is computer use and television viewing side by side (WIP 2012). However, there are more and more simple devices that allow very easy projection of computer (or any other internet link) content onto a TV screen. Their spread will lead to the triggering of real competition for the big screen between traditional content and that arising online.

7.1.3. Conditions for the presence of new technologies in households

The presence of computers and the internet in households varies strongly depending on several factors. Table 7.1.1 presents data on the availability of these technologies in households of various types for 2007-2013.

The availability of computers and the internet in households very much depends on the type of family. Over 90 % of married couples with children own a computer and slightly fewer of those also have access to the internet. At the other end of the spectrum are the single-person households, where computers and internet access are the least common - only one in three persons living on their own have equipment and access to the internet. Though the situation is anyway much better than even two years earlier, when every fourth single-person household had internet. ICT are less common among married couples with no children, 57% of them have internet access. For both these groups, the smaller presence of ICT is linked to the fact that these are primarily households of the elderly. All the time, the situation of single-parent families is significantly worse than that of married couples with children. The difference, like two years ago, is as much as 20 percentage points.

As opposed to previous years, between 2011 and 2013, the differences between specific groups rather decreased instead of getting deeper. Access to new technologies clearly improved for rural households, and also for childless couples and single-person households. Among families with children the increase in access to computers was not great, while those that did have a computer but no internet access now do have it.

The presence of children of school age is invariably of utmost importance for having new technologies in a household.

Table 7.1.1. Access to computers and internet in various households types between 2007-2013

Number of households		Computer				Internet			
		2007	2009	2011	2013	2007	2009	2011	2013
Size of place of residence	Towns of more than 500k	67.4	70.8	77.1	79.8	57.6	65.4	73.3	78.3
	Towns of 200k-500k	60.8	69.2	71.9	74.4	50.2	63.0	68.7	72.7
	Towns of 100k-200k	55.9	61.8	67.1	74.9	44.3	55.8	64.6	72.8
	Towns of 20k-100k	55.7	60.4	66.5	68.3	44.2	52.9	62.0	65.5
	Towns of fewer than 20k	53.3	57.8	65.0	68.0	40.4	50.2	61.4	66.1
	Rural areas	44.2	52.8	58.9	65.1	22.4	39.4	51.7	61.1
Region	Eastern Voivodeships	48.2	55.2	63.0	67.2	30.7	43.9	56.8	63.4
	Other Voivodeships	55.4	61.5	66.7	70.9	41.5	53.3	62.1	68.4
Family type	Married couples with no children	28.1	42.5	50.6	59.7	22.4	35.9	47.8	57.1
	Married couples with 1 child	70.0	82.5	87.2	91.5	53.5	72.3	81.7	89.3
	Married couples with 2 children	80.5	89.7	93.5	95.7	61.5	78.2	87.4	93.5
	Married couples with 3 and more children	75.2	86.6	90.7	93.6	47.3	70.4	84.3	88.5
	Single-parent families	53.5	64.3	72.4	74.6	37.8	53.2	65.8	70.8
	Multi-family	65.5	78.0	87.1	90.7	38.3	63.3	78.5	86.3
	Non-family one-person	19.6	26.3	28.1	33.9	15.8	22.8	25.0	32.0
	Non-family multi-person	43.1	51.8	54.8	42.4	28.1	40.0	52.9	39.8
Income per household unit of consumption	First quartile	39.0	44.8	48.1	55.5	19.1	32.8	41.1	51.2
	First to the second quartile	45.1	49.3	59.3	58.2	30.7	40.2	54.1	55.7
	Second to the third quartile	55.0	61.8	66.2	73.3	41.7	53.4	62.3	71.7
	Third quartile	70.5	81.6	86.5	89.2	60.1	75.8	83.3	87.3

Also the class of place of residence and income are fairly important for the equipment of households with computers and internet access. New technologies are present more often in larger towns and in households with higher income. There is greater variation in the availability of the internet which is a result of slightly greater problems with the availability of internet infrastructure in rural areas and the greater difficulty in bearing the monthly internet access subscription fees in the least well-off households. For families like this the need to increase spending permanently is more difficult than the single purchase of a computer. In the largest cities, 78 % of households have access to the internet, while in rural areas only 61 % do. The difference between one-quarter of households with the highest income and those with the lowest income is 36 p.p. and is clearly smaller than two years earlier. However it ought to be noted that still fastest growing is by far the fastest growth in internet availability has taken place in rural areas. The differences between urban and rural areas are decreasing, just like differences in income.

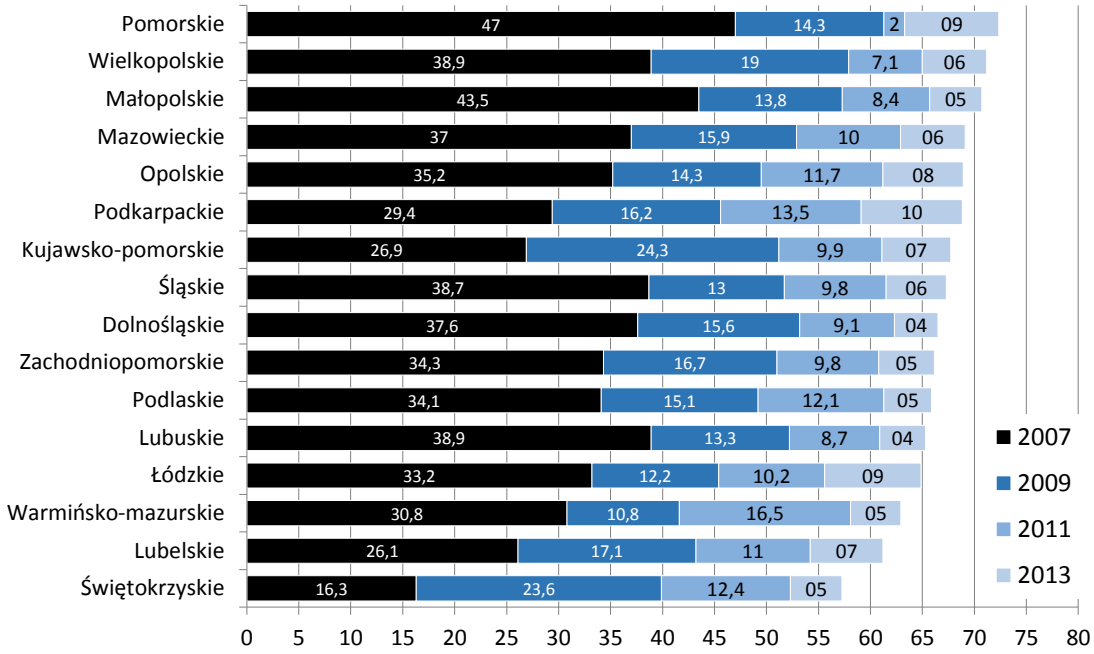


Figure 7.1.7. Percentage of households with internet access by Voivodeship in 2007 and additional percentage with internet access in 2009, 2011 and 2013

Also significant are the differences in internet access in households between different Voivodeships (Figure 7.1.7). Currently, the best situation is in the Pomorskie Voivodeship, where almost three quarters of households have access to the internet. A similar situation is in the Wielkopolskie and Małopolskie Voivodeships, where over 70% of households are connected. Access to the internet is the least common in the Świętokrzyskie (57%), Lubelskie (61%) and Łódzkie (63%) Voivodeships.

As shown in Table 7.1.1, there is a difference between eastern Voivodeships and the rest of the country it is clearly smaller than in 2011 and previous years. In the five Voivodeships of eastern Poland, less than 63 % of households have internet access, while in other regions it is 68%. Difference in internet access amount to 5 p.p., and those for computer ownership are even smaller.

7.1.4. Reasons for the lack of ICT in households

The slowing spread of ICT in households indicates a gradual saturation of the market in a situation when many people still do not have computers or internet access. It is therefore worth asking about the causes of this state of affairs, especially as it has a bearing on Poland's social and economic development. New technology use has a significant meaning for firms, organisations and public administration as they are a means of raising effectiveness and labour efficiency, and ever more often also as a tool to access to services, including public services provided electronically. A lack of general access to ICT technology is identified as a problem, as so called digital exclusion is linked to limited opportunity to participate fully in social, cultural and professional life. Therefore, there have been many initiatives to promote the use of computers and the internet and such activities are planned also in the Operational Programmes of 2014-2020. However, in order to take measures adequate to a problem, it is necessary to diagnose it properly. Especially as many earlier efforts to disseminate technologies and combat digital exclusion poorly match the real problems[94] like for example the activity of Operational Programme Innovative Economy 8.3 was.

The basic reasons for the lack of new technologies in households are motivational and psychological in nature and not financial or technological...

First, let us examine the importance of the declared lack of financial resources as a reason for not having a given technology. Figure 4.3.1 in section 4.3.1 illustrates the availability of various technologies in

[94] Measure 8.3 of the Operational Programme Innovative Economy is an excellent example here.

households. As can be seen, in recent years their availability has improved significantly. At the same time, the percentage of households that do not have the equipment and motivate its lack with financial considerations is decreasing (Figure 4.3.3 in section 4.3.1).

The lack of a computer is ever less often explained in financial terms. Currently, 9% of households declare a desktop computer unaffordable, while in 2011 it was 13%. In addition, 17 % declare the intention to have a laptop and the lack of funds for the purchase, while two years ago it was 25 %. The fall in the group of households that declare a desire to have a computer and the lack of funds to purchase it, confirms that motivational factors are of key significance. The importance of material affluence for having a computer is significantly smaller than the importance of other factors. What is more, a significant group of the least well-off households has the means to purchase a computer with internet access provided they have the necessary motivation. Over 55% of households from the lowest income quartile have a computer, and 51% internet.

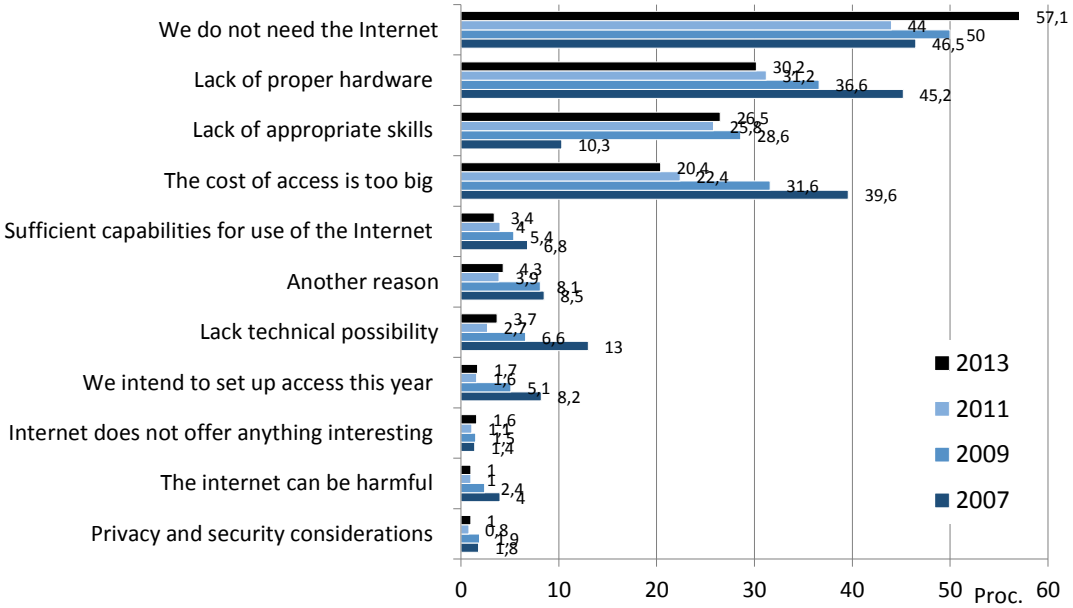


Figure 7.1.8. Reasons for lack of internet access in households in 2007-2013

Only 7% of households declare that they would like to have access to the internet but cannot afford it. This is only 21% of those without access to the internet. Meanwhile, two years ago 12% of households did not have internet access for financial reasons, which was nearly over third household not on line. It is worth noting that the share of households without internet for reasons other than financial has hardly changed between 2011 and 2013. Two years ago this was 27% and this time 26%. The declared reasons of the lack of internet access are shown in Figure 7.1.8.

By far the most frequently cited reason is the lack of need, indicated already 57% of households without access to the internet. The importance of the lack of motivation for internet use is on the rise as two years previously this reason was given by 44%. Second is the lack of adequate equipment (30%), which of course does not exclude also the lack of a need. Both a lack of the appropriate equipment and the too high cost of access (currently a problem for 20% of households without access to the internet) a few years ago were mentioned much more often. These changes are associated with a fall of prices of hardware and of internet access, They also prove that among those without access a few years age, those who earlier more often complained about the lack of equipment and high costs mentioned this, while having much higher motivation. Those people mostly gained access much more than those who lacked the motivation to do so.

The lack of skills is also among the important reasons for the lack of access to the internet. The problem of lack of competence is mentioned by about every fourth household with the lack of internet. Other reasons are now much more rarely mentioned. Of particular significance is the rarity of lack of technological possibility as a cause of internet access, as for a number of years now only around 1% of all Polish households declare a lack of possibility to have internet at home. This shows that the problem of internet accessibility depends on difficulty with linking up to broadband rather than access per se. The data presented here confirm the thesis presented in previous *Social Diagnosis* that hard barriers to internet access (infrastructural or financial) are

becoming less significant, and ever greater barriers to the new technologies are growing – the lack of knowledge, needs and appropriate skills. It should be expected that this trend will be exacerbated in the coming years.

7.2. Internet users and non-users

7.2.1. The Poles and new technologies

The number of users of ICT continues to grow, though the rise is clearly slower than in previous years. In the first half of 2013, already 63% of Poles aged 16 and above connected to the internet. The growth rate of the number of new users is clearly slower and amounts to about 3 percentage points within two years, when earlier this was around 9 p.p. Almost 64% of Poles have computers, and 87.4% have mobile phones and also in the case of the latter, the increase of new users is clearly slower than in previous years. However the number of smartphone users is growing very quickly...

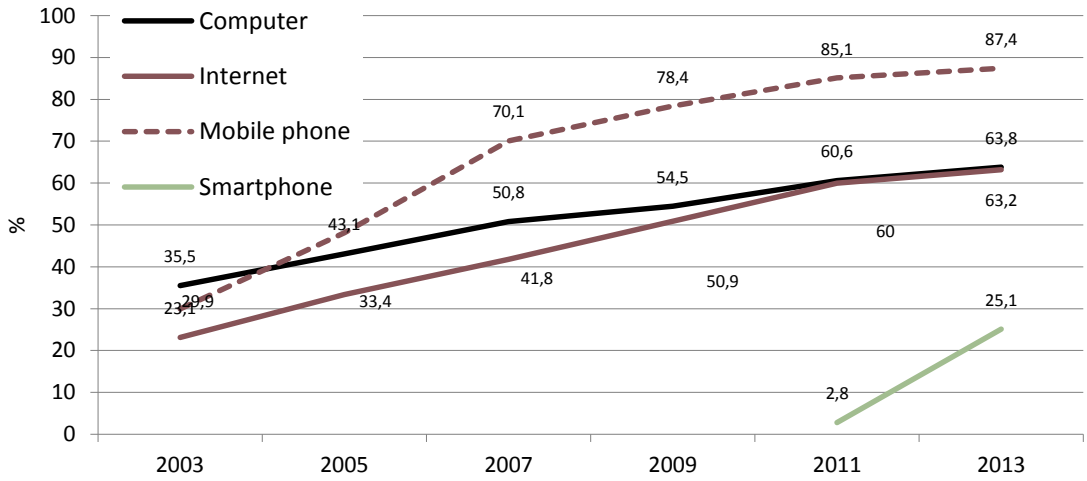


Figure 7.2.1. Use of communication and information technologies in 2003-2013

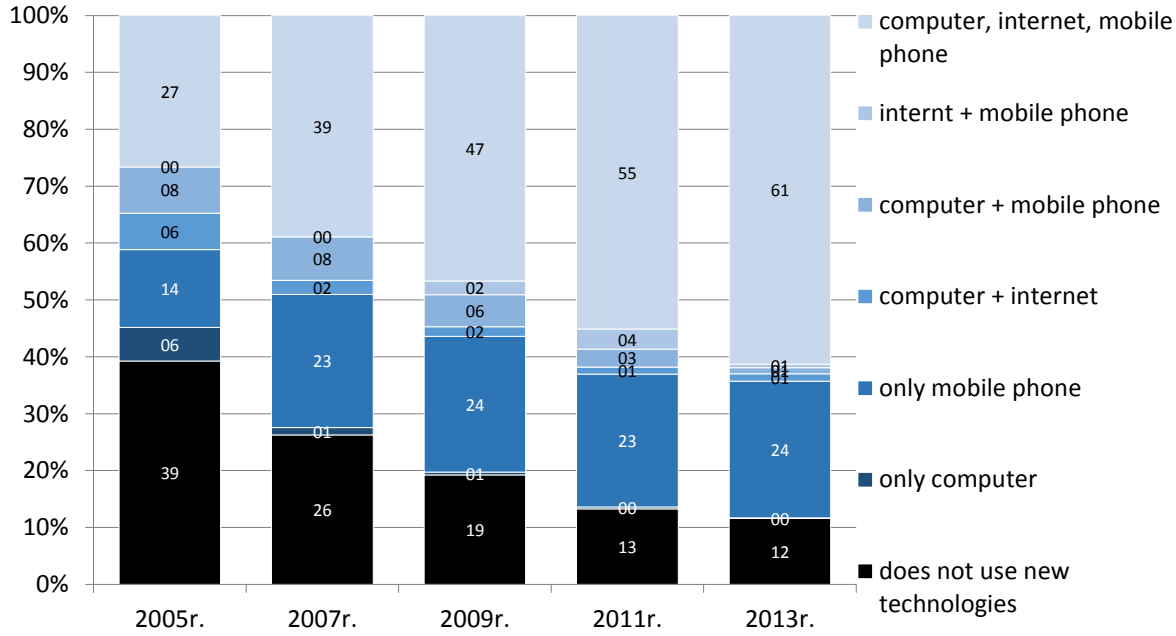


Figure 7.2.2 Percentage of various technology users between 2005-2013

Nearly all computer users also use the internet (98%) and mobile phones (figure 7.2.2). An analysis of the combined use of different technologies in the following figure shows a significant increase in the number of people using computers, the internet and mobile phones. Those who use both computers and the internet, as well as mobile phones, constitute now 61 % of the population. On the other hand, those that do not use any of these technologies constitute 11.6%, which is slightly less than two years ago.

The group of people who use all these technologies is growing mainly because users of mobile phones are starting to use computers and the internet. Direct transitions from the group of people who do not use any of these technologies to the group who use all three are extremely rare. At the same time, the share of people who only use mobile phones practically has not changed since 2007. This group comprises about 24% of Poles aged 16 and above, but its composition is changing significantly with every year. Some people are starting to use other technologies, and those who have not used any of them begin to use mobile phones.

7.2.2. Retreat from internet use

Like in previous years, the cessation of internet use is still noticeable, so the actual increase in new users is in fact greater than the changes presented in figure 7.2.1. Currently 8.8% of those who declared they used the internet in 2011 now claim they no longer do so. These falls also noted in previous years were slightly smaller - 7% in 2009-2011 and 7.5% 2009-2007 - though before that they were greater - 13% in 2005-2007 and over 15% in 2003-2005. It is worth analysing in which groups such cessations are the most frequent.

Above all, the elderly and less well educated stop using the internet, as in 2011 26% of users over 65 ceased, and 19% of 60-64 year olds. As many as 40% of those with basic education did not use the internet in 2011, and 20% with basic professional education. The scale of cessation is also greater in rural areas (14%) and among those from poorer households (14% of the lower income quartile). Retirees also stop using the internet (23% of users two years ago) and farmers (24%).

Least frequent is cessation in groups where internet use is anyway the most frequent. In 2011-2013, only 0.6% of users who study at school or university stopped using the internet, 3% with higher education and 3% of the residents of the largest towns. The youngest cease using least often at 1% in the 18-24 year olds' group and 5% in the group of 25-34 year olds. There are more cessations in each of the older groups.

The reasons for giving up internet use are very different. Sometimes they are because loss of access due to changes in life situation, for example change in work of loss of job. completion of education, move of home or of the moving out of children who were users and computer owners, and sometimes a result of a small need to use, which was earlier already limited anyway.

7.2.3. Access to and use of computer and internet

It is increasingly rare for those who use the internet not to have access to it at home (figure 7.2.3). In 2013, 96% of users had home access. Two years ago it was 94%, 2009 91% and in 2007 80%. Of those with no home access, 10% gain it in other places (above all at work, school or university).

The spread of internet access does not fully translate into a rise in the number of users, as while 75.7% of Poles have home access, only 60.8% take advantage of it. The number of people who do not use the internet despite having a home computer and access is still on the rise. In 2009 it was 13% of adult Poles, two years later 14% and now almost 15%. At the same time one in five with home access do not use it, similarly 16% of Poles over 16 years of age are non-users with access to a computer in the home. This means that just like in 2011, as many as 44% non-users live in homes equipped with computers.

Already over 40% of those who do not use the internet have a computer and home internet access. Meanwhile, in 2007, 18% of non-users had internet access. Simple access does not mean automatic use, and these results confirm the key significance of skills and motivation for the taking advantage of this technology. Just the equipment and broadband network do not suffice for use of ICT to be really general in Poland. The causes of not using the internet by such a large group of people with access is above all a lack of need to use and a lack of necessary competences. It is also worth mentioning that these people are not completely cut off from the internet as they have a certain amount of contact and take advantage of if through other household members by asking them to find needed information and send messages etc.

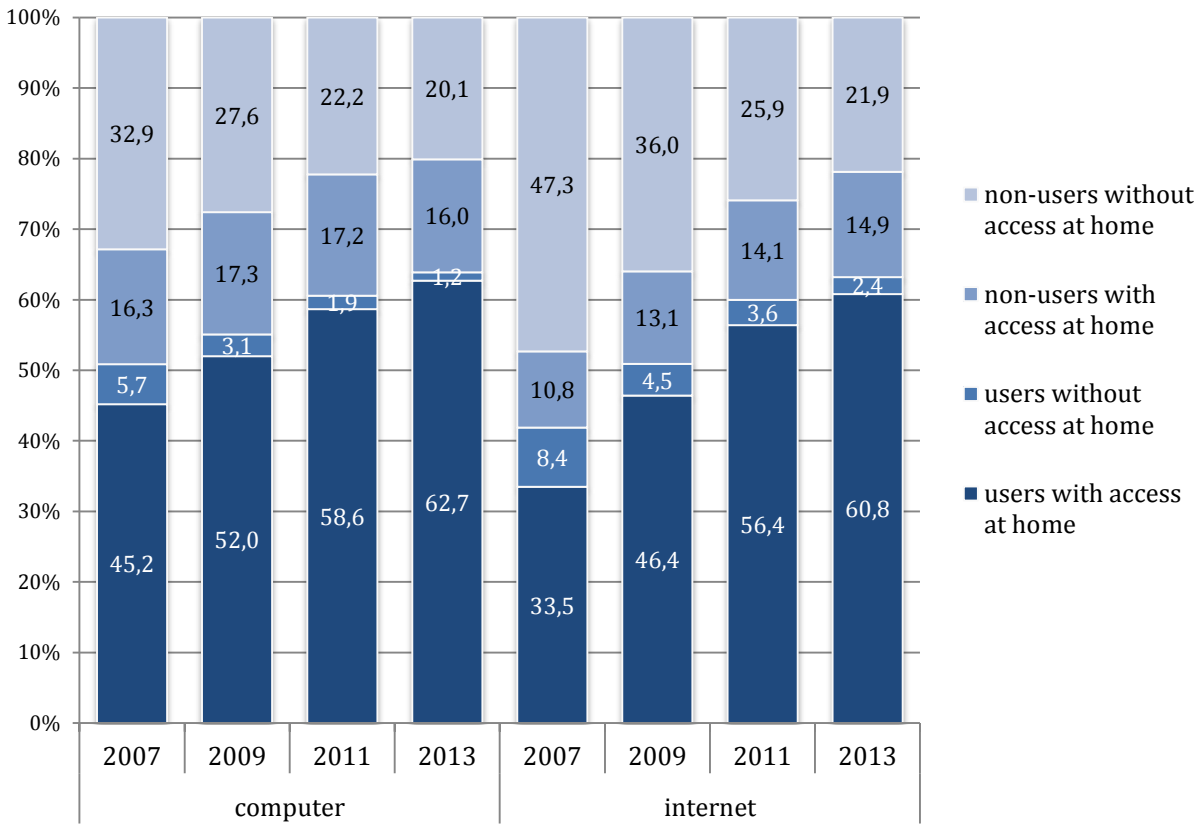


Figure 7.2.3. Use and ownership of computers and internet between 2007-2011

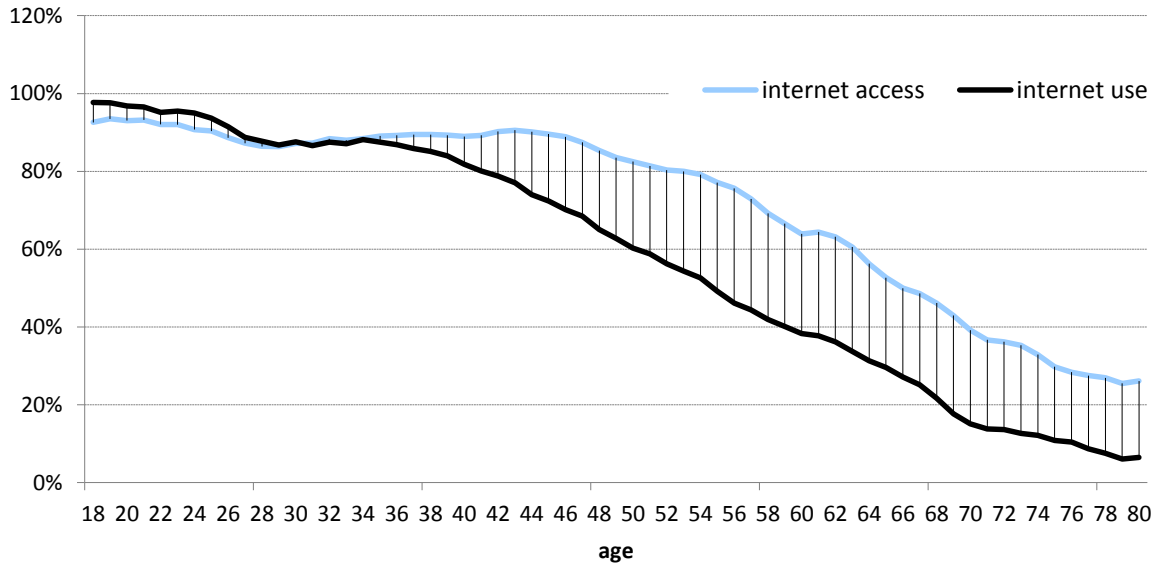


Figure 7.2.4. Internet access and use for different ages

It is worth analysing who, despite having home access to the internet, does not use it. Figure 7.2.4 presents access and internet use in terms of different age groups. as may be observed, among those up to 50 years of age, more than 80% have home access, and it is only the over 50s who have access less often. Having a computer becomes rarer with age, and access to the internet becomes less frequent even more rapidly. Also the elderly tend to use home access much less frequently.

Not taking advantage of home internet access in much more common among the less well educated. Every fourth has basic, and nearly a half basic professional education. Over a half (55%) live in rural areas.

7.2.4. Who uses the internet?

Though the number of internet users is growing, use is very differentiated due to a range of socio-demographic factors. It is worth analysing what determines the use of new technologies as such analysis can be an indicator for e-integration activities and counter-measures to digital exclusion. Also it is worth comparing how the structures of internet users and non-users differ in terms of the most important socio-demographic variables.

Similarly to previous years, in 2013 men used the internet more often than women, as of the over 16s there are 65% men and 61% women internet users. The difference is great and has remained at 3 p.p. for a number of years. On the other hand, the number of women internet users in Poland is greater than that of men as a result of the proportion of women to men in the general population.

Age and education remain factors that are most strongly linked to internet use, as a clear majority of young people use the internet (97% of 16-24 year olds) and very few of the elderly (14% of the over 65s) (figure 7.2.5). Also the lion's share of 25-34 year olds are users, while those of retirement age are usually non-users. The differences in internet use in terms of age are very strong and nothing indicates they are going to change, as the increase in older groups is not much faster than that in the youngest.

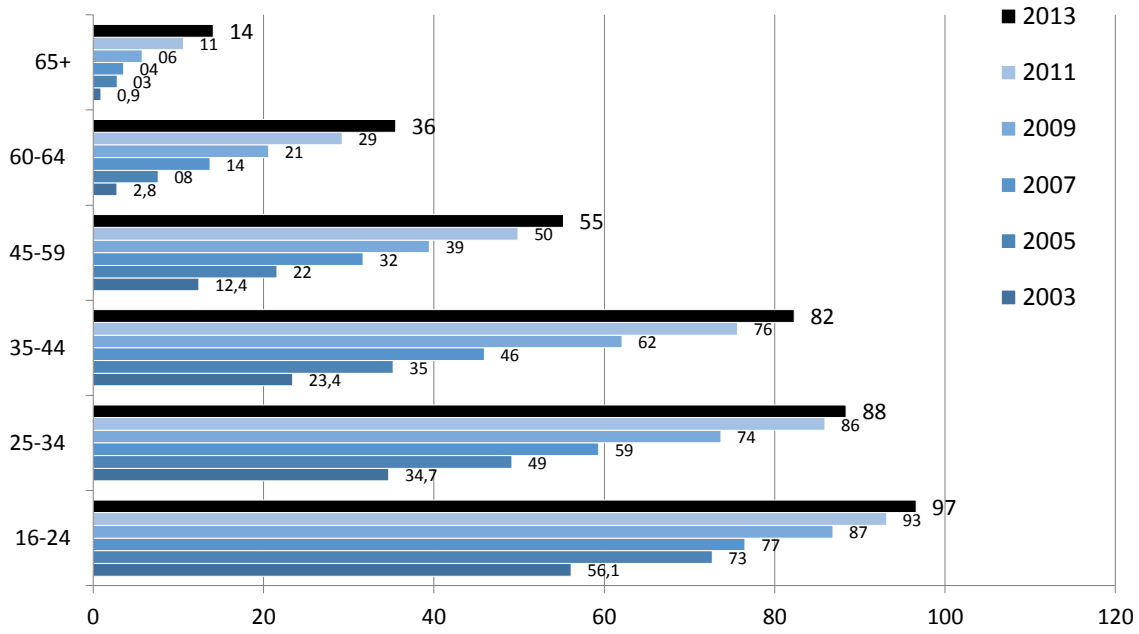


Figure 7.2.5. Percentage of internet users in different age groups between 2003-2013

The big importance of age for internet use means that among users there is definitely more young people while the elderly dominate among non-users (figure 7.2.6). Currently, 48% of internet users are 16-34 year olds with only 7.5% in that age group. Meanwhile those over 45 make up 30% of users and as many as 84% of non-users. The elderly, half of whom are over 60, remain to an ever greater extent, in the group of those who have not yet used the internet.

These inter-generational differences in internet use are a source of many negative social features. The more the internet becomes the main, and increasingly only source of information on various aspects of life, so those who do not use it have hampered opportunities to function in these areas. This does not only concern the professional sphere, but also social and cultural life (Batorski, Zając 2010). The internet is not only a means of access to information, but indirectly also to participation in activity beyond the web. This is the case for work and cultural events, and as a result the ways of functioning in the world and dealing with various kinds of situation and problems are completely different among the younger internet users and older non-users, which indirectly leads also to ever greater difficulties in understanding between members of these groups.

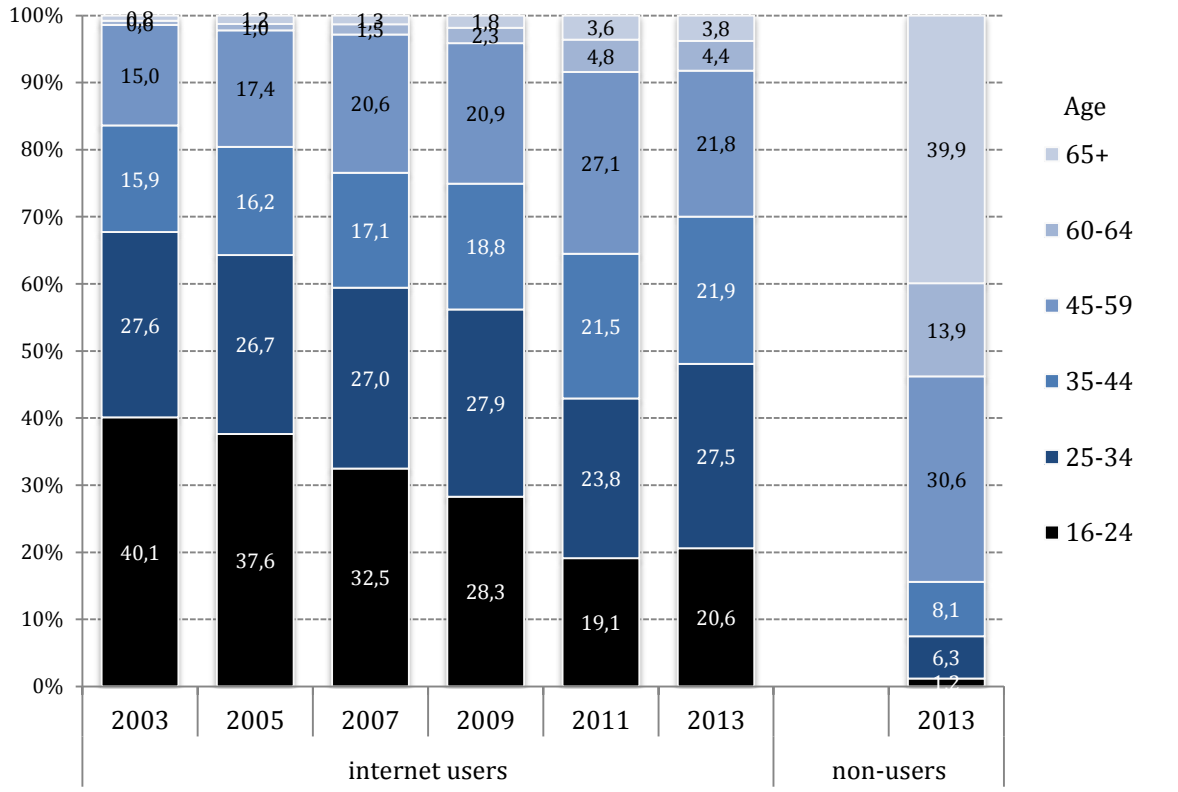


Figure 7.2.6. Change in internet users' age structure between 2003-2013 and non-users in 2013

Education is the second most important factor for internet use, as almost all those in education are users (99% of school and university students) as are the better educated (91% of those with higher education). Meanwhile of those with only basic education, as many as 88% are non-users, and these differences remain very large, with most new users among those with middle education.

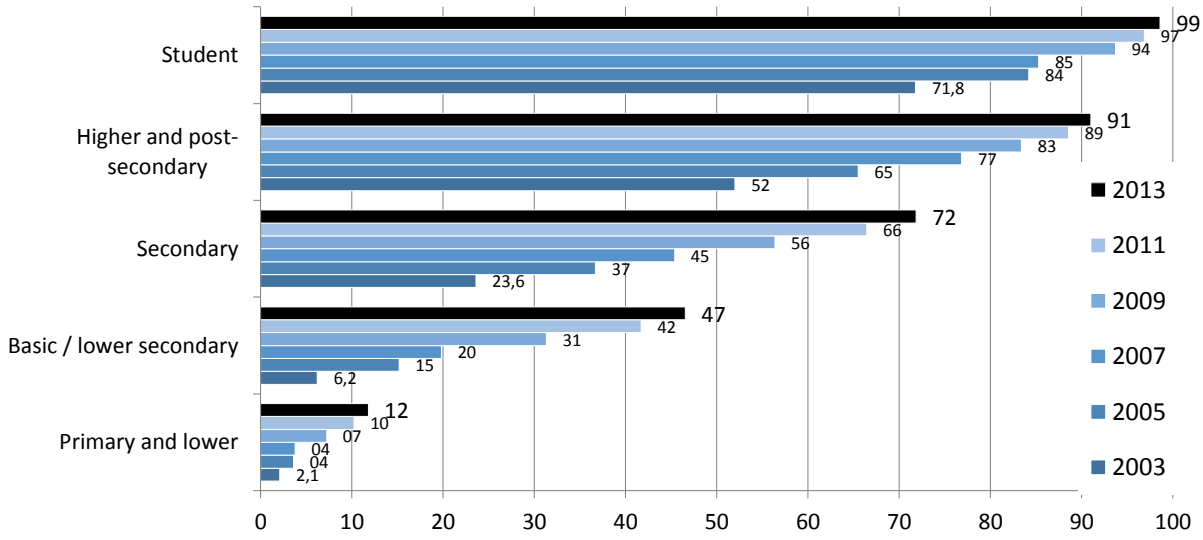


Figure 7.2.7. Percentage of internet users groups of various level of education between 2003-2013

The significance of age and education on mobile phone use is much smaller than that of computer and internet use. The one group that clearly uses mobiles less are those with basic education (table 7.2.1). However, differences in use of smartphones are very significant, as only 5% with basic education have touch-screen phones and over 41% of those with higher education and school students, while over a half of the over 16s.

Table 7.2.1. New technology use in different groups in 2013

	Group	Computer	Internet	Mobile phone	Smartphone	Non-users	Users of all
Total		63.9	63.2	87.4	25.1	11.6	61.3
Gender	Men	65.7	65.2	89.6	26.1	9.4	63.1
	Women	62.2	61.5	85.4	24.2	13.6	59.7
Age	16-24	96.8	96.6	98.1	49.2	0.6	94.3
	25-34	88.8	88.4	98.3	43.3	1.0	86.2
	35-44	82.5	82.3	97.6	31.3	1.7	80.7
	45-59	56.1	55.2	90.5	14.0	8.3	52.8
	60-64	37.0	35.5	80.4	7.5	18.5	33.7
	65+	14.7	14.1	55.1	3.6	44.0	12.8
Social and professional status	Public sector employees	87.5	87.2	98.0	32.7	1.3	85.6
	Private sector employees	82.1	81.6	98.1	35.4	1.4	80.0
	Private entrepreneurs	88.0	87.9	98.2	41.2	1.3	86.1
	Farmers	44.9	43.2	85.5	9.2	12.4	40.1
	Receivers of welfare	28.6	28.2	70.7	8.0	28.4	26.6
	Retirees	23.4	22.5	64.2	5.1	34.7	21.0
	School and university students	99.0	98.6	98.5	51.4	0.1	96.6
	The unemployed	66.6	65.2	92.4	22.8	6.3	63.2
	Other inactive labour	56.7	56.2	85.9	19.9	11.9	52.4
Level of education and current students	Primary and lower	12.5	11.8	55.0	5.0	44.7	10.9
	Basic/lower secondary	47.5	46.6	87.0	14.2	11.7	44.1
	Secondary	72.7	71.9	92.7	24.8	6.1	69.9
	Higher and post-secondary	91.3	91.0	96.9	41.2	2.3	89.3
	Students	99.0	98.6	98.5	51.4	0.1	96.6
Size of place of residence	Towns of over 500.000 residents	80.3	80.1	94.7	39.6	4.6	77.9
	200.000-500.000	74.1	73.4	92.3	31.7	6.8	71.7
	100.000-200.000	71.6	70.6	90.1	28.3	9.3	68.8
	20.000-100.000	66.3	65.3	89.1	25.7	10.1	63.9
	Fewer than 20.000	64.1	63.4	88.4	22.3	10.4	61.6
	Rural areas	53.6	53.1	82.2	19.0	16.6	50.8
Per capita household income	First quartile	49.4	48.5	80.7	15.1	17.7	45.8
	Second quartile	55.0	54.2	84.4	19.6	14.8	52.6
	Third quartile	65.9	65.4	88.7	26.7	10.4	63.8
	Fourth quartile	83.5	82.9	95.0	38.3	4.3	81.2

Computer and internet use is also significantly linked to prosperity, though the relation is smaller than in the case of age and education. The highest income quartile of Poles has 83% internet users, while the largest gains are among lowest income users, of whom 48.5% are currently users. Differences in mobile phone ownership are much smaller as 81% of the low-income group are owners and 91% of the highest earners. However, when taking into account smartphone ownership, the differentiation in terms of income becomes much greater.

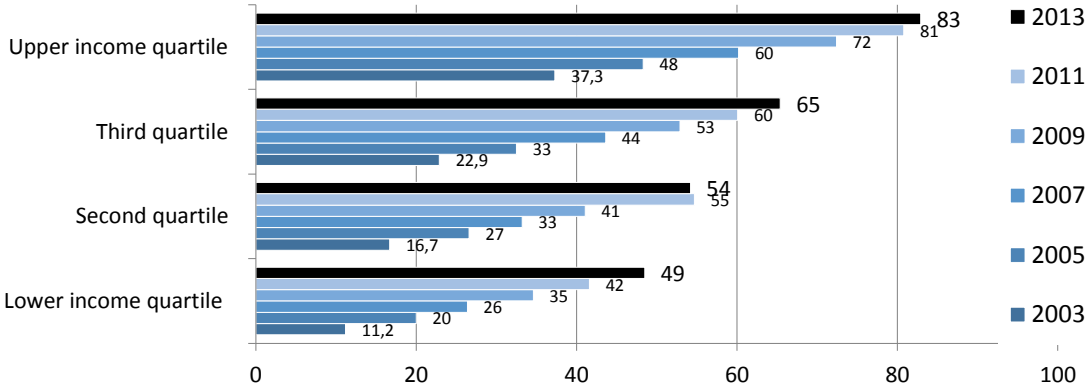


Figure 7.2.8. Income and percentage of internet users between 2003-2013

Professional status has a significant influence on use of ICT. As we mentioned earlier, almost all school and university students use the internet (99%), as do most of those in work. In this last category, those in the private sector are users slightly less often (82%). In the last two years, the share of users among farmers has risen to a marked extent, while it has not changed among the unemployed and the passive professionals, which showed a marked increase in users in 2009-2011. The least users is still among the retirees and pensioners (figure 7.2.9).

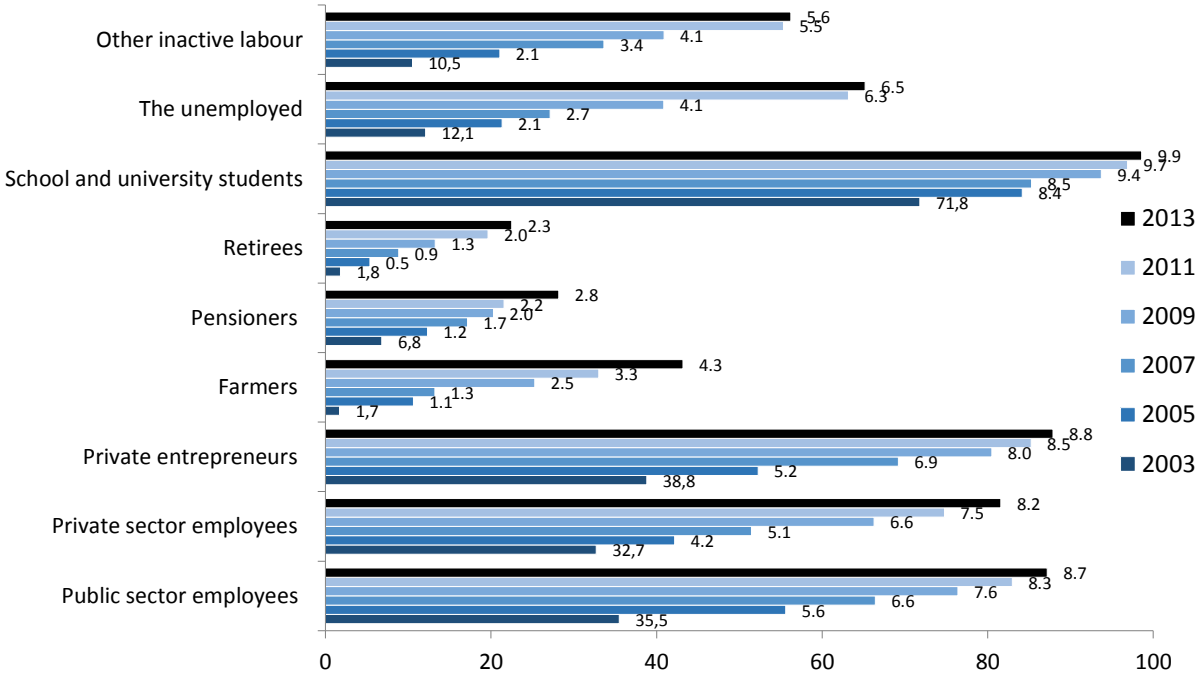


Figure 7.2.9. Percentage of internet users in different socio-professional status in 2003-2013

Currently 58% of internet users of 16 years of age and over are in work (farming not included), and another 13% are school and university students. Meanwhile pensioners make up only 75 of users and as many as 435 of non-users (table 7.2.2).

Internet use is also differentiated by size of place of residence. Clearly more people are users in the larger towns than in rural areas and the smaller towns. 80% of the residents of the largest cities are users, while in the countryside just over half use the internet. After a few years of faster gains in rural areas, the rise in users this year continues at a similar pace, whatever the size of place of residence.

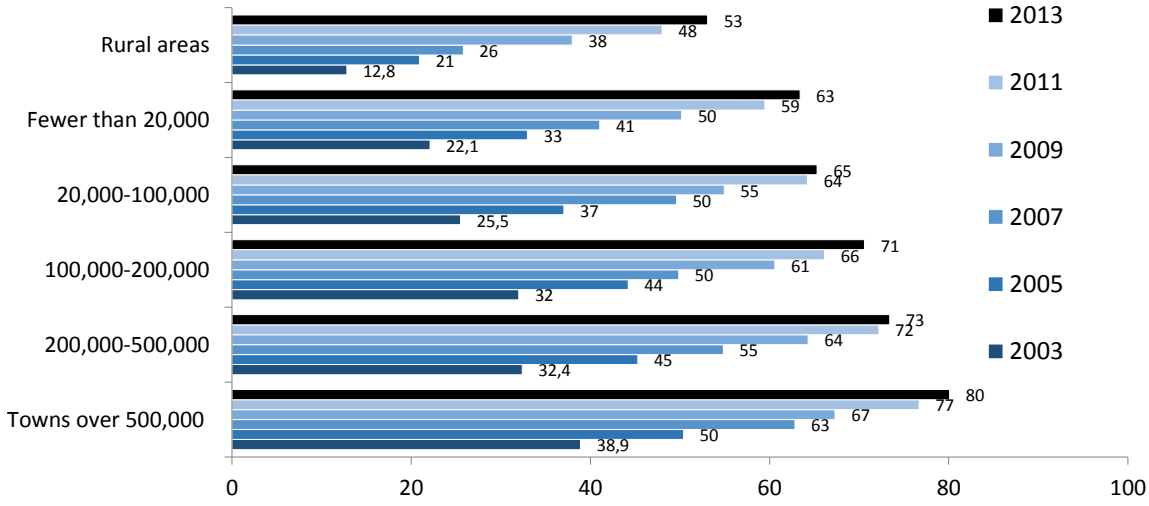


Figure 7.2.10. Internet use by size of place of residence between 2003-2013

Internet use is differentiated not only by place of residence but also by region. The Voivodeships in the east of the country use the internet more rarely as only 59% are users and in the other regions the figure is 64.4%. Figure 7.2.11 presents internet use by Voivodeships in detail, as well as the changes that took place in 2007-2013. Most users are in Pomorskie, then Dolnośląskie, and Śląskie. By far the least internet use takes place in Warmińsko-Mazurskie and Świętokrzyskie.

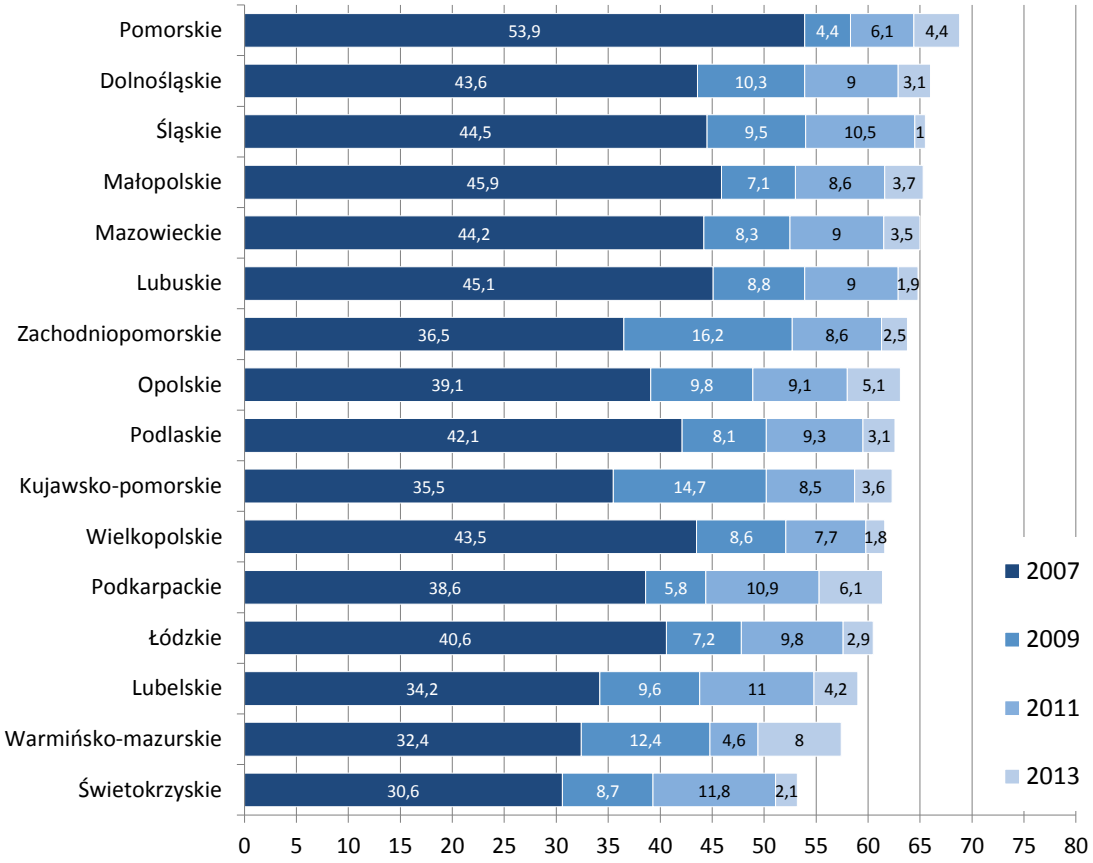


Figure 7.2.11. Percentage of internet users over 16 years of age in 2007 and the percentage of new users in 2009 and 2013 by Voivodeship

The diversity of use of ICT in various socio-demographic groups may be observed comparing people who use mobile phones, computers and the internet and those who do not use any of these devices (table 7.2.1). Among people less than 34 years of age, around 90% use all three technologies, among the oldest group under examination there are only less than 13% of such people, while 44% of them do not use any of these technologies. Despite such significant differences, the situation is improving - four years ago, as many as two-thirds of people aged 65 and above did not use ICT. There are also very large differences in terms of educational attainment - all of these tools are used by 97% of learners and 89% of people with higher education, and just under 11% of people with primary education, and almost 45% from the last group do not use any of these technologies.

The most interesting differences, however, are associated with the social and professional status. Among the working people there are virtually no people who do not use ICT, and already 86% of entrepreneurs and public sector employees and 80% of private sector employees use all three technologies. Those who do not use ICT are almost exclusively retirees and pensioners, with a dozen or so % of farmers and professionally inactive people. In other groups there are practically no people who would not use mobile phones or computers. Also other factors like income and the size of place of residence are significant. Among those from households with higher income and from larger towns, there are more people using ICT and fewer of those that do not use any ICT.

7.2. Children and the web

Earlier we showed internet use among the over 16s, so here we present young persons' and children's behaviour online and with computers. Data on internet use by the under 16s is based on parents' declarations. Having children of school age has up to recently been one of the most important factors favouring computer ownership and internet access. Currently, a generation has grown up that has long used the internet going to school or university, which is why its children have had contact with computers in the home from birth.

Computers and the internet are present in households with children much more often than in those without, and now only a few percent of children do not have a computer or internet access in the home. Among those going to comprehensive school (primary and gymnasium), 95% have a computer and 90% internet access (figure 7.2.12). The improvement is noticeable, as in 2011 only 83% had access. Among high-school and university students, only 3-4% do not have home access to the internet. In every school year, nearly 90% of young people have home internet, which even includes infants (figure 7.2.13). As for the households with children who do not have a computer or internet, practically the only reason given was the financial situation and a lack of necessary means.

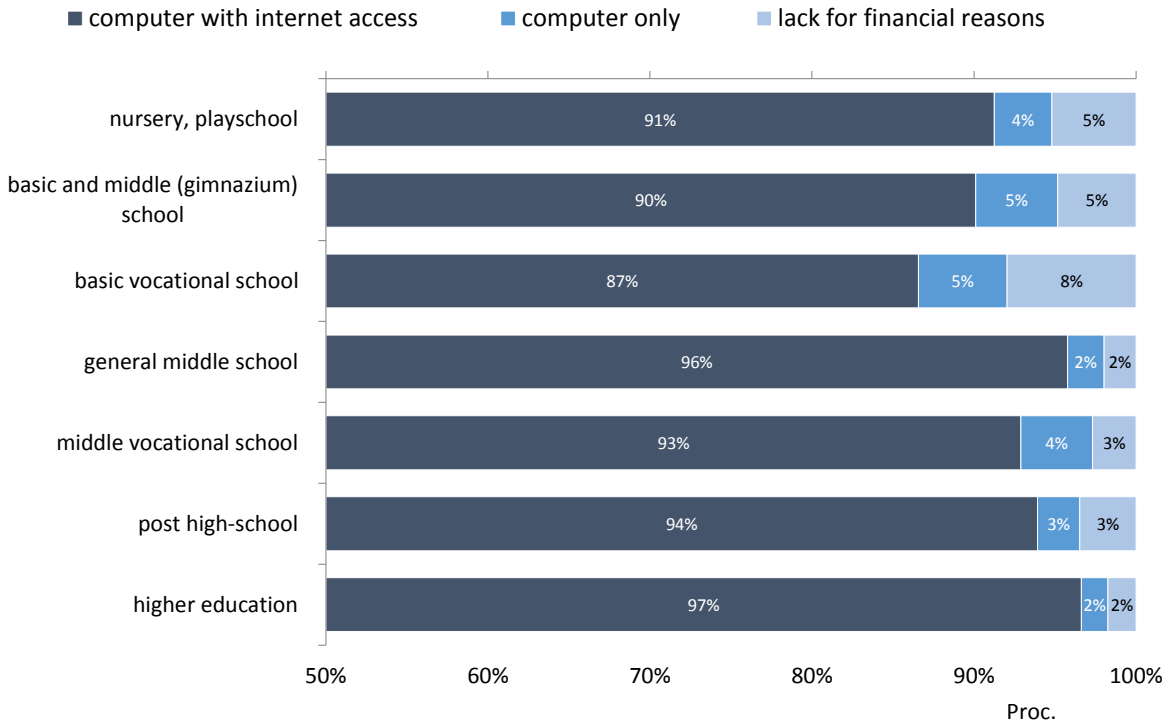


Figure 7.2.12. Computer and internet availability by level of education

The first contacts with computers start very early, as around 10% of three-year-olds and 37% of four-year-olds have already had contact (figure 7.2.13). Like two years previously, according to their parents, in 2013 half of five year olds use computers. A clear majority of children (over 90%), grow up with a computer in their vicinity observing their older co-dwellers using it. ICT technologies are for them completely natural and the process of learning how to use them is completely different than for much older people, who find it more difficult to adapt to the new technology. Also, the great majority of children and young people using computers and the internet do so under their parents' eye, and only among children of school age are there more who use them independently than those who are helped or overseen by parents (figure 7.2.13).

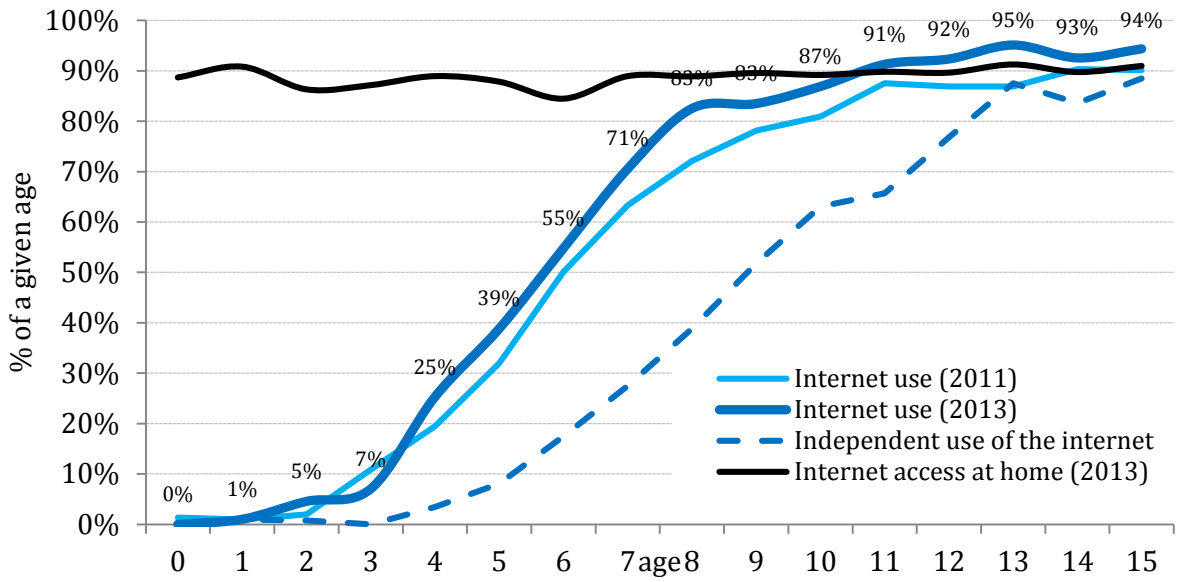


Figure 7.2.13. Computer and internet use by children and young people

The vast majority of children began using computers and the Internet well before going to school. Among the 7 year olds in 2013, some of who had not yet started school, as many as 82% had used computers at home at the time of study, and 91% of the children a year older. The remainder had not done so above all because their families could not afford the expense. Only 5% of parents of 8-9 year olds believe their children are too young to use a computer, and parents of older children do not express this opinion at all.

The education system should take advantage of the fact that the clear majority of children starting school have access to a home computer and the Internet. Currently, this potential is little exploited. Schools should promote smart use and the development of interests with the aid of home computers. Children spend much more time using computers and the Internet at home than at school and it would be good if that time was not only spent on entertainment. The digitalisation of school should above all be about the definition of the role of computers and the Internet in the educational process, and changes in teaching programmes that will allow the raising of the quality of education and students' competences as regards information technologies. The stress should be less on computer skills, which children acquire themselves early on, but above all on informational competences: information seeking, reliability assessment, processing and critical analysis of information etc., but also the development of motivations to better use online resources and also to make a contribution.

7.2.6. Changes in the structures of Internet user and non-user populations

In the previous sections we have shown the use of the Internet and other ICT in various socio-demographic groups, and also how the use of ICT is becoming more common. These changes influence the structure of the population of Internet users and non-users. These changes have consequences both for which content and services are offering in the Internet and also for the ways of reaching non-users. The change in the structure of Internet users between 2003 and 2013 is presented in table 7.2.2.

The biggest changes in the population of internet users are associated with age. In 2003, more than 40 % of users were 16-24 years old (figure 7.2.6). Currently, people from this age group make up around 20% of internet users, while the share of above all middle-aged users is growing.

We are seeing other changes as well. Among users, the share of students is especially shrinking. Within ten years their proportion has declined from 30 % to 13%. This change is primarily due to the increasing share of retirees and remaining groups, as well as to the demographic decline in the group of school and university students. The percentage of Internet users with higher education has changed little in the last decade and is stable at around 32% of users. The share of people with secondary education increased only slightly, and the fastest growth can be seen in the group of people with vocational education.

The population of Internet users is also changing in terms of the size of the place of residence. People living in major cities make up a diminishing proportion of Internet users. The share of rural population is

increasing. In the last decade it rose from 21 to 33 %. The share of people living in towns with up to 100,000 inhabitants has not changed much.

The differences in the structure of Internet users and non-users are still very great. The last column of table 7.2.2 contains data on the current structure of non-users. Young people dominate the users group, nearly half of which are no more than 34 years old, while non-users of that age make up a mere 7.5%. Meanwhile the over 45s are 30% of users and as many as 84% of non-users. Over half of those who have not yet used the Internet are over 60. Over 32% of users have higher education and only 5% of non-users.

One third of non-users and only 3% of users have a basic education, and an even bigger group of non-users is made up of those with a vocational education (39%). There are also significant differences in place of residence as 50% of non-users and 33% of users are residents of rural areas.

Table 7.2.2. Changes in the structure of Internet users between 2003-2013

	Composition of Internet users in a given year						Non-users in
Group	2003	2005	2007	2009	2011	2013	2013
Men	49.9	50.4	46.3	49.4	46.8	49.1	45.2
Women	50.1	49.6	53.7	50.6	53.2	50.9	54.8
	2003	2005	2007	2009	2011	2013	
16-24	40.1	37.6	32.5	28.3	19.1	20.6	1.2
25-34	27.6	26.7	27.0	27.9	23.8	27.5	6.3
35-44	15.9	16.2	17.1	18.8	21.5	21.9	8.1
45-59	15.0	17.4	20.6	20.9	27.1	21.8	30.6
60-64	0.6	1.0	1.5	2.3	4.8	4.4	13.9
65+	0.8	1.2	1.3	1.8	3.6	3.8	39.9
	2003	2005	2007	2009	2011	2013	
Public sector employees	24.2	24.0	23.2	20.2	19.4	18.0	4.5
Private sector employees	24.3	23.6	28.5	30.2	29.7	34.0	13.2
Private entrepreneurs	7.2	6.6	7.2	6.6	6.0	6.3	1.5
Farmers	0.4	1.7	1.6	2.1	2.8	3.5	8.0
Receivers of welfare	3.2	3.3	3.2	3.1	3.0	3.0	13.0
Retirees	1.5	2.9	4.3	5.4	9.1	7.3	43.0
School and university students	30.0	26.0	21.9	19.7	14.7	13.1	0.3
The unemployed	6.2	6.2	4.5	4.8	6.8	8.1	7.5
Other inactive labour	2.9	5.8	5.5	7.9	8.4	6.7	9.0
	2003	2005	2007	2009	2011	2013	
Primary and lower	2.0	2.0	1.5	2.3	2.9	2.6	33.4
Basic/lower secondary	7.5	12.0	12.1	16.4	19.2	19.8	39.1
Secondary	27.7	29.1	30.0	30.1	31.8	32.4	21.8
Higher and post-secondary	32.9	31.7	34.4	31.4	31.5	32.1	5.4
Students	29.9	25.3	21.9	19.7	14.5	13.1	0.3
	2003	2005	2007	2009	2011	2013	
Towns of over 500,000 residents	19.6	15.3	16.1	16.2	15.6	15.4	6.6
200,000-500,000	14.3	13.6	14.5	14.1	11.6	11.0	6.9
100,000-200,000	10.9	11.1	10.5	8.4	8.5	8.6	6.1
20,000-100,000	21.3	22.4	23.5	20.7	21.1	20.1	18.3
Fewer than 20,000	12.8	14.4	12.6	12.8	11.9	11.9	11.8
Rural areas	21.1	23.3	22.8	27.9	31.4	33.1	50.3

7.3. Skills and forms of computer and Internet use

7.3.1. Computer skills

A few years ago computer use was only sometimes linked to Internet use, while the basic uses involved office programmes, entertainment and games based on individual rivalry with a computerised opponent. With the development of the Internet, the spread of computers and online access, the use of technology has also changed. Now, for a large part of users, the computer is exclusively a tool for Internet access (hence the popularity of tablets, which despite often having more modest capabilities than normal computers, satisfy the basic requirements of a large part of Internet users). Many people only use a small part of the capabilities of their computer, and as a result users' computer skills are very varied (figure 7.3.1).

The greatest proportion of users has skills associated with the basic use of the Internet. Computer skills are much less common. Two thirds of users can perform basic operations related to the organization of file systems, such as copying or moving a file or folder. Only one in three computer users know how to install a printer, modem, scanner or other devices.

The knowledge of office programs is small. Not quite 60% % of users have simple skills associated with using a word processor (copying and pasting text fragments). Barely 35% can use a spreadsheet, and 23 % can prepare an electronic presentation.

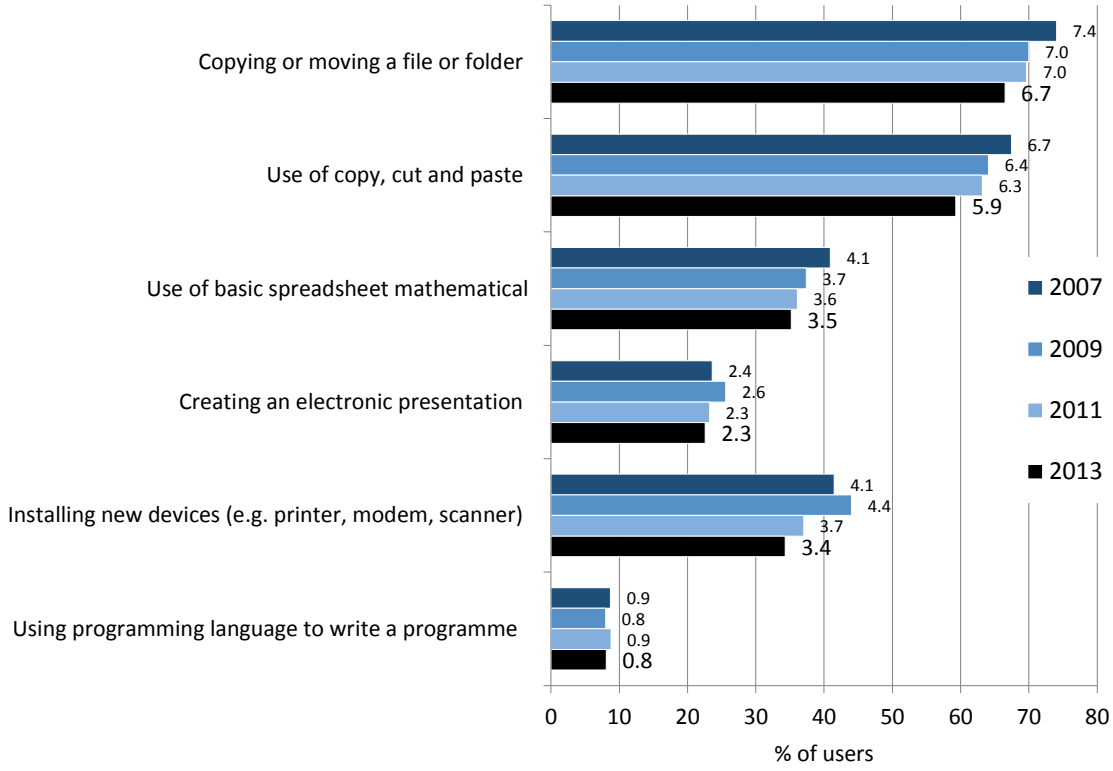


Figure 7.3.1. Computer skills between 2007 and 2013.

Users' computer skills are lower than two years ago, which may seem surprising though is partially a result of a rise in user numbers and the low competences of new computer and Internet users. For example, among new users after 2011, the ability to transfer a file from one catalogue to another is shown by only one in three, which is twice as small as among experienced users. New users fare even worse with office programmes, as only 27% are capable of cutting and pasting a fragment of text, and 11% of handling a calculating spreadsheet. It ought to be noted that those who stopped using the Internet in 2011-2013 had greater computer skills in 2011 than those who started using computers at that time. For the vast majority of new users, the only use of computers is to navigate the Internet. There are also situations in which persons who two years previously declared given skills, now claim they are no longer capable of performing said functions. This may result from different interpretations of one's own competences or may be simply a sign that unused skills disappear with time.

The percentage of users who have considerable computer skills is changing very slightly. 13% of users declared they had all, or nearly all, of the considered computer skills, which is slightly more than in 2011. This may be due to that the youngest participants (16-18 years of age) studied two years ago have generally rather high competences, and much higher than the average for older participants.

Computer skills are very differentiated among users and depend on the same factors as the fact of computer and Internet use (table 7.3.1). Persons from the groups in which there are proportionally more users also have better user skills. The table above shows only those persons using these technologies thanks to which it is possible to compare the competences of users from various groups. The table compares three groups of skills, the first of which is the use of office software. Currently 55% of users operate email ad additionally have at least two of four considered skills: copying or transferring files between folders, using text editing, use of

mathematical formulae in calculation spreadsheets and the preparation of electronic presentations. A considerable part has all these skills (almost 15% of the whole population). Two additional competences considered separately in table 7.3.1 are the ability to create Internet pages and write computer programmes using a computer language. It is worth mentioning that the first of these competences does not currently require great technical ability as the creation of pages like for example blogs or wiki page editing does not require coding skills and may be similar to the editing of other documents. Therefore as many as 43% of users declare that they have once created pages and are able to do so.

Table 7.3.1. Computer skills among users from different groups (in %)

Group		Office work-skills[95]	Creation and modification of websites	Programming
Total		55,0	42,9	8,1
Gender	Men	55	46	11
	Women	55	40	5
Age	16-24	71	59	16
	25-34	63	50	8
	35-44	52	40	6
	45-59	43	29	4
	60-64	32	20	2
	65+	24	21	2
Social and professional status	Public sector employees	65	41	7
	Private sector employees	57	44	8
	Private entrepreneurs	58	47	8
	Farmers	27	31	5
	Receivers of welfare	33	36	5
	Retirees	25	20	2
	School and university students	77	60	17
	The unemployed	48	44	6
	Other inactive labour	40	37	5
Level of education and current students	Primary and lower	21	32	6
	Basic/lower secondary	29	33	4
	Secondary	47	39	6
	Higher and post-secondary	73	47	9
	Students	77	60	17
Size of place of residence	Towns of more than 500k	68	49	11
	Towns of 200k-500k	63	46	9
	Towns of 100k-200k	59	44	7
	Towns of 20k-100k	54	42	8
	Towns of fewer than 20k	49	40	7
	Rural areas	48	40	7
Per capita household income	First quartile	45	41	7
	Second quartile	48	41	8
	Third quartile	54	43	8
	Fourth quartile	66	45	9

Young users, the better educated and students have greater skills. Differences are very great as, for example, office computer software has been mastered by three quarters of users with a higher education and school and university students, but by only 21% of those with basic education. There are also big differences link to professional status. Interestingly enough, people in the public sector declare higher competences than private entrepreneurs and private sector workers. This is slightly different in the case of Internet page creation, which entrepreneurs and the self-employed are more often able to do. The higher earners and those living in larger cities have greater skills, though this above all is for office software skills and differences in the creation of webpages are not great. Differences between men and women occur only in the case of more advanced skills, as men more often create Internet pages and definitely more often can write computer programmes. This last skill is most common among the youngest users, especially among those still in education at school or university (hence also the higher results for the largest cities).

[95] Ability to use email, operate filing systems, text editing functions, spreadsheets and creating electronic presentations.

7.3.2. Time spent using computers and the Internet

The average amount of time spent at a computer per week is around 15 and a half hours, which is close to the average for previous years at just over 15 hours in 2011and in 2009, users spent an average of 16 hours per week. The lack of clear increases in computer use-time is linked to new users spending, generally not very intensively, only 6.5 hours a week (10 hours less than long-term users), of which 5.5 hours is spent online.

An average user spends 10 hours a week at the computer. There are not many more users than two years ago - up to two hours a week –17% of users, and up to seven hours - 40 % of users. 23% of users spend at least 21 hours per week at the computer. People who spend 40 hours and more at computers constitute, similar as in 2011, about 12 % of users.

Internet users spend on average 12 hours a week online, though the majority use it to a limited extent and only just over a half are online for over an hour a day. 71% spend up to two hours a day on the Internet while 6% of users declare over 40 hours per week. It is worth noting that together with the rise in importance of the Internet and the appearance of groups for which it is the only purpose for using computers, ever greater amounts of time spent using computers is time spent online.

Men spend more time on the Internet (13 hours a week) than women (11 hours). The youngest use it most intensively (around 16 hours), and the least the elderly, especially the retired - on average just over an hour a day, just like the less well educated. Those with higher education and in work use the Internet more and there are big differences linked to place of residence. The average time spent a week for residents of the largest cities is over 16 hours per week and not quite 10 for those living in rural areas.

7.3.3. Forms of Internet use

Internet use covers very many different possible activities and means something completely different for different users, which is why it is worth analysing the different forms of Internet use. *Social Diagnosis* studies the forms of Internet use in great detail with questions on 26 different uses within one week previous to the study in the 2013 edition.

We somewhat reduced the number of readings because analysis of each parameter is too detailed, and because some of the studied uses are very closely linked to each other. In order to do so, we conducted a principle component factor analysis with quartimax rotation and isolated four main parameters allowing the description of Internet use in Poland. The combination of these readings explains 60% of variation.

The first parameter is connected to **universal use**, so that practically the more different online uses a given user applies, the higher the result gained. Especially strongly (with greater co-efficients) considered are uses demanding higher competences and creative approaches to the web. This dimension explains 42% of component variable variation. The second is connected to **communication**, which is a scale for chatting, communicators, Internet telephones, social networking services and also email and discussion fora (this dimension explained 7% of variance). It ought to be underlined that this is communication of an exclusively instrumental and above all entertainment character (chatting, social networks). The third are uses connected to **work and economic uses**, so the seeking of material for work or study, Internet banking, shopping, e-auctions, work searching and also the more instrumental use of email (6% of variation). The fourth aspect concerns **entertainment** - online games, downloading music and films, Internet surfing, listening to the radio, and also, though to a slightly lesser degree, use of social network services (5%).

Because for different users Internet use may mean something completely different and also because to a certain extent it is difficult to speak of a single medium (some even suggest talking about "Internets"), it is worth looking at how different groups use the Internet. In order to do so we analysed the average values of the four aspects of use for groups selected according to the most important socio-demographic variables (figure 7.3.2).

Figure 7.3.2. Forms of Internet use.

First let us consider the "universal use" aspect. It is clear that the youngest use the Internet most intensively, as with age the form of use narrows. A greater number of different forms of Internet use are noticeable among students and the better educated, and the lower the user's level of education, the less differentiated are the uses of the Internet. Significant differences are visible depending on place of residence size and household per capita income, as residents of the largest cities use and the most well-off use the Internet more The active on the labour market are active to an average extent, while school and university students are more, and pensioners, those receiving welfare benefits and the passive professionals use fewer of the various functions of the Internet. Universality of use is strongly connected with time spent online as those groups with more varied use spend much more time using the Internet.

Men tend to use the Internet in a wider fashion than women and more often use more advanced Internet functions. On the other hand, women tend to use communication applications more often, and interestingly

enough use the Internet in a much more instrumental manner at work, for banking or online shopping, and less frequently use entertainment functions than men.

There are big differences in Internet use associated with age. Younger users are not only more universal, they also use Internet communication tools much more often, and the Internet is more often a source of entertainment for them as well. Contrary to what it may seem, older users relatively rarely use the Internet as a communication tool, and for them its basic use is as a means of access to information (Batorski, Zając 2010). The relation between age and use of economic and professionally related functions seems interesting as 24-59 year olds use them the most, and least often the youngest who are not yet on active on the job-market. More instrumental use of the Internet is clear among the professionally active, while at the same time they use entertainment and communication tools less often.

There are also marked differences according to education. Users with basic and vocational education treat the Internet rather as a source of entertainment and as a tool of communication, and less as a work tool, a means of doing shopping or realizing economic needs. Their use is narrower and less advanced than that of the better educated, as greater scope and above all more instrumental use is apparent among users with higher education. Their use is more conscious as they treat the new medium less as a means of gaining access to entertainment content, communication tools and social network portals.

Likewise for users from larger cities, who use the Internet more instrumentally, and less for entertainment purposes. Users from rural areas use the Internet in the least advanced manner and only entertainment and communication uses are more frequent here than among city dwellers. More well-off household users show a more instrumental and a wider scope of use, while for the poor the Internet is above all a means of entertainment.

7.3.4. Depth of digital exclusion

The results presented in this chapter indicate that the spread of computer and Internet use in various socio-demographic groups is taking place at very different rates and that the differences observed in earlier years are relatively long term. Young people, students and the better educated use the Internet much more often. At the same time, those people are much more active in both professional and social life. Along with the rise in importance of ICT in various spheres of life when more and more matters require Internet use (work, education, access to information and participation in social and cultural life), people who do not have access to digital technology or have the required skills or motivation to make use of it effectively, are to an ever greater degree threatened by digital exclusion. ICT technologies are to an ever greater degree becoming a condition to full participation in social life, which is also why differences in the availability and use of the Internet may have significant social consequences.

The problem of digital exclusion also concerns those differences connected to the availability, fact and abilities in using ICT technologies that lead to social and economic exclusion. However, digital exclusion is not only a problem of social inequality, as digital inequalities and competence deficits have also a wider significance for economic competitiveness, both from the side of generating demand for more advanced technologies and services, as from that of available competences on the job market as one of the key factors in the raising adaptation potential and competitiveness of Polish businesses.

The problem of digital exclusion is not only complex but multi-layered. The observed differences are not only about having access (15% of Poles do not use the Internet despite having a computer and home Internet access), or the fact of use, but above all ability to use and ways of use. Those belonging to groups who less often have Internet access and in which fewer people use the Internet have, generally, much lower abilities to use the Internet, their use is less wide in scope and what is more it is for them above all a source of entertainment and not a means of improving their own life situation.

The Internet, which without doubt serves some users by easing access to information, giving the opportunity to get things done and develop knowledge and interests and build social capital, is for others above all an source of entertainment and a way of killing time. The same instrument that is potentially a source of enormous opportunity is for some a means of insuring social peace and quiet. It is no accident that the protest against ACTA mobilised such a huge group of young people - why did this matter mobilise them so much when they are not prepared to protest on economic matters? Because though many young people do not have the best future prospects, many are unemployed or earn relatively little, at least thanks to the Internet they have more chance to enjoy culture and entertainment, which they do not always take advantage of legally or pay

anything to do so. The threat that ACTA would take away access to this content had an unusually mobilising effect, as the Internet acted as a tool of mobilisation though on a daily basis it is the "opium of the masses".

In Poland, it is mainly less educated, especially the elderly that are at risk of digital exclusion. There is no doubt that people living in smaller towns and with lower household income face greater difficulties. People from these groups not only use the Internet less often, but even if they do so they dispose of lesser competences and above all use the Internet in a way that less serves to improve their life situation. Better educated users from larger cities and more prosperous families are able to use the net more instrumentally, less as a source of entertainment or as a time-killer. These differences remain very large and appear to be very long-term.

A key barrier to the spread of computer and Internet use and the raising of Poles' digital competences is a lack of motivation. Partially it may be linked to a lack of knowledge and skills, however it would seem to be a much wider problem. A lack of motivation is not only the main reason for many people not using the Internet even if they have access to it at home. It is also why users raise their competences only to a minor extent. It should be noted that such motivation is not provided either by the education system, which only to a small degree requires students use the Internet more creatively and raise their Internet skills, or the job-market, on which it is still more important that workers are able to carry out concrete requirements, pre-defined from above rather than build on and use more advanced digital and informative competences. Motivations are also significant in terms of the forms of online activity, readiness to use the Internet to broaden knowledge, gain new potential and avoid content and services that only serve to kill time.

8. Social exclusion

8.1. Poverty

Tomasz Panek

8.1.1. Definition and method of measuring poverty

8.1.1.1. Poverty – definitions

The first and at the same time the crucial step to measure poverty is to define this category. Selection of a particular poverty definition is vital for the results of such a measurement (Hagenaars, 1986). Depending on the definition, various groups in the society may be considered as the poor. At the same time the manner of defining poverty and the methods of measuring it affect the social policy programmes aimed at reducing poverty.

Actual differences in poverty assessment and thus divergences in the concept of combating poverty result from the lack of precise and generally accepted definition of poverty. Moreover, this category is variable over time and regionally diversified (Sen, 1983).

All definitions used in the literature of the subject associate poverty with the failure to satisfy certain basic needs at a demanded degree (Drewnowski, 1977, Panek 2007). Such definitions are general enough not to be disputable and they are indeed commonly accepted. Such acceptance results from the fact that the main controversial issues, such as which needs are to be considered basic and what degree of their satisfaction should be considered sufficient remain open.

In the present analysis we have adopted the so-called economic definition of poverty (Panek, 2011). Poverty would imply a situation where a household does not have sufficient financial resources (both cash in the form of current income and income from previous periods and accumulated non-cash assets) to satisfy its basic needs on unacceptable level. In this case poverty is analysed as one of the dimension of social exclusion; i.e. its financial aspect. However, poverty is not a situation where basic needs cannot be satisfied by a household for reasons other than financial, such as due to disability of household members or low level of their attainment.

8.1.1.2. Ways of understanding and measuring shortage

The greatest controversy in the measuring of poverty concerns the way of defining acceptable required level of need fulfilment, or the way of we understanding poverty. Poverty may be understood in absolute or relative terms[1996]. Poverty in absolute terms as a category is based on consideration of the level of needs fulfilment defined in concrete quantitative and value categories. Individuals (persons, families and households) are defined as poor when their needs are not sufficiently fulfilled (Drewnowski, 1997). The level of needs fulfilment is not therefore compared to the level of other members' of society's needs fulfilment. The problem of poverty, according to advocates of the absolute approach, is solved when all members of society's basic needs are fulfilled. Poverty in the absolute sense may therefore be completely eliminated by economic growth. However, it is worth noting that the absolute approach always carries with it a certain dose of relativism, as establishing the set of basic needs and the minimal level of their satisfaction always depends on the level of the analysed country's socio-economic development.

The category of poverty in the relative perspective is based on a consideration of individual needs fulfilment (person, family or household) compared to the same needs fulfilment level of other members of society. Poverty is here is identified with excessive level needs fulfilment inequality in society, and taken in this sense may not be practically completely eliminated, only reduced through reduction of inequalities in the level of needs fulfilment.

The basic fault of the relative approach is a lack of a fixed point of reference to comparisons of change in poverty in time and space, and as a result hampers assessment of the effectiveness of policy directed to combat

[96] See Seidl (1988)

poverty. Apart from that, assessments gained from the relative perspective indicating that there has been a rise in the level of needs fulfilment may be a result not so much of a factual rise in fulfilment as a fall in the inequality in needs fulfilment level in a given population. The choice of way of understanding poverty makes up the initial stage in taking the decision as to the method of its measurement and choice of identification criteria. Taking the decision as to method of poverty measurement entails choosing between considering poverty from an objective or subjective perspective (Hagenaars, 1986, Panek, 2011). Each of these methods of measurement may be applied both in the absolute or relative approach. The terms "objective" or "subjective" should therefore not be linked to level of arbitrariness in the assessment of poverty, as in each of these considerations there are certain assumptions of an arbitrary nature.

In the case of the objective approach to the assessment of needs fulfilment of studied individuals (persons, families and households) is conducted independent of their personal value judgements in this respect, and most often experts conduct this kind of assessment. In the subjective approach the assessment of needs fulfilment level is provided by the actual studied individuals (persons, families and households). In this discussion, both methods of poverty assessment were applied as they were considered to be complementary. Also for these reasons, poverty is considered in the absolute sense.

Another decision that ought to be taken before assessing poverty is the definition of criteria of poverty. In studies of poverty up to the 1970s, the conventional approach, which was based exclusively on monetary indicators, was dominant. In this approach, the assessment of needs fulfilment level occurs exclusively through the current income expressed in money terms. However gradually the view gained ground that identifying the poor only in monetary terms (level of income or expenditure) was far from satisfactory. This was not about the fact of the underestimation of income declared by persons and households taking part in empirical study. Much more significant was the belief that poverty is a multi-dimensional phenomenon and that non-monetary factors should be also considered in its identification. Apart from that, what is unusually important in studies of poverty is that monetary approaches, in their consideration of financial means the individual disposes of consider only current income (flows), and miss income and assets accumulated in the past. In this study we applied a one-dimensional approach, above all due to the necessity to maintain the means to analysing changes on the sphere of poverty. Apart from that, for this round of study the analysis of poverty was broadened by including non-monetary factors.

8.1.1.3. Methods for identifying the poor

Different ways of understanding poverty and including of various criteria of poverty, and also different approaches to the measurement of poverty (subjective and objective approaches) lead to various methods of identifying poverty in households. In the case of the conventional approach, in order to define the subpopulation in poverty, there is a certain critical level of income or expenditure known as the poverty line below which the fulfilment of basic needs is not possible. In the case of the multidimensional approach, different solutions are possible in the identification of the subpopulation in poverty.

Apart from the assessment of households' current incomes (monetary poverty), non-monetary poverty assessments were included (material deprivation). An entry point to the measurement of non-monetary poverty was defining its non-monetary dimensions, strictly linked to groups of household needs and next the choice of symptoms of non-monetary poverty in each of its dimensions. Inclusion of a given household to the subpopulation of materially deprived in a given dimension was decided by the number of symptoms of poverty occurring in that household in that dimension. However, as to whether households suffer non-monetary poverty (material deprivation), was decided by the number of variables in which a household is materially deprived. In the final reckoning, a household is in poverty when it is both poor in monetary and non-monetary (materially deprived).

Aggregate poverty indices were used to assess poverty. They are statistical formulae that aggregate individual poverty measures (relating to individual households) enabling to assess poverty at the national level, across regions or typological groups of households. Due to the fact that there is no single universal formula in this respect, various aggregate index formulae were applied, providing information about various aspects of poverty. Poverty indices focus on four main aspects of poverty; i.e. its incidence, depth, intensity and severity.

In the case of poverty assessments it is vital to analyse changes in poverty over time. In the present study we analysed the mobility of households due to membership of poverty sphere, with mobility assessed on the

basis of tables of flows. Moreover, tables of flows were also used to estimate mobility indices. In the last stage the household features that determine poverty were identified.

Detailed information about the methodology of measuring poverty adopted in this study is presented in Annex 4.

8.1.2. Results of unidimensional approach poverty analysis

8.1.2.1. The incidence and depth of poverty

The poverty indices used in the analyses contain basic information that is the objective of every research on poverty. However, due to the abstract nature of the term *poverty line*, the significance of the information provided by these indices should not be overestimated. Much more significant for the objectives of this study are changes in their values over time and distributions according to selected typological groups of households.

The value of minimum of existence estimated by the Institute of Labour and Social Studies, which serves as the poverty line for one-person households of employees in February 2013 was PLN 520. Due to the method of defining the minimum of existence category (cf. Annex 45), it should be considered as the extreme poverty line. In the case of the subjective approach, we shall use the term *deficiency line* since when households consider the lowest level of income necessary to make ends meet, which is one of the parameters that are decisive for specifying the value of that threshold (cf. Annex 45), they take into account the higher level of income than the one that secures only the minimum of existence. The subjective deficiency line for one-person households was estimated to be PLN 1718. This is more than 3 times higher than objective poverty line. This means that the aspirations of households with regard to their income situation allowing for satisfaction of their needs at an acceptable minimum level are much higher than the minimum standards established by experts in this regard. Households simply compare their economic situation with that of other households in a better financial condition.

In February/March 2013, 5.1% of households in Poland lived below the objective poverty line and 44.7% below the subjective deficiency line (tables 8.1.1 and 8.1.2). However, these values should be considered overestimated as households tend to underestimate their income in the statements they make. On the other hand, poverty depth indices reached almost 26.3% with the objective approach and 33.1% with the subjective approach (tables 8.1.1 and 8.1.2). This means that in February/March 2013, the average equivalent income of Polish households below the poverty line was lower by 26.3% than the minimum of existence, and the average equivalent income of Polish households below the deficiency line was beneath the deficiency line (subjective poverty line) by 33.1%.

The poverty intensity index, derived from the combined incidence and depth of poverty, was 1.4% in February/March 2013, while the deficiency intensity index was 14.8% respectively. This means that in February/March 2013, on average each household below the poverty line should receive PLN 7.0 (PLN 0.0135 x 520 PLN) in order to eliminate poverty. In order to eliminate deficiency, the average transfer to each household below the poverty line should amount to PLN 254 (PLN 0.1478 x 1718). The poverty severity index, derived from the incidence and depth of poverty and income inequalities among the poor, was 0.59% in February/March 2013, while the deficiency severity index was 4.65% respectively.

With the two approaches combined, the highest percentage of households living in poverty concerned the groups of households living on unearned sources of income and retirees (40.1 and 12.4% respectively under the objective approach and 88.6% and 77.6% respectively (tables 8.1.1 and 8.1.2). The lowest poverty level was reported in the groups of households of retirees, employees and the self-employed (the headcount ratio in those groups of households was below 2.7%). However, with the subjective approach the notably lowest levels were reported in the groups of households of the self-employed and employees (22.3% and 32.7% respectively). The deepest poverty with the objective approach was reported in households living on unearned sources of income as well as among the self-employed. They amounted to of the groups at 35.4 and 25.7% respectively. In the group of self-employed households, deep poverty is related to the present economic crisis as a result of which many family businesses went bankrupt or their income significantly decreased.

The deepest deficiency level with the subjective approach in February/March 2013 was reported in households living on unearned sources of income as well as among retirees. Deficiency depth indices in those groups of households amounted to 55.4% and 39.7% respectively.

Poverty and deficiency were most intensive and severe also in the group of households living on unearned sources of income. In this group, the poverty intensity index was 14.2% with the objective approach and 49.1% with the subjective. Poverty severity index in this group of households amounted to 7.3% with the objective approach and 32.3% in the subjective.

Not less than 18.1% and 67.8% of households with unemployed members lived in poverty or deficiency respectively in February/March 2013, whereas in the group of households without unemployed members these indices amounted merely to 3.0% with the objective approach and 41.0% with the subjective (tables 8.1.1 and 8.1.2). Also the poverty depth with the two approaches was higher in the former group of households than in the latter. The poverty gap index in these groups amounted to 29.5 and 23.1% respectively. Deficiency depth indices in those groups of households amounted to 43.2 and 30.3% respectively.

Similar levels of indices among the discussed groups of households can be reported in the case of intensity and severity of poverty (tables 8.1.1 and 8.1.2).

Table 8.1.1. Aggregate extreme poverty indices by socio-economic group and type of economic activity in March/April 2013 - the objective approach

Socio-economic group and type of economic activity	Aggregate poverty indices - 100			
	Incidence	Depth	Intensity	Severity
Employees	2.65	23.01	0.61	0.25
Farmers	10.85	20.16	2.19	0.81
Retirees	2.32	18.73	0.43	0.13
Pensioners	12.36	21.66	2.68	0.91
Entrepreneurs	2.63	25.74	0.68	0.31
Living on unearned sources	40.08	35.44	14.20	7.30
Without unemployed members	3.01	23.09	0.70	0.28
With unemployed members	18.11	29.50	5.34	2.48
Total	5.14	26.27	1.35	0.59

Table 8.1.2. Aggregate deficiency indices by socio-economic group and type of economic activity in March/April 2013 - the subjective approach

Socio-economic group and type of economic activity	Aggregate poverty indices - 100			
	Incidence	Depth	Intensity	Severity
Employees	32.69	29.43	9.62	4.03
Farmers	57.45	37.37	21.47	10.54
Retirees	53.70	28.82	15.47	6.07
Pensioners	77.57	39.73	30.82	15.50
Entrepreneurs	22.25	30.02	6.68	2.92
Living on unearned sources	88.61	55.35	49.05	32.26
Without unemployed members	40.95	30.29	12.40	5.30
With unemployed members	67.78	43.20	29.28	16.08
Total	44.73	33.05	14.78	6.82

Among the types of households, in February/March 2013 the highest incidence of poverty was reported with the objective approach among the groups of married couples with many children and single-parent families (13.5% and 8.5% respectively and the range of shortage was greatest in the group of non-family households, couples with many children and single-parent families (67.0% and 57.7% and 56.8% respectively; Tables 8.1.3 and 8.1.4). Poverty depth is much less diversified according to household types than its incidence. The highest indices of extreme poverty depth were reported in group of households with couples with one child 32.6%. However, the highest depth of deficiency index value was observed among group of non-family many persons households and incomplete families at nearly 39%.

Poverty intensity and severity were also the highest in those groups of households where the highest levels of poverty incidence and depth were reported. With the objective approach, the visibly highest levels of poverty intensity and severity indices were reported in the group of households of married couples with many children (3.0% and 1.1% respectively), whereas with the subjective approach, the highest levels of deficiency intensity and severity indices were reported in the groups of non-family one-person households and incomplete families. Indexes of poverty intensity in these household groups were 22.2% and 21.9%, and indexes of poverty severity were 10.3% and 10.7%.

Table 8.1.3. Aggregate extreme poverty indices by household type in March/April 2013 - the objective approach

Household type	Aggregate poverty indices - 100			
	Incidence	Depth	Intensity	Severity
Single family: no children	3.03	28.28	0.86	0.37
1 child	2.41	32.59	0.79	0.38
2 children	3.50	20.58	0.72	0.26
3+ children	13.48	22.07	2.98	1.07
Incomplete families	8.46	22.91	1.94	0.73
Multi-family	4.56	25.81	1.18	0.51
Non-family: single person	6.11	30.24	1.85	0.92
Multi-person	8.00	25.53	2.04	0.76

Intensity and severity of poverty were also the greatest in those household groups in which poverty had the greatest range and depth. In the case of the objective approach, indexes of poverty intensity and severity took on by far the greatest values in the many children couple households (3% and 1.1% respectively). Meanwhile the intensity and severity of shortage was the greatest in the non-family single person households and incomplete households. Deficiency intensity indices in those groups of households were 22.2% and 21.9% respectively and deficiency severity indices were 10.3% and 10.7% respectively.

Table 8.1.4. Aggregate deficiency indices by household type in March 2013 - the subjective approach

Household type	Aggregate poverty indices - 100			
	Incidence	Depth	Intensity	Severity
Single family: no children	31.41	31.52	9.90	4.41
1 child	28.80	31.45	9.06	4.03
2 children	34.02	30.62	10.42	4.52
3+ children	57.66	33.63	19.39	9.21
Incomplete families	56.84	38.51	21.89	10.69
Multi-family	33.54	28.11	9.43	4.02
Non-family: single person	67.04	33.12	22.20	10.34
Multi-person	52.27	38.77	20.26	10.15

The obtained results indicate the impact of the size of place of residence on the incidence of poverty (tables 8.1.5 and 8.1.6). In February/March 2013, the percentage of households living in poverty was significantly higher the smaller their place of residence. Among households living in rural areas, 84% lived below the poverty line and 57.4% lived below the deficiency line. The headcount ratios for poverty and deficiency in the largest cities accounted for merely 2.5% and 28.5% respectively.

Diversification of the poverty depth among the respective classes of place of residence was not too high. The deepest poverty with the subjective approach was reported in rural areas, where the deficiency depth index reached 38.8%. In turn the deepest poverty with the objective approach concerned households in medium-sized cities with 100-200k inhabitants (the poverty depth index in this group of households amounted to 31.2%).

The highest intensity of both poverty and deficiency was reported in rural areas (where poverty intensity indices accounted for 2.1% and 20.8% respectively). Poverty severity with both approaches was also the highest in the group of households in rural areas (severity indices in this group of households accounted for 0.9 and 10.1% respectively).

Table 8.1.5. Aggregate extreme poverty indices by place of residence class in March/April 2013- the objective approach

Place of residence class	Aggregate extreme poverty indices - 100			
	Incidence	Depth	Intensity	Severity
Towns of more than 500k	2.48	25.87	0.64	0.29
Towns of 200k-500k	2.44	25.43	0.62	0.28
Towns of 100k-200k	4.06	31.29	1.27	0.57
Towns of 20k-100k	4.08	28.66	1.17	0.56
Towns of fewer than 20k	4.43	26.52	1.18	0.53
Rural areas	8.42	24.99	2.10	0.87

Table 8.1.6. Aggregate deficiency indices by residence class in March/April 2013 - the subjective approach

Place of residence class	Aggregate deficiency indices - 100			
	Incidence	Depth	Intensity	Severity
Towns of more than 500k	28.45	29.85	8.49	3.69
Towns of 200k-500k	34.20	28.79	9.85	4.08
Towns of 100k-200k	38.46	30.70	11.81	5.44
Towns of 20k-100k	43.61	31.64	13.80	6.20
Towns of fewer than 20k	45.60	31.34	14.29	6.29
Rural areas	57.41	36.19	20.78	10.05

Table 8.1.7. Aggregate extreme poverty indices by Voivodeship in March/April 2013 - the objective approach

Voivodeship	Aggregate extreme poverty indices - 100			
	Incidence	Depth	Intensity	Severity
Dolnośląskie	4.76	33.60	1.60	0.80
Kujawsko-pomorskie	6.21	28.01	1.74	0.84
Lubelskie	7.51	33.90	2.55	1.32
Lubuskie	8.01	25.28	2.02	0.83
Łódzkie	5.24	20.04	1.05	0.42
Małopolskie	3.93	14.67	0.58	0.13
Mazowieckie	4.84	22.32	1.08	0.43
Opolskie	5.43	27.91	1.52	0.60
Podkarpackie	6.92	26.36	1.82	0.83
Podlaskie	3.81	15.43	0.59	0.16
Pomorskie	4.81	29.93	1.44	0.58
Śląskie	4.46	30.08	1.34	0.61
Świętokrzyskie	7.84	31.26	2.45	1.34
Warmińsko-mazurskie	5.73	24.55	1.41	0.54
Wielkopolskie	3.83	24.59	0.94	0.35
Zachodniopomorskie	3.84	24.30	0.93	0.34

Table 8.1.8. Aggregate deficiency indices by Voivodeship in March/April 2013 - the subjective approach

Voivodeship	Aggregate deficiency indices - 100			
	Incidence	Depth	Intensity	Severity
Dolnośląskie	41.97	32.04	13.45	6.29
Kujawsko-pomorskie	53.59	34.16	18.31	8.66
Lubelskie	58.55	35.65	20.87	9.89
Lubuskie	44.49	35.56	15.82	7.89
Łódzkie	51.21	34.78	17.81	8.08
Małopolskie	42.21	29.84	12.59	5.36
Mazowieckie	38.60	34.05	13.14	6.07
Opolskie	47.28	33.99	16.07	7.38
Podkarpackie	53.14	34.47	18.32	8.72
Podlaskie	49.63	33.75	16.75	7.51
Pomorskie	41.89	32.05	13.42	6.04
Śląskie	35.20	33.21	11.69	5.59
Świętokrzyskie	53.69	34.28	18.41	9.08
Warmińsko-mazurskie	50.51	31.78	16.05	7.29
Wielkopolskie	46.05	28.81	13.26	5.59
Zachodniopomorskie	39.15	32.27	12.63	5.77

The highest poverty with the objective approach was reported in Lubuskie, Świętokrzyskie and Lubelskie Voivodeships (with 8.0%, 7.8% and 7.5% of households respectively in poverty in those Voivodeships, Table 8.1.7) in February/March 2013. With the subjective approach, the highest deficiency was reported in Lubelskie Voivodeship (58.6%, Table 8.1.8).

The deepest poverty in the analysed period was reported in Lubelskie and Dolnośląskie Voivodeships where the poverty depth indices were 33.9% and 33.6% respectively. The relatively deepest deficiency was reported in Lubelskie, Łódzkie and Podkarpackie Voivodeships. In those Voivodeships the deficiency depth indices were 35.7%, 34.8% and 34.5% respectively. This means that in those Voivodeships with households in poverty (with the objective approach) or deficiency (with the subjective approach) were on average the least wealthy.

The greatest intensity of extreme poverty in February/March 2013 occurred in Lubelskie, Świętokrzyskie and Lubuskie, attaining over 2% intensity index. The index of deficiency intensity reached the highest value in Lubelskie and Świętokrzyskie (the index of deficiency severity there reached 9.9 and 9.1% respectively).

8.1.2.2. Changes in the sphere of poverty

Between March 2011 and March 2013 we observed both a rise in the incidence of extreme poverty and deficiency (over 1p.p. and around 11p.p. respectively, table 8.1.9 and 8.1.10), which was influenced by a fall in the value of real equivalent incomes in the studied period.

In the studied period there were no marked changes in the depth of extreme poverty (objective approach) with a simultaneous increase (of over 2 p.p.) in the depth of deficiency (tables 8.1.9-8.1.10). This means that households living in extreme poverty were on average equally prosperous in 2013 as in 2011, while the average wealth of households living in deficiency clearly rose in the period studied.

The intensity of poverty measured in income gap index increased significantly between March 2011 and March 2013 in subjective terms (over 4 p.p.) and in objective terms did not change significantly (tables 8.1.9 and 8.1.10). We observe a similar tendency of change in the case of poverty severity (tables 8.1.9 and 8.1.10), while the value of the deficiency severity index rose in the studied period on the general national scale by over 2 p.p. and poverty did not show a marked change.

The rise of incidence of extreme poverty between March 2011 and March 2013 differed in scale in the various socio-economic household groups (table 8.1.9). The increase of incidence was greatest among household groups living on unearned sources and farmers, rising by 7 p.p. and 5 p.p. respectively. In the subjective perspective during the studied period, the strongest growth in households in deficiency took place among those living on unearned incomes, retirees and pensioners (in these groups the incidence level of deficiency increased nearly 17 p.p., over 15 p.p. and nearly 15 p.p. respectively.

The depth of extreme poverty has increased significantly in the studied period in the group of pensioners households and those living on unearned incomes (indexes of extreme poverty depth for these groups rose by over 4 p.p. and nearly 4 p.p. respectively, table 8.1.9). At the same time the depth of extreme poverty fell significantly among the households of the self-employed and farmers (fall in the indexes of extreme poverty depth by nearly 9 p.p. and almost 5 p.p. respectively). The values of deficiency depth indexes increased significantly in all socio-economic household groups, though strongest in households of farmers and those living on unearned incomes (increase in depth of deficiency index of over 6 p.p. and over 5 p.p. respectively). The intensity of extreme poverty increased significantly between March 2011 and March 2013 only in the case of households living on unearned incomes (rise in index of extreme poverty intensity of nearly 4 p.p., table 8.1.9). The intensity of deficiency increased however in the studied period in all socio-economic household groups, with the strongest increases among those living on unearned incomes and pensioners households (nearly 13 p.p. and around 8 p.p. respectively, table 8.1.10).

The severity of extreme poverty increased significantly only in the group of households subsisting on unearned incomes (index value increased by over 2 p.p., table 8.1.9). However, the severity of deficiency increased significantly in all socio-economic groups of households apart from those of the self-employed (table 8.1.10), and the most among those living on unearned sources and pensioners households of welfare benefits (rise in index values of over 9 p.p. and nearly 5 p.p. respectively).

Table 8.1.9. Changes in aggregated indices of extreme poverty by socio-economic group and type of economic activity from March 2011 to March 2013 - the objective approach

Socio-economic group and type of economic activity	Aggregate extreme poverty indices - 100 (March 2011 to March 2011)			
	Incidence	Depth	Intensity	Severity
Employees	0.03	-0.44	0.00	0.04
Farmers	5.41	-4.50	0.94	0.39
Retirees	0.91	1.46	0.19	0.06
Pensioners	2.05	4.32	0.94	0.47
Entrepreneurs	0.50	-8.45	-0.01	0.03
Living on unearned sources	6.64	3.79	3.59	2.15
Without unemployed members	0.42	2.37	0.17	0.10
With unemployed members	5.10	-0.57	1.36	0.67
Total	1.05	0.03	0.27	0.14

Table 8.1.10. Changes in aggregated indices of deficiency by socio-economic group and type of economic activity from March 2011 to March 2013 - the subjective approach

Socio-economic group and type of economic activity	Aggregate extreme deficiency indices - 100 (March 2011 to March 2011)			
	Incidence	Depth	Intensity	Severity
Employees	7.64	3.06	2.99	1.23
Farmers	6.18	6.13	5.27	3.18
Retirees	15.35	1.08	4.82	2.06
Pensioners	14.64	3.54	8.01	4.67
Entrepreneurs	3.41	4.65	1.81	0.66
Living on unearned sources	16.51	5.33	12.74	9.45
Without unemployed members	9.76	1.67	3.52	1.61
With unemployed members	16.84	6.31	10.08	5.75
Total	10.71	2.60	4.40	2.16

In the group of households with unemployed members there was a marked growth the range of extreme poverty between March 2011 and March 2013 (over 5 p.p.), while in the households without unemployed members the changes were not significant. However, the depth of extreme poverty increased significantly in the analysed period in the households without unemployed members (by over 2 p.p.), while its changes in the households with unemployed members were not significant (tables 8.1.9 and 8.1.10). The remaining characteristics of extreme poverty did not significantly change in this period, apart from the increase in the intensity of extreme poverty in the households with unemployed members (by over 1p.p.). In the case of the sphere of deficiency, all the values of poverty characteristics increased in both households with and without unemployed members. This increase was definitely stronger in character in the households with unemployed members than in those without.

The incidence of extreme poverty between March 2011 and March 2013 increased significantly among households of couples with many children and single persons without families (by nearly 3 p.p. and over 2 p.p., table 8.1.11). The incidence of the sphere of deficiency increased significantly in the studied period in all socio-economic groups and most of all in the single persons without family households, couples without children and incomplete families (rise in levels of shortage of nearly 17% and over 12 p.p. respectively, table 8.1.12).

The changes in the depth of extreme poverty were multilinear in the types of households in the studied period. The strongest growth in the depth of extreme poverty was observed in the many-person and multi-family households (index growths of over 13 p.p. and over 1p.p. respectively, table 8.1.11). However, the depth of deficiency increased significantly in the studied period among all types of households apart from the single person without families. The greatest growth in the index of deficiency depth took place among the households of couples with 2 children, multiperson and incomplete families (nearly 7 p.p., over 6p.p and nearly 6 p.p., table 8.1.12).

Both the intensity and the severity of extreme poverty did not change significantly between March 2011 and March 2013 in any of the household types (changes in the values of respective indexes were smaller than 1 p.p., table 8.1.11).

In the subjective approach, we observe a marked fall in the intensity and severity of shortage in all household types (table 8.1.12). The strongest increase took place in groups of incomplete families or multi-person households, with the index values rising in these households by around 7 p.p. and nearly 6 p.p. respectively for intensity of shortage and by nearly 3 p.p. for severity.

Table 8.1.11. Changes in aggregated indices of extreme poverty by household type from March 2011 to March 2013 - the objective approach

Household type	Aggregate extreme poverty indices - 100 (March 2011 to March 2011)			
	Incidence	Depth	Intensity	Severity
Single family: no children	0.59	2.58	0.21	0.10
1 child	0.32	1.85	0.12	0.05
2 children	0.20	-4.88	-0.11	-0.03
3+ children	2.83	-0.93	0.56	0.24
Incomplete families	0.68	-2.30	-0.02	-0.04
Multi-family	-0.23	11.31	0.38	0.35
Non-family: single person	2.24	3.56	0.82	0.45
Multi-person	2.28	13.17	1.00	0.41

Table 8.1.12. Changes in aggregated indices of deficiency by household type from March 2011 to March 2013 - the subjective approach

Household type	Aggregate deficiency indices - 100 (March 2011 to March 2011)			
	Incidence	Depth	Intensity	Severity
Single family: no children	12.18	3.30	4.39	2.03
1 child	9.69	2.38	3.38	1.54
2 children	1.46	6.53	2.31	1.03
3+ children	6.70	3.75	4.08	2.09
Incomplete families	12.07	5.70	7.01	3.54
Multi-family	5.87	1.44	1.95	0.81
Non-family: single person	16.88	0.11	5.69	2.97
Multi-person	9.40	6.08	5.99	3.62

The range of extreme poverty between March 2011 and March 2013 increased significantly among rural and largest town households (by nearly 2 p.p. and over 1p.p. respectively, table 8.1.13). The rise in the range of shortage was clearly differentiated in terms of place of residence class (table 8.1.14).

The depth of extreme poverty increased in the studied period most strongly in the middle-sized towns of 100-200 residents and the smallest (index growth of nearly 10 p.p. and over 5p.p respectively). However the average wealth of households in shortage increased most strongly over this period in rural households (rise in index value of nearly 6 p.p.).

Changes in the intensity and severity of poverty in the studied period were not significant. However, from the subjective perspective, there was in this time a marked growth both in the intensity and severity of shortage in all place of residence classes. The strongest rise in intensity of shortage occurred in rural areas (by nearly 6 p.p.) and also in severity both in rural areas and in small towns of 20-100 thousand residents (nearly 3 p.p. and over 2p.p respectively).

Between March 2011 and March 2013, we have observed an increase in the incidence of extreme poverty in the vast majority of Voivodeships, and most strongly in Opolskie (by nearly 5 p.p., table 8.1.15). The deficiency incidence increased significantly in this period in all Voivodeships (table 8.1.15), with the strongest increase in Kujawsko-Pomorskie, and Łódzkie (nearly 16 p.p. and over 15 p.p. respectively).

In the studied period the changes in the depth of extreme poverty at Voivodeship level were multilinear (table 8.1.15). The greatest rise in poverty depth index took place at this time in Dolnośląskie and Lubelskie (nearly 11 p.p. and 9 p.p. respectively). At the same time we observe a fall in the depth of extreme poverty in a number of Voivodeships, the largest of which in Łódzkie and Podlaskie (nearly 8 p.p. and over 6 p.p. respectively). The depth of deficiency however increased at this time in all Voivodeships except in Wielkopolskie, and the strongest increases were in Kujawsko-Pomorskie and Łódzkie (nearly 16 p.p. and 15 p.p., table 8.1.16).

Changes in the intensity of extreme poverty in the period studied were not significant in any Voivodeship (table 8.1.15). However, the intensity of deficiency increased in this period in all Voivodeships (table 8.1.16). The strongest rise in value of deficiency intensity index took place in Opolskie (by over 7 p.p.).

Table 8.1.13. Changes in aggregated indices of extreme poverty by place of residence class from March 2011 to March 2013 - the objective approach

Place of residence class	Aggregate extreme poverty indices - 100 (March 2011 to March 2011)			
	Incidence	Depth	Intensity	Severity
Towns of more than 500k	1.03	2.62	0.29	0.18
Towns of 200k-500k	0.04	-0.20	0.00	0.06
Towns of 100k-200k	0.73	9.94	0.51	0.20
Towns of 20k-100k	0.84	1.60	0.29	0.20
Towns of fewer than 20k	1.00	5.14	0.46	0.22
Rural areas	1.59	-0.25	0.38	0.19

Table 8.1.14. Changes in aggregated indices of deficiency by place of residence class from March 2011 to March 2013 - the subjective approach

Place of residence	Aggregate deficiency indices - 100 (March 2011 to March 2011)			
	Incidence	Depth	Intensity	Severity
Towns of more than 500k	10.35	2.04	3.57	1.61
Towns of 200k-500k	11.68	-0.05	3.15	1.24
Towns of 100k-200k	8.32	1.64	2.93	1.38
Towns of 20k-100k	11.12	3.30	4.56	2.23
Towns of fewer than 20k	10.40	2.13	4.03	1.94
Rural areas	11.01	3.45	5.53	2.91

Table 8.1.15. Changes in aggregated indices of extreme poverty by Voivodeship from March 2011 to March 2013 - the objective approach

Voivodeship	Aggregate extreme poverty indices - 100 (March 2011 to March 2011)			
	Incidence	Depth	Intensity	Severity
Dolnośląskie	2.24	10.67	1.08	0.61
Kujawsko-pomorskie	0.71	-4.84	-0.07	-0.15
Lubelskie	-0.83	8.94	0.45	0.47
Lubuskie	2.24	7.75	0.93	0.54
Łódzkie	1.67	-7.97	0.00	-0.04
Małopolskie	1.48	-5.47	0.05	-0.02
Mazowieckie	0.32	0.45	0.09	0.11
Opolskie	4.66	-5.27	1.16	0.48
Podkarpackie	1.48	7.39	0.78	0.51
Podlaskie	1.26	-6.31	-0.03	-0.09
Pomorskie	1.94	3.25	0.69	0.12
Śląskie	1.44	2.29	0.52	0.25
Świętokrzyskie	2.02	6.97	1.01	0.69
Warmińsko-mazurskie	-0.59	2.20	-0.09	0.02
Wielkopolskie	-1.14	-1.99	-0.35	-0.09
Zachodniopomorskie	0.68	-5.87	-0.14	-0.16

Table 8.1.16. Changes in aggregated indices of deficiency by Voivodeship from March 2011 to March 2013 - the subjective approach

Voivodeship	Aggregate extreme deficiency indices - 100 (March 2011 to March 2011)			
	Incidence	Depth	Intensity	Severity
Dolnośląskie	8.33	3.46	3.90	2.36
Kujawsko-pomorskie	15.84	3.58	6.61	2.91
Lubelskie	11.59	1.61	4.86	2.42
Lubuskie	8.00	4.72	4.24	2.44
Łódzkie	15.14	2.77	6.24	2.86
Małopolskie	10.06	2.00	3.62	1.69
Mazowieckie	6.95	1.84	2.91	1.36
Opolskie	13.49	6.28	7.14	4.17
Podkarpackie	11.80	2.69	5.08	2.87
Podlaskie	12.91	3.19	5.51	2.76
Pomorskie	13.65	5.26	6.02	2.90
Śląskie	9.17	2.00	3.43	1.81
Świętokrzyskie	5.27	5.98	4.56	2.83
Warmińsko-mazurskie	13.80	2.34	5.17	2.07
Wielkopolskie	12.29	-1.53	2.94	0.86
Zachodniopomorskie	9.64	1.85	3.75	1.65

The conducted analysis of poverty and deficiency between March 2011 and 2013 indicates that the assessment of direction and scale of these changes depends on the accepted poverty line, that is on who we consider to be poor. However, if we accept the extreme poverty line as the minimum existence value or we considerate deficiency line, that is analysing extreme poverty or deficiency, then the changes is the studied period should be seen as negative.

8.1.2.3. Poverty permanence

For most households participating in the last two research waves, poverty was not of a permanent nature with the objective approach. Only 2.1% of households lived in extreme poverty in both the years of study. However, out of the 4.1% of households in poverty in March 2011, not less than 49% remained in extreme poverty also in March 2011 (Table 8.1.17). 28.6% of households remained in the sphere of deficiency in both years. Among households in poverty in March 2013 as many as 84% still lived in deficiency in March 2013 (table 8.1.18) which means that deficiency was of a rather permanent nature for most households studied in the analysed period.

Approximately 5.2% of households in March 2013 shifted between poverty and non-poverty (table 8.1.19). The number of households that have entered the poverty sphere in the last two years was higher (3.13% of households) than the number of those that left this sphere (2.09%).

A mobility trend can be noted in the case of households belonging to the deficiency sphere (table 8.1.19). In the analysed period, almost 21.5% of households shifted between the deficiency sphere and beyond that sphere. In March 2013 the income of over 5% of households had improved with regard to March 2013 to the extent that they left the deficiency sphere. In the same period, over 11% of households entered the deficiency sphere due to significantly lower income.

Table 8.1.17 Movements of households either in or out of the extreme poverty sphere from March 2011 to March 2013

Specification	Non-poor households in March 2013 (%)	Poor households in March 2013 (%)	Total
Non-poor households in March 2011 (%)	92.77	3.13	95.90
Poor households in March 2011 (%)	2.09	2.01	4.10
Total	94.86	5.14	100.00

Table 8.1.18. Movements of households either in or out of the deficiency sphere from March 2011 to March 2013

Specification	Non-deficient households in March 2013 (%)	Deficient households in March 2013 (%)	Total
Non-deficient households in March 2011 (%)	49.86	16.11	65.97
Deficient households in March 2011 (%)	5.41	28.62	34.03
Total	55.87	44.73	100.00

Table 8.1.19... Mobility of households in terms of belonging to the poverty and deficiency sphere from March/April 2011 to March/April 2013

Mobility indices	Mobility indices - 100	
	Poverty	Deficiency
S	5.22	21.52
SU^+	2.09	5.41
SU^-	3.13	16.11
CM	-1.05	-10.71

8.1.3. Results of poverty analysis in the multidimensional approach

The multivariable approach to the analysis of monetary poverty was broadened to an analysis of non-monetary poverty (material deprivation). As many as 19.7% of households suffered from material deprivation in Poland in February/March 2013, which is much more than the poor in the monetary sense (table 8.1.20). It should however be noted that to a marked extent accepted assumptions as to the material deprivation lines have an influence on the size of deprivation indexes, both for separate dimensions for all dimensions, taken together. The depth of non-monetary poverty was found to be on the same level as monetary poverty (index readings 21.2% and 22.4% respectively table 8.1.20). However, the intensity and severity of material deprivation were much greater than monetary poverty. The indexes of the intensity and severity of material

deprivation were 4.6% and 2.8% while the intensity and severity indexes of material deprivation were at 1.4% and 0.6%.

By far the highest percentage of material deprivation occurred in households living on unearned sources and households of pensioners (49.1% and 36.2% of the materially deprived respectively). The depth of material deprivation was also the greatest in these two household groups (index readings 33.7% and 36.2%). However, the differences between socio-economic groups in terms of depth of material deprivation are much smaller than for the range of this depravation. Groups of those living on unearned income and households of pensioners are also characterised by the greatest intensity and severity of material deprivation (index readings 16% and 9.7% for the former and 6.7% and 3.6% the latter). In the group with unemployed members the range of material deprivation was in February/March 2013 much greater than in those without unemployed members. In the first of these groups there were 36.4% of materially deprived households and in the second 16.9%. Also the depth, intensity and severity of material deprivation in the households with unemployed members is much greater than in the households without the unemployed.

Material deprivation had the greatest range in February/March 2013 among incomplete families and couples with many children (table 8.1.21), as 29.2% and 28.2 of these households suffered from material deprivation. Also incomplete family and couples with many children households were characterised by the greatest depth, intensity and severity of material deprivation at 30.4%, 8.9% and 5.7% for the former and 35.6&, 10% and 7.7% for the latter.

Households in the largest towns and in the countryside were affected by the greatest range of material deprivation in February/March 2013 (table 8.1.22), at 21.3% of largest city and 20.7% of rural households. The greatest depth of material deprivation characterised households in rural areas and small towns of 20-100 thousand residents (index readings 26.2% and 25.1% respectively), while also the intensity and severity of deprivation were also the greatest in these household groups at 5.4% and 3.5% in rural households and 4.8% and 2.9% in the small towns.

Dolnośląskie and Łódzkie suffered from the greatest incidence of material deprivation in February/March 2013 (table 8.1.23) with index readings of 25.6% and 25.4% of households respectively. In terms of depth of material deprivation, this was Warmińsko-Mazurskie, Lubuskie and Zachodnio-Pomorskie (index readings 31%, 29.9% and 28.3% respectively). The highest intensity and severity of material deprivation was observed in February/March 2013 in Dolnośląskie, Warmińsko-Mazurskie and Łódzkie (intensity index readings 6.9% 6.7% and 6.3% and severity 4.4%, 4.3% and 4.2%). In the final reckoning, households are considered in poverty if they are so both monetary and non-monetary poor, and such households made up 2.7% of the total studied in February/March 2013 (table 8.1.20). The values of the remaining obvious poverty characteristics were also significantly lower than monetary and non-monetary poverty.

Definitely the largest incidence of manifest poverty was recorded in February/March 2013 among households living on unearned income and households of pensioners (index reading 27.3% and 7% respectively, table 8.1.20), while depth of manifest poverty was clearly the greatest among the self-employed and those living on unearned income (index readings 46.3% and 37.7% respectively), which means that in these poor households were on average the least wealthy. The intensity and severity of poverty were not significantly differentiated among the socio-economic household groups, with the only exception being households living on unearned incomes with relatively very high index values of poverty intensity and severity (11.8% and 7.5% respectively).

The incidence of manifest poverty in February/March 2013 was significantly higher is households with unemployed members than in those without (table 8.1.20). In the first group, there was 11% of households in poverty while in the second it was only 1.3%, while also the depth, intensity and severity of poverty in the former were much higher than in the latter at 36.6%, 4.8% and 3.1% for the households with unemployed members and 26.6%, 0.5% and 0.2% for those without.

From among the household types, couples with many children and incomplete families were affected by the largest incidence of manifest poverty at nearly 7% and over 5% respectively in February/March 2013. The deepest poverty occurred in the studied period also in the households of couples with many children, followed the many person without family households and couples with one child, with index readings at 37.3%, 34.6% and 33.9% respectively. The intensity and severity of manifest poverty were strongest among the couples with many children and incomplete families, with index readings of 3% and 7.8% and 2% and 1% respectively.

Table 8.1.20. Aggregated indices of poverty in multidimensional approach by socio-economic group and type of economic activity in March 2013

Socio-economic group and type of economic activity	Aggregate manifest poverty indices - 100											
	Incidence			Depth			Intensity			Severity		
	Monetary	Non-monetary	Manifest	Monetary	Non-monetary	Manifest	Monetary	Non-monetary	Manifest	Monetary	Non-monetary	Manifest
Employees	2.65	16.93	1.35	23.01	21.02	26.75	0.61	3.56	0.51	0.25	2.08	0.31
Farmers	10.85	16.72	4.12	20.16	24.40	24.88	2.19	4.08	1.28	0.81	2.69	0.74
Retirees	2.32	19.43	0.90	18.73	17.93	24.30	0.43	3.48	0.33	0.13	1.71	0.17
Pensioners	12.36	36.15	6.98	21.66	29.85	25.82	2.68	10.79	2.03	0.91	6.37	0.95
Entrepreneurs	2.63	8.28	1.11	25.74	25.25	46.25	0.68	2.09	0.93	0.31	1.63	0.74
Living on unearned sources	40.08	49.12	27.32	35.44	33.71	37.66	14.20	16.56	11.82	7.30	11.31	7.45
Without unemployed members	3.01	16.91	1.32	23.09	20.15	26.00	0.70	3.41	0.47	0.28	1.86	0.24
With unemployed members	18.11	36.40	11.05	29.50	31.42	36.60	5.34	11.44	4.75	2.48	7.80	3.11
Total	5.14	19.74	2.72	26.27	23.45	15.27	1.35	4.63	1.08	0.59	2.80	0.65

Table 8.1.21. Aggregated indices of poverty by multidimensional in terms of household type in March 2013

Household type	Aggregate deficiency indices - 100											
	Incidence			Depth			Intensity			Severity		
	Monetary	Non-monetary	Manifest	Monetary	Non-monetary	Manifest	Monetary	Non-monetary	Manifest	Monetary	Non-monetary	Manifest
Single family: no children	3.03	15.04	1.57	28.28	18.21	31.70	0.86	2.74	0.66	0.37	1.48	0.38
1 child	2.41	13.98	1.24	32.59	19.35	33.88	0.79	2.70	0.65	0.38	1.56	0.40
2 children	3.50	15.80	1.56	20.58	25.45	28.23	0.72	4.02	0.57	0.26	2.37	0.36
3+ children	13.48	28.21	6.84	22.07	35.58	37.33	2.98	10.04	2.99	1.07	7.74	2.03
Incomplete families	8.46	29.24	5.17	22.91	30.44	29.25	1.94	8.90	1.79	0.73	5.74	1.06
Multi-family	4.56	18.32	2.35	25.81	23.58	28.08	1.18	4.32	0.97	0.51	2.68	0.61
Non-family: single person	6.11	24.17	3.40	30.24	19.54	31.45	1.85	4.72	1.24	0.92	2.40	0.69
Multi-person	8.00	20.01	2.20	25.53	15.06	34.64	2.04	3.01	1.18	0.76	1.85	0.70

Table 8.1.22. Aggregated indices of poverty in multidimensional approach by of place of residence class in March 2013

Place of residence class	Aggregate deficiency indices - 100											
	Incidence			Depth			Intensity			Severity		
	Monetary	Non-monetary	Manifest	Monetary	Non-monetary	Manifest	Monetary	Non-monetary	Manifest	Monetary	Non-monetary	Manifest
Towns of more than 500k	2.48	21.39	1.46	25.87	19.21	26.56	0.64	4.11	0.63	0.29	2.22	0.36
Towns of 200k-500k	2.44	20.30	1.57	25.43	19.61	38.56	0.62	3.98	0.75	0.28	2.13	0.53
Towns of 100k-200k	4.06	17.02	3.11	31.29	23.86	37.91	1.27	4.06	1.28	0.57	2.61	0.84
Towns of 20k-100k	4.08	19.16	2.33	28.66	25.14	34.48	1.17	4.82	1.07	0.56	2.91	0.64
Towns of fewer than 20k	4.43	17.49	2.22	26.52	21.39	28.13	1.18	3.74	0.77	0.53	2.03	0.41
Rural areas	8.42	20.74	3.97	24.99	26.16	30.38	2.10	5.43	1.44	0.87	3.54	0.87

Table 8.1.23. Aggregated indices of poverty in multidimensional approach by of Voivodeship in March 2013

Voivodeship	Aggregate deficiency indices - 100											
	Incidence			Depth			Intensity			Severity		
	Monetary	Non-monetary	Manifest	Monetary	Non-monetary	Manifest	Monetary	Non-monetary	Manifest	Monetary	Non-monetary	Manifest
Dolnośląskie	4.76	25.62	2.85	33.60	26.75	38.35	1.60	6.85	1.50	0.80	4.38	0.91
Kujawsko-pomorskie	6.21	19.69	3.44	28.01	22.65	32.93	1.74	4.46	1.29	0.84	2.46	0.71
Lubelskie	7.51	20.36	4.40	33.90	23.44	41.61	2.55	4.77	1.96	1.32	3.24	1.30
Lubuskie	8.01	19.62	4.39	25.28	29.86	44.10	2.02	5.86	1.93	0.83	3.80	1.33
Łódzkie	5.24	25.44	2.54	20.04	24.88	30.38	1.05	6.33	0.96	0.42	4.23	0.63
Małopolskie	3.93	17.28	1.25	14.67	19.62	17.15	0.58	3.39	0.45	0.13	1.73	0.22
Mazowieckie	4.84	21.22	2.40	22.32	20.03	23.23	1.08	4.25	0.68	0.43	2.56	0.39
Opolskie	5.43	11.04	1.54	27.91	16.90	23.64	1.52	1.87	0.48	0.60	0.84	0.18
Podkarpackie	6.92	21.00	3.31	26.36	22.22	32.58	1.82	4.67	1.67	0.83	3.13	1.03
Podlaskie	3.81	15.41	1.47	15.43	24.30	25.24	0.59	3.74	0.42	0.16	2.56	0.17
Pomorskie	4.81	20.98	2.81	29.93	23.57	29.21	1.44	4.94	0.98	0.58	2.69	0.45
Śląskie	4.46	16.93	2.78	30.08	23.04	34.24	1.34	3.90	1.15	0.61	2.21	0.70
Świętokrzyskie	7.84	20.58	3.86	31.26	27.67	36.81	2.45	5.69	1.81	1.34	3.66	1.26
Warmińsko-mazurskie	5.73	21.68	4.43	24.55	30.98	32.79	1.41	6.72	1.50	0.54	4.27	0.98
Wielkopolskie	3.83	16.15	1.87	24.59	19.41	23.42	0.94	3.13	0.62	0.35	1.55	0.28
Zachodniopomorskie	3.84	16.98	2.44	24.30	28.26	44.78	0.93	4.80	1.09	0.34	2.96	0.84

The incidence of manifest poverty was not markedly differentiated in February/March 2013 according to place of residence class (table 8.1.22), though it was clearly greater in rural areas than in the cities, with 4% of rural households in poverty. The depth of manifest poverty was however the greatest among households in the large cities of 200-500 thousand residents (index values at nearly 39%). Rural households were characterised by the greatest intensity and severity of manifest poverty (index values at 1.4% and 0.9% respectively).

The highest percentages of households in manifest poverty in February/March 2013 were observed in Warminsko-Mazurskie, Lubelskie and Lubuskie (index readings at around 4.4%, table 8.1.23). The greatest depth of manifest poverty however occurred in Zachodnio-Pomorskie, Lubuskie and Lubelskie (index readings at 44.8%, 44.1% and 41.6% respectively). Both the intensity and severity of manifest poverty were the greatest as was its range in Lubelskie and Lubuskie (index readings at 2%, 1.9% and both 1.3% respectively).

The analysis of manifest poverty in Poland gives a better picture than that of poverty in terms of current household income (monetary poverty), as low household incomes do not always mean household poverty in the sense that basic needs are not satisfied on the minimal acceptable level. If households have stored material assets, these can be used when incomes fall to avoid falling into poverty.

8.1.4. Determinants of poverty

In table 8.1.20 present the results of the probit analyses of manifest poverty risk. They include estimates of model parameters, standard errors of parameter estimates, values of *t*- student statistic and empirical significance levels *p*-value|, where we reject the hypothesis about the insignificance of the probability that the absolute value of the random variable which has the *t*- student distribution assumes the value no lower than the obtained value of the *t*-statistic.

The comparison of the value of χ_2 statistic, amounting to 508,5 (with 23 degrees of freedom) with the corresponding empirical levels of significance equal to 0.000, indicates high goodness-of-fit of model and the significance of all its independent variables (variants of the attributes) examined jointly. The level of significance assumed for the analysis of the significance of particular independent variables (variants of the attributes) selected for the model equals 0.05. This means that a given variable (variant of the attribute) is significant when the corresponding critical empirical level of significance is lower than 0.05.

Socio-economic group (source of income of the household head)

The point of reference assumed for the assessment of impact of the main source of income of a household (the socio-economic group the household belonged) on poverty risk was the group of self-employed households. This means that the degree of poverty risk for a group of households broken down by the main source of income was analysed in relation to the degree established for the self-employed households. The groups of households with the poverty risk are households living on unearned sources of income other than pension or retirement pay, and the households of pensioners. This is confirmed by the highest positive values of the parameters behind these categories. Members of the former group of households are often unemployed and so they have relatively the lowest income. At the same time the remaining households selected for source of income did not significantly differ in terms of poverty risk from the household group of the rntrepreneurs [97].

Number of household members

The point of reference for estimating the impact of the number of household members on the poverty risk was the group of one-person households. With the exception of households consisting of 2 members does the number of household members significantly affect the poverty risk (table 8.1.24). The risk is significantly higher than in the group of one-person households and basically differs together with a rise in the number of household members. Most probably, this it is caused by the most of the multi-person households being families with many children where most of household members do.

[97] There is a range of strongly correlated determinants of poverty, which meant that they carry they same information about poverty risk. Strongest is educational attainment, and after elimination of this variable, it turned out that belonging to households in rural areas and farmers had a significant influence on increase in poverty risk..

Class of place of residence

The point of reference assumed for estimating the impact of class of the place of residence on poverty risk was the group of households in the largest towns. All estimates of model parameters, behind the variables representing the class of place of residence are not significant (table 8.1.24).

Table 8.1.24... Results of poverty risk probit model estimates by objective approach in March/April 2013

Predictors	Parameter estimates	Standard errors of estimates	t-statistic	*p*-value
(Constant)	-1.972	0.301	-6.550	0.000
Socio-economic group:				
Employees	0.001	0.211	0.000	0.997
Farmers	0.284	0.238	1.190	0.000
Self-employed	Ref.			
Retirees	-0.103	0.239	-0.430	0.665
Pensioners	0.449	0.237	1.890	0.058
Living on unearned sources	1.123	0.232	4.830	0.000
Number of household members				
1	Ref.			
2	-0.106	0.107	-0.990	0.324
3	-0.321	0.132	-2.420	0.015
4	-0.245	0.148	-1.650	0.098
5	-0.263	0.147	-1.790	0.073
6 and more	-0.112	0.152	-0.740	0.461
Class of the place of residence:				
Towns of over 500,000 residents	Ref.			
500,000-200,000	-0.093	0.175	-0.530	0.250
200,000-100,000	0.116	0.176	0.660	0.462
100,000-20,000	-0.110	0.158	-0.700	0.200
Fewer than 20,000	-0.266	0.174	-1.530	0.075
Rural areas	-0.044	0.153	-0.290	0.255
Household head level of education:				
Primary and lower	1.274	0.205	6.210	0.000
Basic vocational	0.924	0.194	4.770	0.000
Secondary	0.353	0.198	0.790	0.074
Higher	Ref.			
Age of the household head: under 35	0.057	0.154	0.370	0.712
35-59	-0.381	0.172	-2.220	0.027
60+	Ref.			
Household labour-market status:				
At least one unemployed person	Ref.			
No unemployed persons	-0.804	0.086	-9.320	0.000
Household disability status: At least one disabled person	Ref.			
No disabled persons	-0.209	0.078	-2.680	0.007

Educational level of attainment of household head

The educational level of attainment of a household head clearly determines poverty risk (table 8.1.24). The point of reference assumed for estimating the impact of educational level of attainment of the household head on poverty risk was the group of households where the household head had a university degree. All estimated parameters are statistically significant and have positive values. This means that clearly the lowest risk households in terms of entry into the poverty sphere are those with a head that has higher education, and the lower the level of education of the household head, the greater the poverty risk. However, when the household head has middle education, the average household poverty risk is higher than that of household heads with basic vocational education.

Age of the household head

Household head age groups were distinguished according to adults' stages of life. The point of reference assumed here was the group of households where household heads were at the age of 60 and older. The differences in the level of poverty risk between the reference group of households and all other groups of households turned out to be significant only for the group of households where the

household heads were 35-39 (table 8.1.24). For that group of households, the poverty risk was significantly lower than for the reference group of households.

Household status on the labour market

Households analysed in terms of their status on the labour market were divided into the households without unemployed members and those where at least one household member was unemployed. Second was assumed as the point of reference for poverty risk assessment. The obtained parameter estimates showed that the higher poverty risk was considerably higher for households with unemployed members (tables 8.1.24).

Disability status

The point of reference assumed here was a group of households with at least one disabled person. The occurrence of the disabled significantly increases the poverty risk for households. However, this impact is relatively lower when there are unemployed members in the household (table 8.1.24).

8.2. Unemployment

Janusz Czapiński

The registered unemployment rate in the sample of individual respondents in the working age group was 13.9% (slightly less than estimated by the Central Statistical Office in the month of the study- 14.2%). All persons registered at the labour offices can be divided into two large groups: the real and the fake unemployed. The fake unemployed can be divided into those who are not interested in working (they are not seeking and/or not ready to get a job) and those working illegally or otherwise earning an income not lower than PLN 1,200 per month. Similarly to the previous waves of the study, the share of the fake unemployed in all registered unemployed was significant (about 1/3 in 2003 and 2005 and from 2007 onwards already between 40 and 50%, and currently 36%[98]) (Table 8.2.1).

*Table 8.2.1. Share of the unemployed for age group in employment (18-60 women, 18-65 men) excluding the pensioners, receivers of welfare benefits and students according to unemployment category **

Unemployment category	Rate of unemployment for age group in employment					
	2003	2005	2007	2009	2011	2013
Registration	19.6	17.6	12.5	9.9	10.9	13,9
Registration + ready to work	16.6	14.7	8.9	7.2	9.0	11,4
Registration + ready to work + actively seeking employment	14.8	13.4	7.6	6.6	7.6	8,9
Registration + ready to work + actively seeking employment + not working full time + monthly personal net income lower than PLN 1,034 (PLN 800 in 2003, PLN 850 in 2005, PLN 900 in 2007, PLN 950 in 2009)	13.5	11.9	6.5	5.1	6.5	8,6
Together with unregistered unemployed (passive labour ready to work + actively seeking employment N=278)						10.3

* The study took into account only respondents who completed individual questionnaire as one of the unemployment criteria was personal net income, which did not feature in the household questionnaire. This is why younger household members were omitted.

Table 8.2.2. Share of registered unemployed women and men not interested in working, who justified not seeking work in 2009 and in 2013

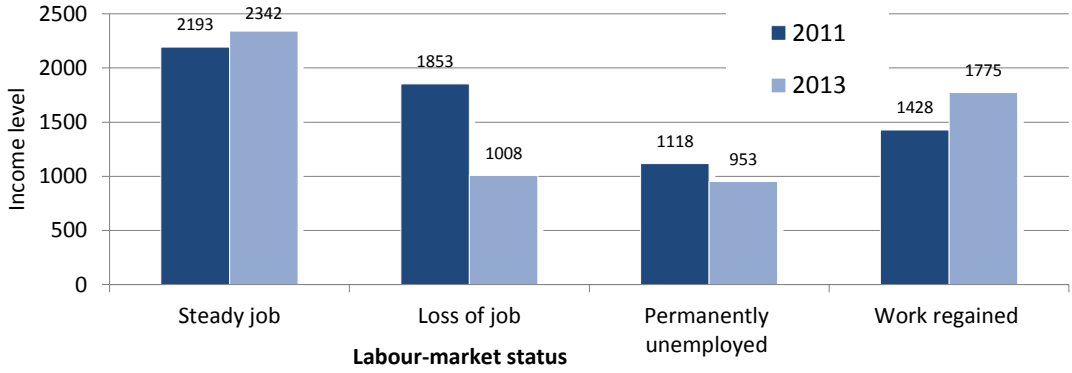
Reason for not seeking work	Women		Men		Total	
	2013	2009	2013	2009	2013	2009
Study, raising qualifications	4.3	3.4	4.6	11.5	4.4	5.5
Household duties	14.3	14.3	.0	2.1	10.3	11.0
Childcare	43.9	50.8	.0	2.1	31.4	37.8
Taking care of disabled or elderly household members	2.1	2.3	2.3	2.1	2.2	2.2
Bad health	7.6	7.1	26.2	22.9	12.9	11.3
Inappropriate age	1.8	2.3	5.4	7.3	2.8	3.6
Lack of proper qualifications	2.1	1.9	3.1	5.2	2.4	2.8
Belief they will not find a job	12.5	10.9	30.8	24.0	17.7	14.4
Does not want to lose welfare benefits	1.8	1.9	4.6	9.4	2.6	3.9
Does not want to work	1.8	1.1	3.8	2.1	2.4	1.4
Other reasons	6.7	3.4	19.2	11.5	10.3	5.5

For the majority of the registered unemployed women the main reason for not seeking a job is childcare (44%, an fall of 7% from 2011) and general household duties (the total of 16.4% including housework and care of disabled or elderly household members). Men do not seek a job mostly due to the loss of hope in finding work (31%) and in the second place due to their health condition (26%, an

[98] The increase in the percentage share of apparently unemployed among the registered out of work is a result of mainly the fall in the level of registered unemployed with a relatively stable size of group..

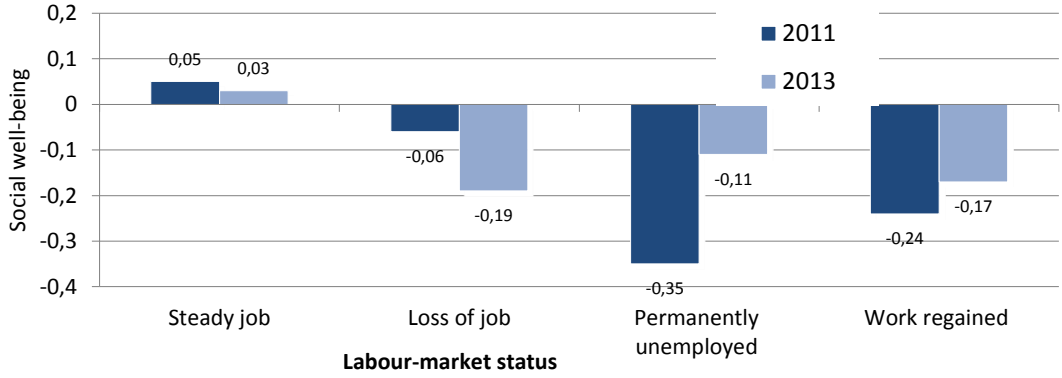
increase by 3% compared to 2011). It is symptomatic that quite often mainly for men (though twice less often than two years ago) the reason for not seeking a job is the desire to keep the right to receive social benefits (4.6% in comparison with 1.8% in the group of the unemployed women). Also men, more often than women, explicitly admit that they do not feel like getting a job (3.8% and 1.8%, respectively; table 8.2.2).

Losing or gaining a job has many life consequences affecting income, social relations, psychological well-being and life strategies. However, the probability of losing a job depends on several personal features, including those relating to income, social relations, life strategies or mental condition. Figures 8.2.1-8.2.4 show this mutual dependence. People who have already lost a job in the past have lower income, worse social relations[99], worse psychological well-being[100] and less often apply a task-oriented strategy to deal with their problems.[101] Job loss alone deteriorates those deficits. On the other hand, finding a new job improves all those factors, although for people who find a new job those indicators have been usually better already before finding the new job than it is the case for the permanently unemployed.[102]



NOTES: main effect of date of measurement F(1,594)=5.986, p<0.05, η^2= *0.001*; main effect of labour market status F(3,5924)=91.986, p<0.000, η^2= 0.044; effect date of measurement and labour market status interaction F(3,5924)=54.886, p<0.000, η^2= 0.027.

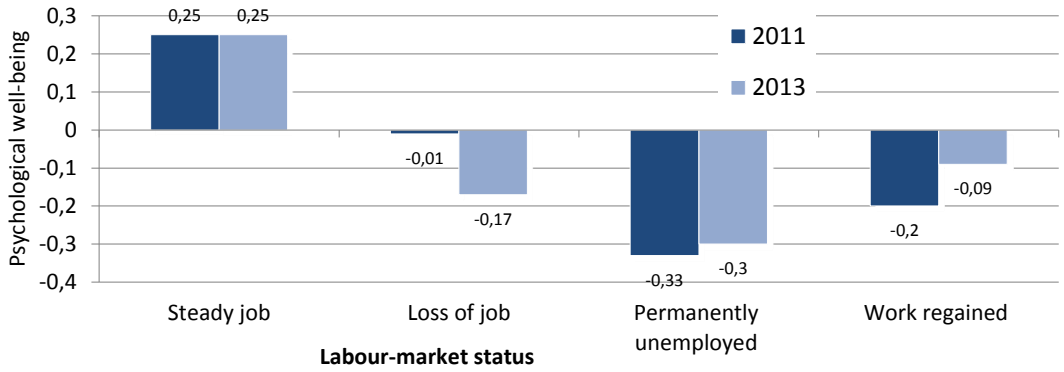
Figure 8.2.1. Level of personal monthly net income between 2011 and 2013 among those in employment who had lost their jobs in 2011 and had not yet found work before 2013 and those who found work after 2011 and were still employed in 2013



NOTES: main effect of date of measurement not significant.; main effect of labour market status F(3, 7254)=27.201, p<0.000, η^2=0.011; effect of date of measurement and labour market status interaction F(3, 7254)=10,906, p<0.000, η^2= 0.005.

Figure 8.2.2. Social well-being in 2011 and in 2013 among those in employment in those years, those who lost their jobs after 2011, those who were unemployed in those years those who found a new job after 2011

[99] Measured according to social well-being; for the operational definition of this indicator, see Chapter 9.2.
[100] For the operational definition of this indicator, see Chapter 9.2.
[101] For the dealing strategy, see Chapter 5.8.
[102] A more detailed description of mutual connections between individual features and the change of status on the labour market can be found in previous editions of *Social Diagnosis* (www.diagnoza.com)



NOTES: main effect of date of measurement not significant.; main effect of labour market status F(3, 7102)=184.407, p<0.000, η^2= 0.072; effect of date of measurement and labour market status interaction F(3, 5,439)=47.918 p<0.000, η^2= 0.020.

Figure 8.2.3. Psychological well-being in 2011 and in 2013 among those in employment in those years, those who lost their jobs after 2011, those who were unemployed in those years those who found a new job after 2011

NOTE: main effect of date of measurement not significant.; main effect of labour market status F(3,7546)=4.371, p<0.01, η^2= 0.002; effect of date of measurement and labour market status interaction F(3.7546)=15.348, p<0,000, η^2= 0.006

Figure 8.2.4. Task-oriented strategy indicator in 2011 and in 2013 and in 2013 among those in employment in those years, those who lost their jobs after 2011, those who were unemployed in those years those who found a new job after 2011 with verification for age, gender and education level

8.3. Social discrimination

Janusz Czapiński

One of the important risks for social integration is the discrimination occurring when a certain category of citizens is denied equal rights and access to various aspects of life due to their particular features, and when neither the discrimination nor its consequences are formally penalised.

In order to define the type and the level of risk for social order which discrimination can entail, it is first necessary to assess its incidence and the extent of intolerance in our society. We did not ask our respondents about nationality, ethnicity or race and households of foreigners were excluded from the study. Therefore, we are unable to estimate the level of discrimination regarding these attributes. It should be pointed out however that the Third Republic is a very homogeneous country in terms of race, ethnicity and religion. Contrary to many Western countries, we have not experienced racial, religious or national conflicts. Thus omitting these attributes should not significantly distort our estimates. In Poland we witness other signs of discrimination, both hot" or emotive (e.g. towards homosexuals and HIV positive people), and "cold" which are inextricably linked with culture and mechanisms of social stratification including gender, disability and the place of residence.

In general, the sense of discrimination in Poland is still low, although it is three times higher than in mid-1990s (Table 8.3.1).

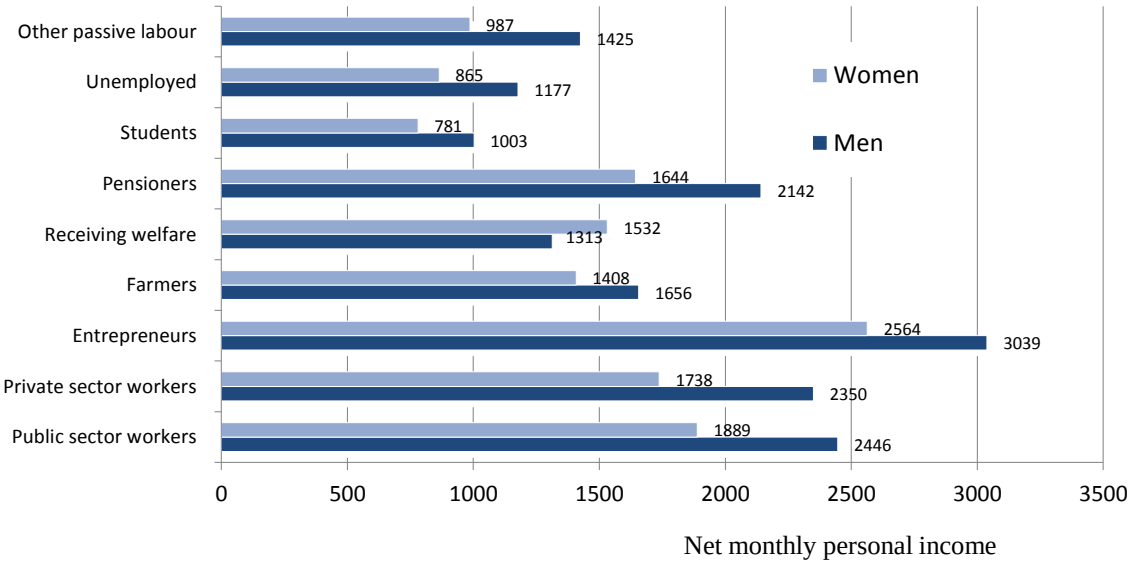
Table 8.3.1. Share of adults who felt discriminated between 1992-2011

1992 N=3396	1993 N=2307	1994 N=2298	1995 N=3024	1996 N=2329	1997 N=2100	2000 N=5431	2003 N=9620	2005 N=8609	2007 N=12638	2009 N=26122	2011 N=26300	2013 N=26201
0.8	1.0	0.7	0.9	0.5	0.6	1.2	1.6	1.8	1.9	1.8	1.7	1.8

Source of data: for years 1992-1997: Czapiński, 1998; for years 2000-2013: *Social Diagnosis.*

We asked about the sense of discrimination on any grounds. Some objective grounds for the discrimination in Poland, such as disability (e.g. accessibility barriers or a negative attitude of employers) or gender-based income inequality can be easily indicated.

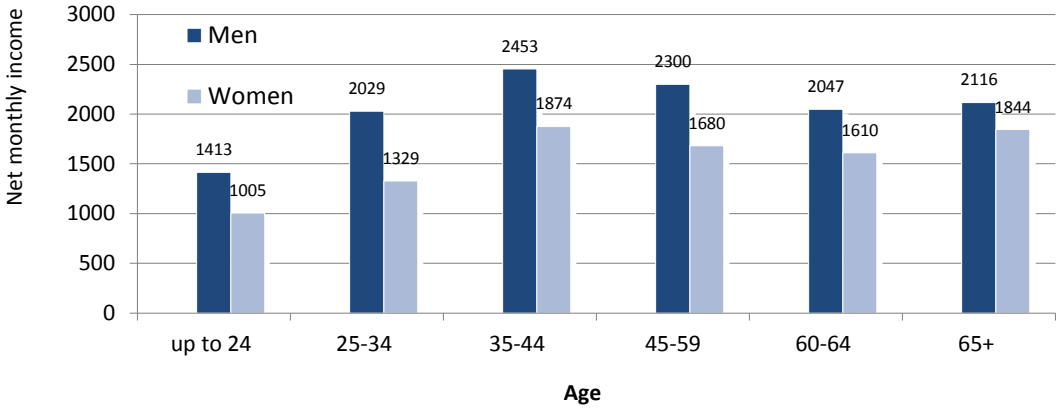
Firstly, let us discuss gender-based discrimination. We have already mentioned income disproportions between men and women (Chapter 5.5.1). The average personal income declared by women is ¼ lower than the income declared by men (similarly to 2009 and 2011). This discrepancy does not result from different social and professional status. In all social and professional groups, except for pensioners, the difference is either equal or similar to the general difference revealed after verification of the level of attainment (Figure 8.3.1).



NOTES: main effect of gender F(1, 18806)=114,822, p<0.000, η^2=0.006; main effect of status F(8, 18806)158.626, p<0.000, η^2= 0.063; effect of gender and status interaction F(8, 18806)=15,192, p<0.000, η^2= 0.006.

Figure 8.3.1. Average monthly personal net income (disposable income) of men and women by social and professional status with verification for level of education

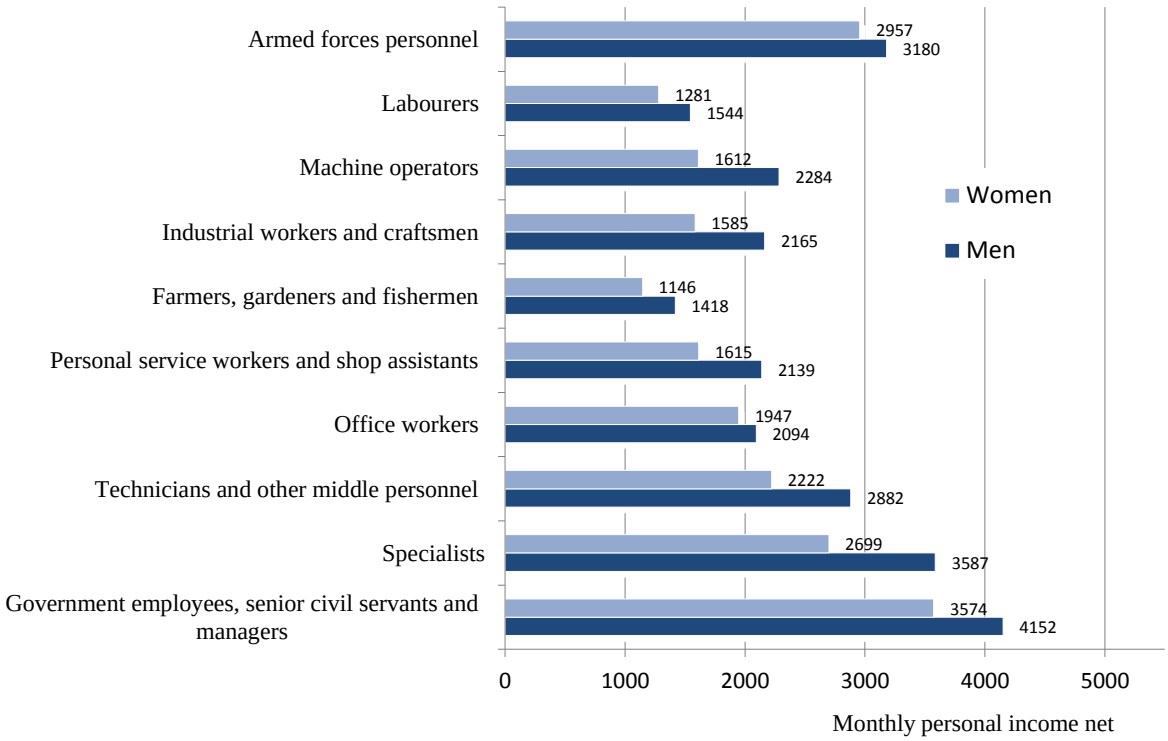
The difference remains at the same level also in all age groups. This difference is the greatest in the working age group (25-59) and the smallest in the oldest group (65+) (Figure 8.3.2).



NOTES: main effect of gender F(1, 18853)=444.604, p < 0.000, η^2= 0.023; main effect of age F(5, 18853) =98.650, p < 0.000, η^2= 0.023; effect of gender and age interaction F(5, 18853)=10,824, p < 0.000, η^2= 0.003.

Figure 8.3.2. Average monthly personal net income (disposable income) of men and women by age group with verification for years in education

One can question these results by saying that income inequalities depend on the type of profession and position rather than gender. However, the male-female income disparity does not disappear even within respective professional groups representing relatively equal competences, duties and positions although remains at the same level (Figure 8.3.3). Therefore the actual gender-based discrimination in terms of income can be estimated at 19-20%.



NOTES: main effect of gender F(1, 11413)=33,959, p<0.000, η^2= 0.003; main effect of group F(9, 11413)=221.157, p<0.000, η^2= 0.149; effect of gender and group interaction F(11413)=5.818, p<0.000, η^2= 0.005.

Figure 8.3.3. Average monthly personal net income (disposable income) of men and women by professional groups with control for age

The general indicator of women's pay discrimination amounted to 20.5% with a more detailed professional group breakdown in the analysis of gender differences. Verification of the level of educational attainment and age (as tenure indicator) increases the difference between men and women in terms of personal income up to 22% (Figure 8.3.4). Women have on average a half year shorter tenure

but nearly a year longer education. If we compare the income generated by men and women working in the same professions with the assumption that both have the same level of attainment measured by years of study, the difference grows up to 21.4%, which is 0.9 p.p., whereas with the assumption that both have the same tenure, rise is by 0.2 percentage point. This means that education and not time worked is the critical factor in reducing the income difference between men and women.

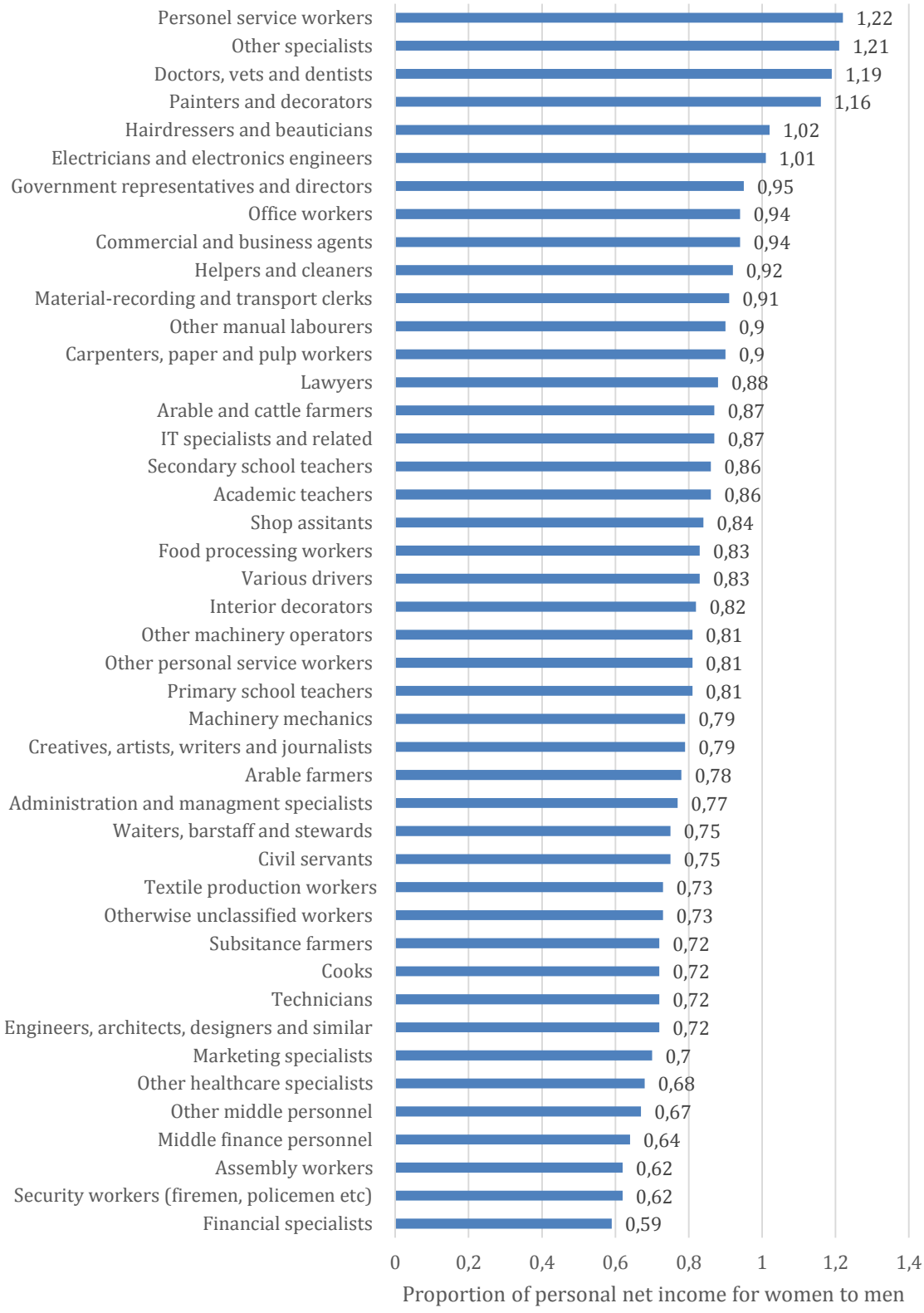


Figure 8.3.4. Proportion of personal net income for women to men in various professions with control for age and number of years in education

Let us consider if such visible income discrimination translates into a greater feeling of being discriminated against. It appears that women do not feel discriminated against more often than men (Figure 8.3.5), and in 2007 and in 2011 the share of men who subjectively felt discriminated against was higher than the share of women (in the remaining years the differences were statistically insignificant). Even if we consider only people who are working and if we compare men and women with the same tenure and level of attainment, we do not state any greater sense of being discriminated against among women (1.5 and 1.9% respectively, with a statistically insignificant difference).).

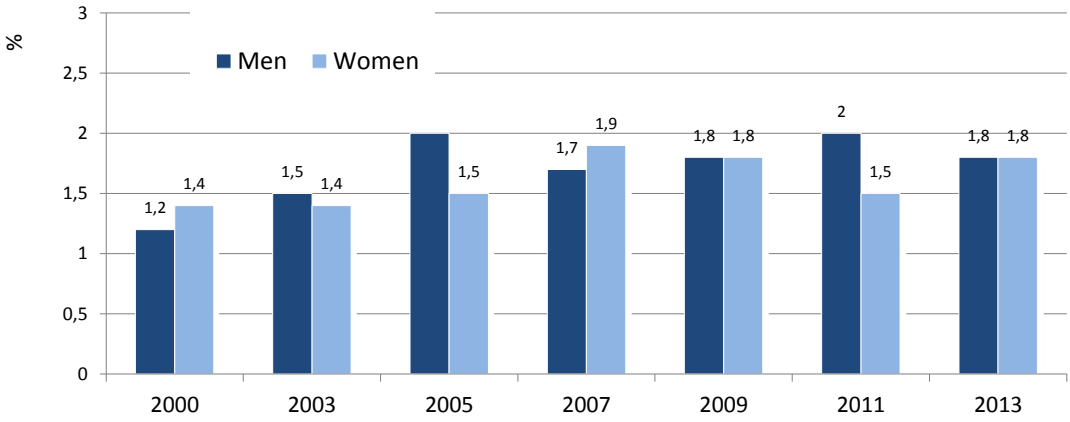
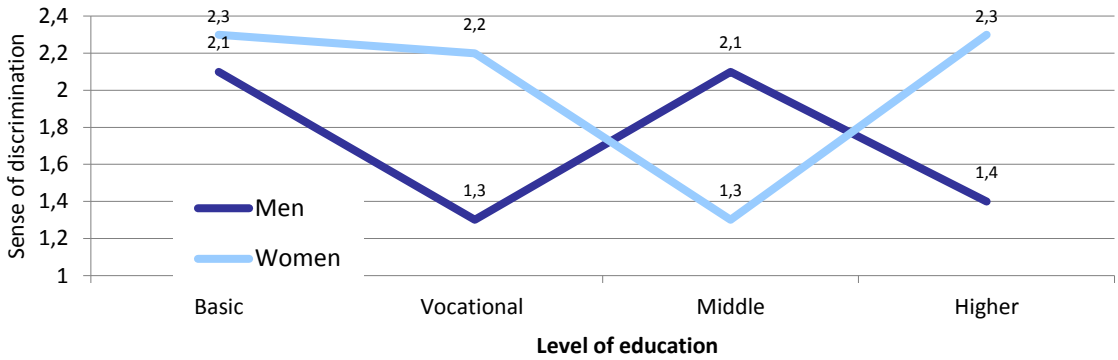


Figure 8.3.5. Share of men and women who felt discriminated between 2000-2013

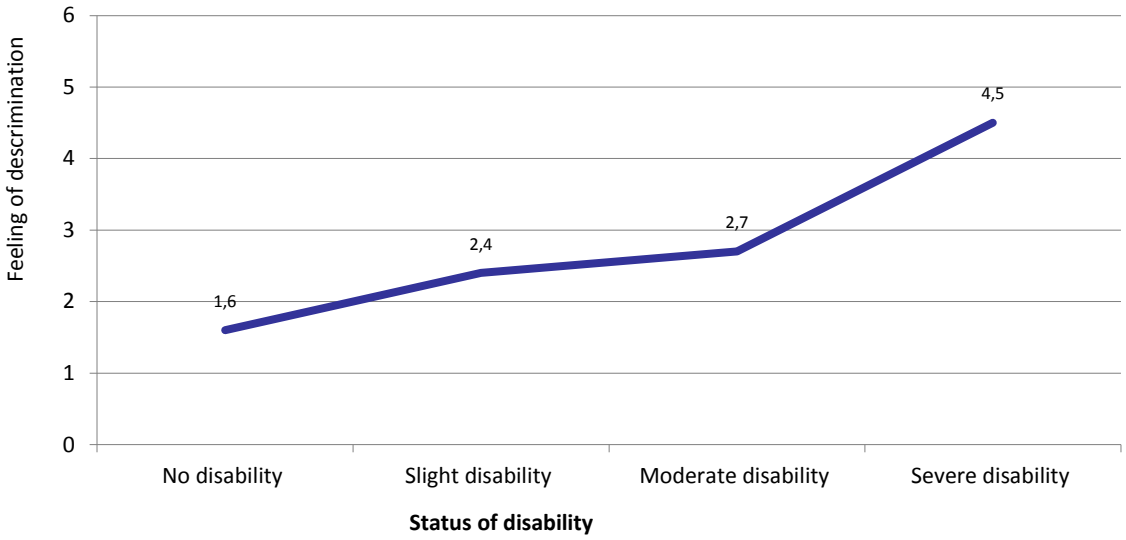
The level of attainment (Figure 8.3.6) impact on the differences in the sense of discrimination between men and women. Among men, those who most often felt discriminated against were those whose level of attainment was the lowest and with middle education, while among women with less well educated (primary and basic vocational school) also this concerned those with the highest level of attainment.



NOTES: main effect of gender not significant; main effect of level of education not significant.; effect of gender and level of education interaction F(3, 25609)=6,663, p<0.000, η^2= 0.001.

Figure 8.3.6. Share of men and women who felt discriminated due to their level of education after verification for age

Another group other than women that is objectively discriminated and denied equal access to goods, institutions and rights are the disabled. However, apparently their objective social inequality only moderately translates into their sense of being discriminated against. Here the degree of disability is crucial (Figure 8.3.7). In the group of persons with a high degree of disability, the subjective discrimination rate is nearly double higher than in the group of persons with a low degree, and three times more than with able-bodied groups.

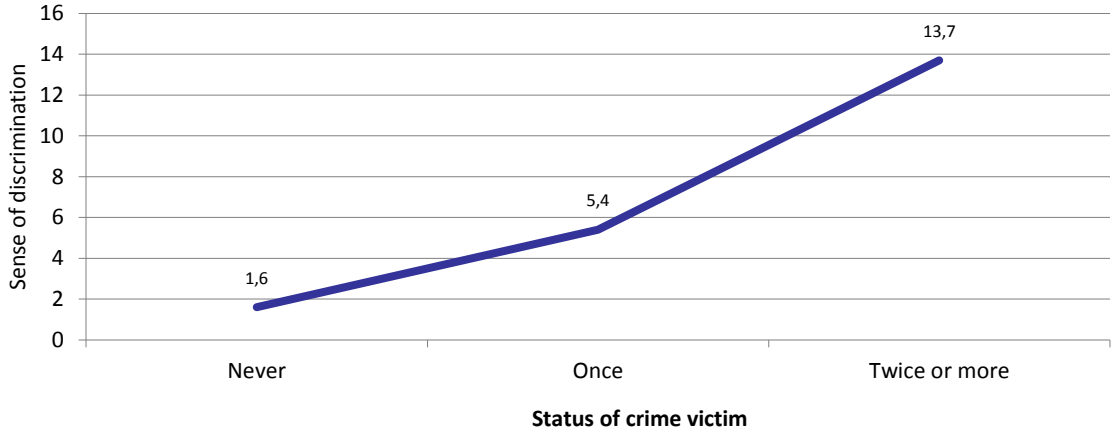


NOTES: main effect of gender not significant.; main effect of disability F(3, 24826)=12,754, p<0.000, η^2= 0.002; effect of gender and disability interaction not significant.

Figure 8.3.7. Percentage who feel discriminated by disability status with control for gender age and level of education

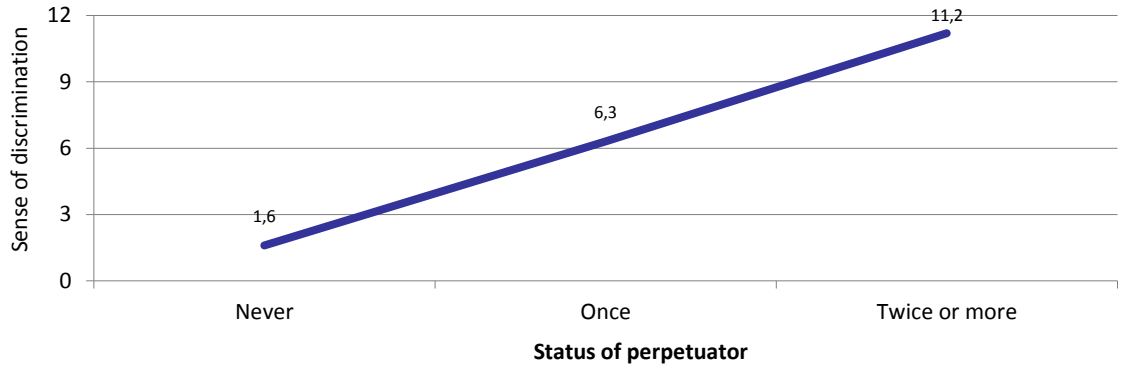
However, it is not the disabled persons, even those with high degree of disability, who feel discriminated against most often, but persons who are the victims of crime and criminals (Figures 8.3.8 and 8.3.9), smoke cigarettes, abuse alcohol or take drugs (Figure 8.3.10) or undergo psychiatric or psychological treatment (Figure 8.3.11). The sense of discrimination of people addicted to three drugs is diversified in terms of gender.

A single addiction (in most cases to nicotine) does not increase the subjective discrimination rate; only when it is accompanied by alcohol and/or drug addiction does this rate grow in particular and with three radically addicted among women the indicator of subjective discrimination rises to over 18% (figure 8.2.10).



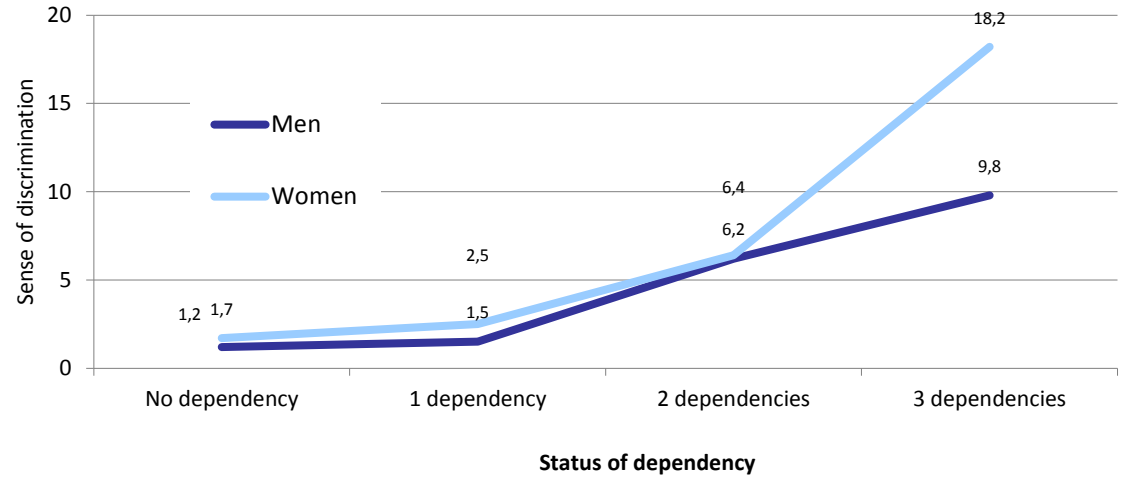
NOTES: main effect of gender not significant.; main effect of victim F(2, 25641)=128,444, p<0.000, η^2= 0.010

Figure 8.3.8. Percentage who felt discriminated by status as crime victim after verification for age, gender and education



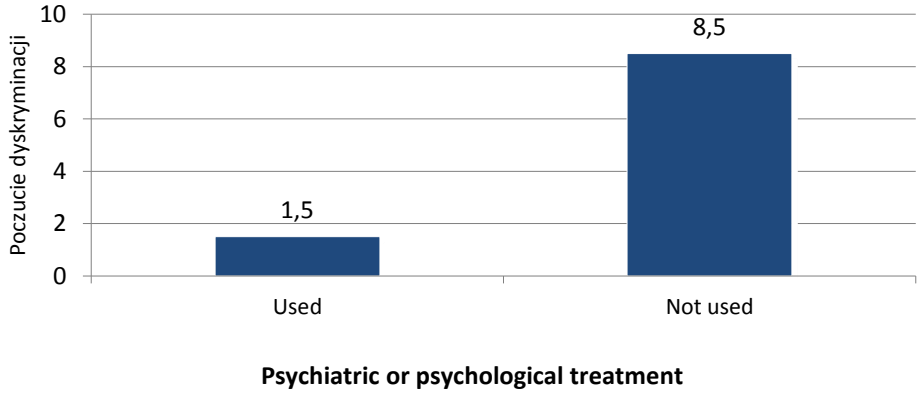
NOTES: main effect of gender not significant.; main effect of perpetuator F(2, 25641)=59.944, p<0.000, η^2= 0.005.

Figure 8.3.9. Percentage who felt discriminated by status as perpetuator after verification for age, gender and education



NOTES: main effect of gender F(1, 25612)=9,132, p<0.01, η^2= 0.000; main effect of dependency F(2, 25612)=49,244, p<0.000, η^2= 0.006; effect of gender and addiction interaction F(2, 25612)=2,879, p<0.05, η^2= 0.000.

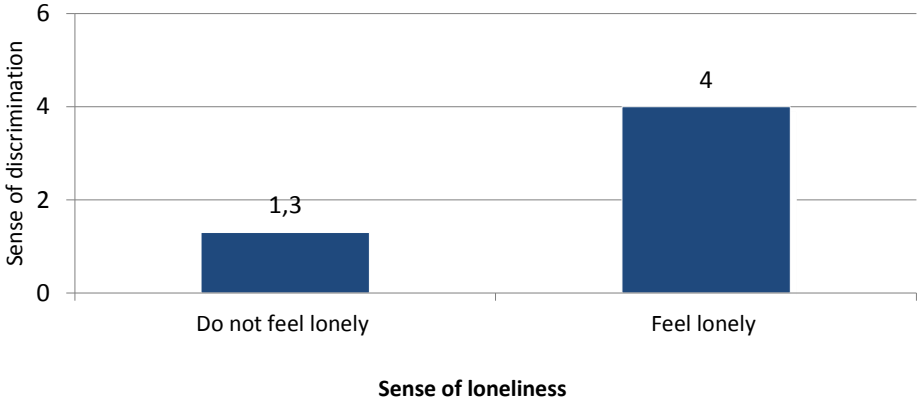
Figure 8.3.10. Percentage of men and women who felt discriminated by status of dependency with control for age and level of education



NOTES: main effect of gender ns.; main effect of treatment F(1, 25629)=309.344, p<0.000, η^2= 0.012; effect of interaction of gender and treatment ns.

Figure 8.3.11. Share of persons who felt discriminated against due to their psychiatric or psychological treatment after verification for gender and age

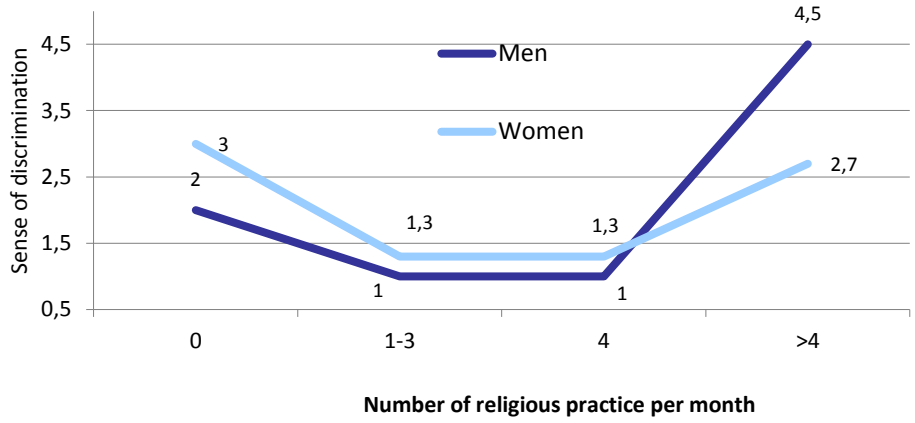
Also single persons more often feel discriminated against in particular men (Figure 8.3.12). The latter feature might be however considered yet another symptom of social ostracism. The feeling of being discriminated against is also the case for the socially excluded who, for reasons other than prejudice, have a similarly limited (or even more so) access to resources institutions and social services than discriminated people (see Chapter 8.4).



NOTES: main effect of gender not significant; main effect of lack of partner F(1, 2536)=164.744, p<0.000, η^2= 0.006; effect of gender and lack of partner interaction not significant

Figure 8.3.12. Percentage who felt discriminated by sense of loneliness after verification for age, gender and education

A separate category of persons who might be discriminated against in a country where most people are practising Roman Catholics are atheists and according to our categories, persons not participating in any religious practices. This is indeed the case. However, also the religiously devoted who go to church more often than four times a month are at a higher risk of discrimination, especially men (figure 8.3.13).



NOTES: main effect of gender not significant.; main effect of practices F(3, 25508)=34,144, p<0.000, η^2= 0.004; effect of gender and practices interaction F(3, 25508)=7,289, p<0,000, η^2=0,001

Figure 8.3.13. Percentage who felt discriminated by frequency of religious practice per month with verification for age

The data from *Diagnosis* prove that in Poland the main grounds for social discrimination are deviations from the majority standards in terms of alcohol and drug addiction, psychological disorders, criminal offences and religious practices. On the other hand, disabled and women do not feel significantly discriminated against. This does not imply however that the latter groups are not objectively discriminated against in any way.

8.4. Types of social exclusion

Janusz Czapiński

The correlations between respective exclusion criteria such as those mentioned above (poverty, unemployment and social discrimination) are relatively weak. Therefore, it is difficult to indicate a single and coherent exclusion syndrome. This has also been proved in a factor analysis involving ten quite obvious barriers to complete participation in the mainstream of society, such as old age, loneliness, poverty, living in rural areas, low level of educational attainment, alcohol or drug addiction, infringement of the law, sense of discrimination, disability and unemployment. In the first four waves of measurement in 2000, 2003, 2005 and 2007, these ten criteria that coherently formed three orthogonal factors together explaining over 40% of the variances. In the last three editions a certain change in structure of factors was observed. Apart from the three factors identified earlier: i.e. physical, structural and normative exclusion, we indicated a fourth, which is strictly linked with unemployment and poverty. It can be referred to as material exclusion resulting from the lack of permanent income from work (Table 8.4.1). Indeed the largest share of materially excluded households (over 45% in comparison with the population of 7.4%) is the group of households living on passive sources of income.

From the beginning of social exclusion studies, poverty and unemployment have been considered the main barriers preventing full participation in social life. Most attention has been paid to these problems, as it has been assumed that combating unemployment and poverty should constitute the principal aim of social reintegration policy. The fact that material exclusion is at present one of four distinct types of exclusion in Poland suggests the need to diversify reintegration policy so that it could include other grounds for exclusion which are independent of labour market situation and material living standards and which require separate instruments addressed to the less educated, rural area inhabitants, the disabled, alcohol and drug addicts as well as those who break the law. Therefore, full employment and elimination of poverty does not imply that the problem of social exclusion is solved.

Let us see the extent of exclusion and the risk of exclusion for reasons other than unemployment and poverty in the entire society and across different social groups.

Table 8.4.1. Factor analysis (factor loadings) results of selected exclusion criteria with varimax rotation for 2011-2013

Criteria	Factors of exclusion							
	physical		structural		normative		material	
	2013	2011	2013	2011	2013	2011	2011	2009
50+ years of age	0.72	0.73						
Disability	0.71	0.64						
Loneliness	0.40	0.47			0.33	0.30	0.34	0.33
Residence in rural areas			0.81	0.76				
Below middle education			0.73	0.70				
Addiction (alcohol, narcotics)					0.65	0.70		
Conflict with the law					0.72	0.71		
Sense of discrimination					0.53	0.42		
Poverty							0.70	0.70
Unemployment							0.77	0.73
% variance explained	14.41	16.68	12.85	12.95	14.97	11.28	10.26	9.59

NOTE: factor readings above 0.3 only

8.4.1. The range of exclusion in various social groups

It is difficult to fully define the limits of exclusion, just as it is difficult to define the true and universal level of poverty (apart from the obvious criteria of biological survival). Both are relative in character - one can be more or less poor compared to the general living standard of society and one can be more or less socially excluded. For the poverty sphere, a certain income level was accepted (see chapter 8.1). However, for exclusion the most important criteria is the level of social differentiation of barriers or risk factors. The operational measure of differentiation is standard deviation. In applying this gauge in relation to four types of exclusion, we identified two limiting values - threat of exclusion and exclusion itself. A exclusion we took the size of two standard deviations from the norm of the factor defining the given type of exclusion, and for the threat of exclusion, the size of one standard deviation. Because these criteria are relative, it is difficult to estimate what percentage of Poles is actually excluded

or in danger of exclusion. However it is possible to show which groups in various socio-demographic sections are characterised by greater or lesser degrees of exclusion or threat of exclusion (table 8.4.2 and 8.4.5).

The greatest percentage of Poles of 16 years of age and more is under risk of structural and physical exclusion (12.6% and 10.5% respectively, table 8.4.2), but the most exclusions have a material cause (7.4%). Only in the case of material exclusion is there less under threat of exclusion than those actually excluded. For structural exclusion the relation of the excluded to those under threat is the greatest (22.6% to 1.3%), which indicates that as far as reintegration policy is concerned, combating unemployment and associated poverty ought to be priority measures, as in the case of this kind of exclusion, almost all those under threat of exclusion are in fact already excluded.

The risk of specific types of exclusion is slightly different for men and women (table 8.4.2). For men the greatest is the risk of material and normative exclusion, while for women it is material and physical.

As far as socio-economic groups are concerned, material exclusion is the most frequent among households subsisting on unearned income sources (45% are excluded and 12% under threat, table 8.4.3). Also normative exclusion affects and endangers mainly households subsisting on unearned sources, but also those who are self-employed. Structural exclusion most threatens, which is no surprise due to the nature of the defining criteria, households of farmers, and physical exclusion affects pensioners and those receiving welfare benefits. Households of receivers of welfare benefits and those living on unearned sources are most under threat of general social exclusion for whatever reason and the least under threat are households of employees and the self-employed.

Table 8.4.2. Percentage under threat of exclusion and the excluded by type of exclusion and gender

Gender	Type of exclusion							
	physical		structural		normative		material	
	threatened	excluded	threatened	excluded	threatened	excluded	threatened	excluded
Men	9.5	5.0	25.4	1.3	9,2	6,3	4,1	7,2
Women	11.7	5.2	20.1	1.3	3,5	3,0	4,1	7,5
General	10.5	5.1	22.6	1.3	6,3	4,6	4,1	7,4
Chi-square, significance	45; 0.000		93; 000		482; 0.000		1; not significant	

Table 8.4.3. Percentage under threat of exclusion and the excluded by type of exclusion and socio-economic household group

Socio-economic group	Type of exclusion							
	physical		structural		normative		material	
	threatened	excluded	threatened	excluded	threatened	excluded	threatened	excluded
Employees	6.1	2.0	17.5	1.1	7,3	5,2	3,7	6,0
Farmers	6.9	2.0	54.2	4.5	4,3	3,8	6,9	5,6
Entrepreneurs	5.0	1.2	18.4	0.9	5,9	5,9	4,3	4,7
Retirees	19.7	11.2	24.4	0.5	4,0	2,6	2,5	4,3
Receivers of welfare	25.5	20.9	32.5	1.9	4,8	4,9	6,6	15,8
Unearned income	14.0	5.4	24.4	3.4	8,9	7,8	12,3	45,3
Chi-square, significance	2583; 0.000		1349; 0.000		184; 0.000		2233; 0.000	

In terms of household type (table 8.4.4), absolutely the most at risk of physical exclusion are people from single person households without families (mainly pensioners), couples without children (also largely pensioners) and non-family many-person households (also households of elderly relatives). Structural exclusion most threatens couples with three or more children, incomplete families and multi-family households. This means that in this kind of household there is an especially low level of cultural capital (low education). The risk of normative exclusion is greatest in incomplete families and in households of couples with 2, 3 or more children (this mainly concerns children covered by our study of 16+ years of age). Also, material exclusion most often reaches couples with 3 or more children and incomplete families, while the general threat of exclusion most concerns non-family, incomplete family and many children households.

In terms of Voivodeship, physical exclusion occurs most often in Lubuskie and Małopolskie (table 8.4.5). Structural exclusion and its threat is most widespread in the east of the country, especially in Lubelskie, Podkarpackie, Świętokrzyskie and Małopolskie. The greatest percentage of normatively excluded is in Podkarpackie, Śląskie and Kujawsko-Pomorskie, and materially excluded in Kujawsko-Pomorskie and Lubelskie. Generally however the differentiation of exclusion risk in terms of Voivodeship is relatively small, and much smaller than for socio-economic group and household type.

Table 8.4.4. Percentage under threat of exclusion and the excluded by type of exclusion and household type

Household type	Type of exclusion							
	physical		structural		normative		material	
	threatened	excluded	threatened	excluded	threatened	excluded	threatened	excluded
Single family: no children	14.5	8.0	16.9	0.5	5,5	2,7	2,7	3,5
1 child	6.7	3.2	17.1	0.5	6,6	4,9	3,7	5,5
2 children	4.0	1.8	19.8	1.1	6,9	4,6	4,1	6,8
3+ children	5.1	1.4	34.0	5.1	5,7	4,9	6,0	14,1
Incomplete families	12.1	4.8	24.0	1.8	5,8	7,0	4,9	12,1
Multi-family	7.9	2.5	36.8	1.2	6,3	4,4	6,5	7,3
Non-family: single person	25.8	15.9	16.9	0.3	6,0	4,3	1,7	4,6
Multi-person	12.6	5.9	20.9	0.4	9,5	5,5	2,4	9,1
Chi-square, significance	2042; 0.000		1093; 0.000		83; 0.000		522; 0.000	

Table 8.4.5. Percentage under threat of exclusion and the excluded by type of exclusion in terms of Voivodship

Voivodeship	Type of exclusion							
	physical		structural		normative		material	
	threatened	excluded	threatened	excluded	threatened	excluded	threatened	excluded
Dolnośląskie	13.5	4.8	14.4	0.7	7,9	4,4	3,3	6,4
Kujawsko-pomorskie	11.0	5.4	25.0	1.6	5,1	5,4	6,4	11,7
Lubelskie	11.4	6.1	30.1	3.0	5,6	3,1	4,7	10,2
Lubuskie	13.4	8.5	22.0	1.4	7,6	4,4	5,8	7,8
Łódzkie	9.9	4.6	21.4	1.7	6,7	2,7	5,2	7,8
Małopolskie	9.7	7.4	31.8	1.5	5,2	3,8	4,4	4,4
Mazowieckie	10.4	3.6	21.9	1.2	6,7	5,7	4,3	6,9
Opolskie	9.4	3.9	27.8	0.5	6,3	3,3	3,3	7,1
Podkarpackie	10.7	4.8	31.8	1.4	5,1	6,1	6,1	7,5
Podlaskie	10.9	3.7	20.6	1.1	6,3	4,4	3,7	4,9
Pomorskie	7.8	6.3	17.0	1.8	7,8	4,9	3,3	6,1
Śląskie	9.1	3.9	12.3	0.7	6,2	5,6	2,6	7,3
Świętokrzyskie	10.8	5.7	30.4	1.9	4,9	4,2	5,4	8,0
Warmińsko-mazurskie	11.1	5.2	26.5	0.9	5,6	1,9	3,5	9,2
Wielkopolskie	10.6	5.6	26.2	0.7	6,2	4,1	2,7	6,8
Zachodniopomorskie	9.8	5.2	18.0	1.2	6,3	6,2	4,1	8,0
Chi-square; significance	120; 0.000		601; 0.000		102; 0.000		181; 0.000	

8.4.2. Exclusion, psychological well-being and coping skills

The factors of exclusion risk are a potential threat to social order. Concerns like unemployment, level of disability and high rates of crime and poverty cannot be ignored by any responsible politician. This does not however automatically mean the negative influence of exclusion defined by these factors on the subjective quality of life (psychological well-being). The unemployed, poor, disabled and criminals are not necessarily less happy, more depressed and less well motivated for life than the employed, rich, able-bodied and law-abiding citizens. Indeed, world studies show that the objective conditions of life have a minor effect on psychological well-being (Andrews, Withey, 1976, Campbell, Converse, Rodgers, 1976; Czapiński, 1992, 2001a, 2004a; Myers, 1993). The poor turn out to be only slightly less happy than the rich, the elderly are just as happy as the young and the educated are on average only slightly more satisfied than the uneducated. Only marital status and health (though only subjectively, not however an objective medical diagnosis) consistently and clearly determine level of psychological well-being. People living alone, especially the widowed and divorced, and those who consider themselves infirm, are much less happy than those who are married and feel healthy. As far as

government can increase the feeling of health security and thus the amount of citizens who are happy with their health, so small an influence do they have on interpersonal relations and the marital status of citizens. Equally they have a small potential influence on citizens' sense of happiness.

Also changes in life situation do not often result in a lasting change in psychological well-being. For example in the USA, Japan, Great Britain and the majority of other developed countries, the sense of happiness and satisfaction with life have not changed for decades despite continuous economic growth[27].

However, in Poland the relationship between the objective conditions of life and psychological well-being is a lot stronger than in other, more wealthy countries (Czapiński, 1996, 2001b). One can therefore expect that social exclusion is going to have a considerable effect on the subjective quality of life here, and to ascertain this, we calculated with the aid of multiple regression equations the value of predictive factors defining three types of exclusion for different gauges of psychological well-being.

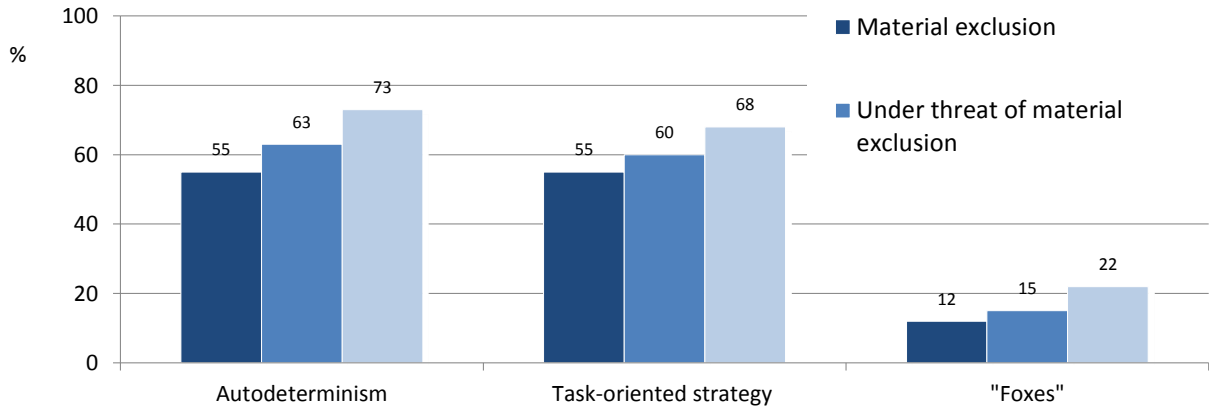
In terms of general psychological well-being all three factors have a similar, and quite large, meaning for all six readings and together explain from 15 to 35% of variation in 2013 depending on the indicator of well-being, with the greatest being physical, and the next material exclusion (table 8.4.6). In terms of will to live (suicidal tendencies and desire for life), the main predictors are physical and normative exclusion, and the smallest is structural exclusion. The strong link between psychological depression and physical exclusion results from the high correlation of depression indicator and age (see chapter 5.3), which makes up one of the main indicators of physical exclusion.

Table 8.4.6. Results of multiple regression analysis of four types of exclusion as predictors of three psychological well-being indicators

Predictor of exclusion	Will to live			General subjective well-being			Depression		
	Beta	p	R^2	Beta	p	R^2	Beta	p	R^2
Normative	-0.254	0.000		-0.180	0.000		0.048	0.000.	
Physical	-0.227	0.000		-0.451	0.000		0.584	0.000	
Structural	-0.014	0.025		-0.063	0.000		0.072	0.000	
Material	-0.195	0.000		-0.255	0.000		0.017	0.001	
			0.154			0.304			0.349

The socially excluded are, with a certain exception discussed below, less able to cope with life. We have taken various indicators of coping: autodeterminism (see chapter 5.6), the task based strategy for dealing with problems (see chapter 5.8) and entrepreneurship, known as also the "fox" strategy (Czapiński, Wojciszke, 1997), or the undertaking of at least one of four activities supposed to increase income (Appendix 1, individual questionnaire, questions 30-33). Figures 8.4.1-8.4.4 show the relations between these four types of exclusion.

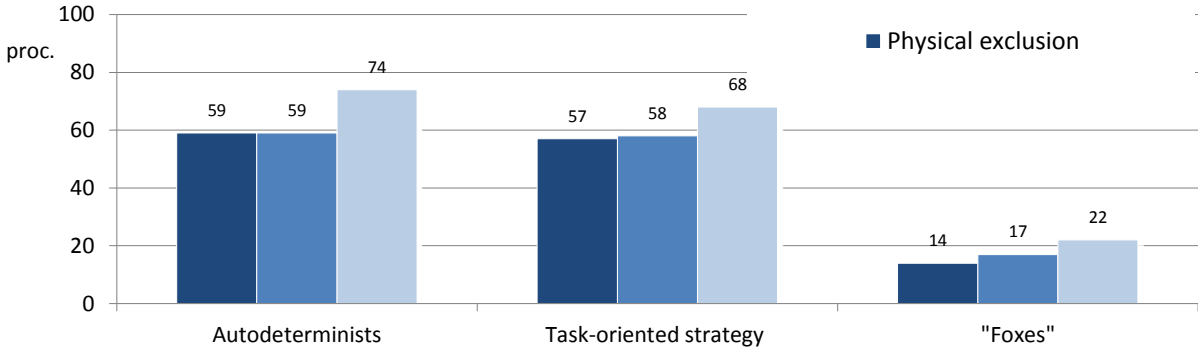
The materially excluded are more rarely autodetermined than the non-excluded, and they more rarely apply task-based strategy or belong to the "foxes" (figure 8.4.1).



NOTE: main effect of material exclusion: for autodeterminism F(2, 22221)=147.277, p < 0.000, η^2= 0.013, task-oriented strategy F(2, 22202)=59.891, p < 0.000, η^2= 0.005, „foxes" F(2, 22435)=61.570, p < 0.000, η^2= 0.005

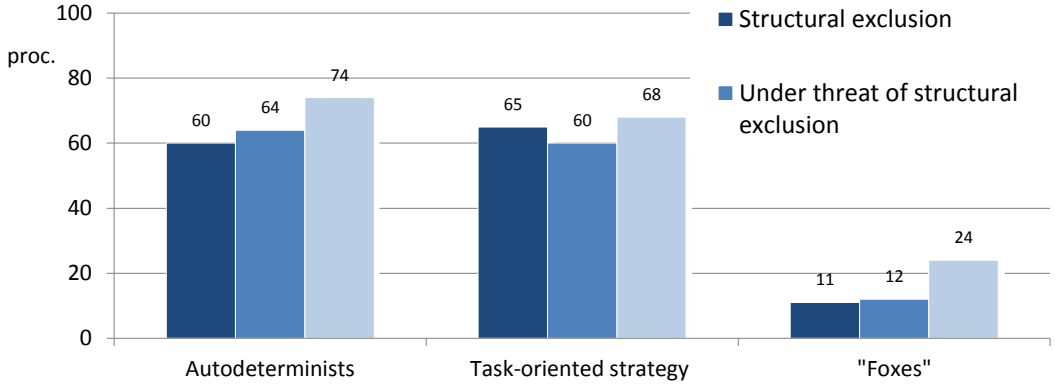
Figure 8.4.1. . Percentage of autodeterminists, users of task-oriented coping strategy and "foxes" among the excluded and the non-excluded with control for gender and age

The physically and structurally excluded are very similar to the materially excluded in terms of coping with life; they are less likely to be autodetermined, use task-based strategy or belong to the "foxes" (figures 8.4.2, 8.4.3).



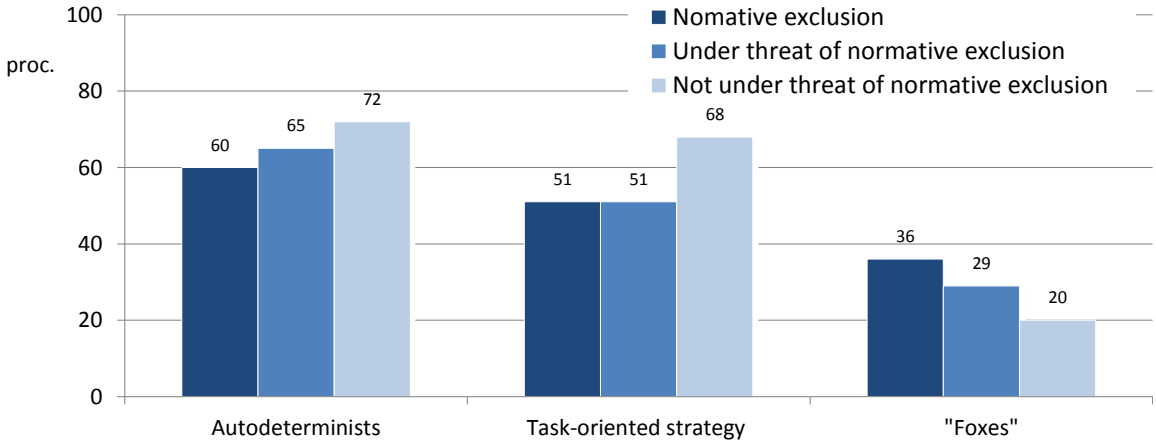
NOTE: main effect of physical exclusion: for autodterminism F(2,22221)=130.147, p < 0.000, η^2= 0.012, task-oriented strategy F(2,22202)=58.260, p < 0.000, η^2= 0.005, „foxes" F(2,22435)=30.258, p < 0,000, η^2= 0.001.

Figure 8.4.2. Percentage of autodeterminists, users of task-oriented coping strategy and "foxes" among physically excluded with control for gender and age



NOTE: main effect of structural exclusion: for autodeterminism F(2,22221)=14.617, p < 0.000, η^2= 0.001, task-oriented strategy F(2,22202)=57,469, p < 0.000, η^2= 0.005, „foxes" F(2,22435)=186,954, p < 0.000, η^2= 0.016

Figure 8.4.3 . Percentage of autodeterminists, users of task-oriented coping strategy and "foxes" among structurally excluded and non-excluded with control for gender and age



NOTE: main effect of normative exclusion: on autodterminism F(2, 22221)=50.099, p < 0.000, η^2= 0.004, fatalism not significant., task-based strategy F(2, 22202)=132.794, p < 0.000, η^2= 0.012, „foxes" F(2, 22435)=96.425, p < 0.000, η^2= 0.008

Figure 8.4.4. Percentage of autodeterminists, users of task-oriented coping strategy and "foxes" among the normatively excluded and non-excluded with control for gender and age

The normatively excluded clearly differ from the other types in terms of entrepreneurship as they belong to the group of "foxes" much more often (figure 8.4.4). The different nature of this normative exclusion profile is also confirmed in terms of social functioning (see below).

8.4.3. Social functioning and quality of life of the excluded

Irrespective of whether exclusion from the community or threat of exclusion causes suffering or lowers psychological well-being, it is better that there are as few excluded as possible. It is better for the community, its coherence, standard of life and opportunities for development. It is generally accepted as a certainty that the fewer excluded, the better the social integration and the stronger the community. In Poland, as we have already indicated in chapter 6.3, all is not well with the attitudes and behaviours that make up social capital conditioning the strength of civil society. The question arises whether the excluded can in this context come out even worse and can they have even less, compared to the whole of society, a positive attitude to democracy, an even lower trust in others and even less value the public good. Are the excluded a worse kind of citizen?

It turns out that the excluded, especially the structurally excluded, linked to low education and residence in rural areas, go together with lower than average social capital[103] and a less positive attitude to democracy (table 8.4.7). The exception is normative exclusion, as those in danger of exclusion due to conflict with the law and dependence on alcohol or drugs differ fundamental from groups under threat from other types of exclusion. As far as physical and structural exclusion limits social life and participation in cultural events, the normatively excluded often attend social meetings, more often go out to eat and slightly more often go to the cinema, theatre or concerts. They also more often than other excluded and non-excluded groups express the readiness to go abroad in search of work and less often go to church. Material exclusion only slightly limits social activity, increases the readiness to seek work abroad and limits participation in the life of the religious community. Only physical exclusion does not weaken sensitivity to the common good. All forms of exclusion increase the level prejudice[104], domination (with the exception of material domination) and egalitarianism (with the exception of normative egalitarianism). Exclusion, especially the physical kind, drastically lowers the general quality of life[105]..

Table 8.4.7. Correlation of four types of social exclusion with indicators of quality of life, social capital, sensitivity to the common good, frequency of participation in religious ceremonies and social attitudes and behaviours and the intention to emigrate

Indicators of quality of life	Type of exclusion			
	physical	structural	normative	material
Quality of life	-0.30**	-0.47**	-0.21**	-0.28**
Social capital	0.04**	-0.06**	-0.18**	-0.11**
Sensitivity to the common good	-0.04**	0.01	-0.12**	-0.04
Participation in religious ceremonies	-0.08**	0.07**	0.11**	-0.09**
Prejudice	0.01*	0.06**	0.20**	0.02**
Positive attitude to democracy	-0.04**	-0.11**	-0.18**	-0.10**
Domination	0.03**	0.06**	0.04**	0.01
Egalitarianism	0.00	0.05**	0.10**	0.06**
Intention to emigrate	0.18**	-0.14**	-0.04**	0.11**
Going to cinema, theatre or concerts	0.07**	-0.14**	-0.15**	-0.04**
Going to restaurants, cafes or pubs	0.15**	-0.21**	-0.17**	-0.03**
Going to social events	0.16**	-0.19**	-0.10**	-0.03**

* p<0.05; * p<0.01*

Different conditions of exclusion demand different programmes of social integration. It is necessary to do one thing to limit the extent of physical exclusion (mainly of the disabled and the elderly), and another to counter normative exclusion linked to crime and addiction. Dealing with structural exclusion would require the faster civilising of the polish countryside, and countering material exclusion considerable spending on reducing the sphere of extreme poverty and the activation of the professionally unemployed. There is no one recipe for an effective programme of social integration. Fortunately a

[103] See chapter 9 for a discussion of how the indicator is made up.
[104] The indicator of prejudice here is denying homosexuals the right to live according to their convictions and a negative attitude to foreigners (Annex 1, individual questionnaire 54.9 i 54.12).
[105] See chapter 9 for a discussion of how the indicator is made up

number of areas of exclusion are being reduced rapidly such as mainly low education. Indicators of crime are also falling but others of addiction are unfortunately on the rise (especially alcohol). Ahead of us there is a great danger connected to demography, the aging of society and the rise of the share of disabled in society. Therefore a programme of integration is necessary directed above all at physical exclusion. The most effective action in this area seems to be pro-family policy favouring childbirth and intergenerational solidarity, as well as more effective rehabilitation and professional activation of the disabled and persons over 50.

9. The quality of life in Poland - winners and losers

Janusz Czapiński

9.1. A plus for the Pole, a minus for the Poles

Our development, especially on an individual level, has been drastically slowed down. This is clearly visible when we compare the change in financial condition of Polish families with GNP and the central budget; between 2008 and 2010, similarly as in previous years, the Poles have been getting richer at a pace close to the growth of GDP[106], but in the last two years, equivalent household incomes fell by 3.4% though GNP at this time rose, it did so much more slowly, also state spending, after a fall between 2008 and 2010 rose slightly in the last two years (figure 9.1.1) Starting with the middle of the previous decade, budget income grew faster than the GDP and household income, mainly thanks to EU funds and loans. The latter inflated public debt, bringing it dangerously close to statutory safety limit. A fierce public debate over that issue unfolded and still is unfolding. In the light of the uncertain economic situation in the world and in our closest European surroundings, the tone of the debate has become increasingly forbidding, if not to say catastrophic. This however, has not impressed our fellow citizens to a great extent. Though the growth rate of affluence has fallen dramatically, a majority of general psychological well-being indicators continue to grow as in the best times of the economic boom. However in the consciousness of Poles symptoms of the crisis are already visible as in the last two years satisfaction with most aspects of life fell, most of all regarding future perspectives and the situation in the country, though satisfaction with the family financial situation did not change (chapter 5.2.2).

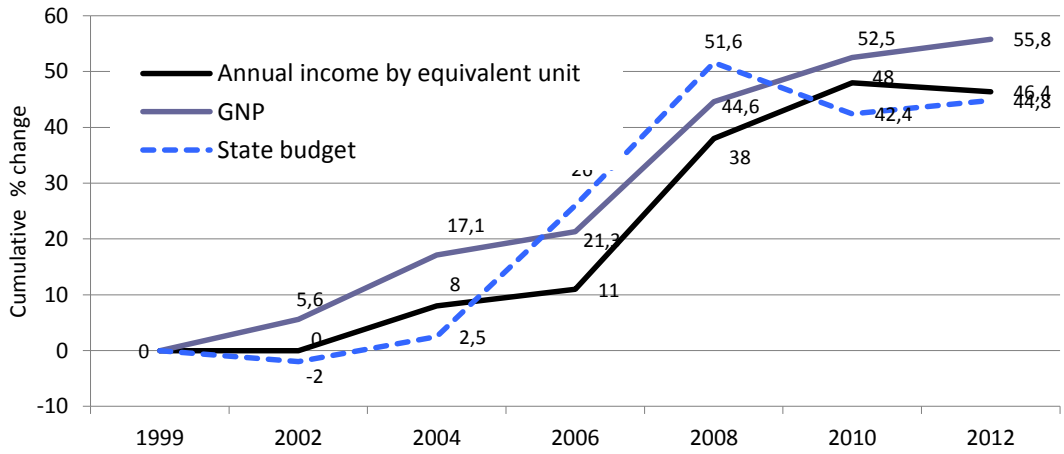


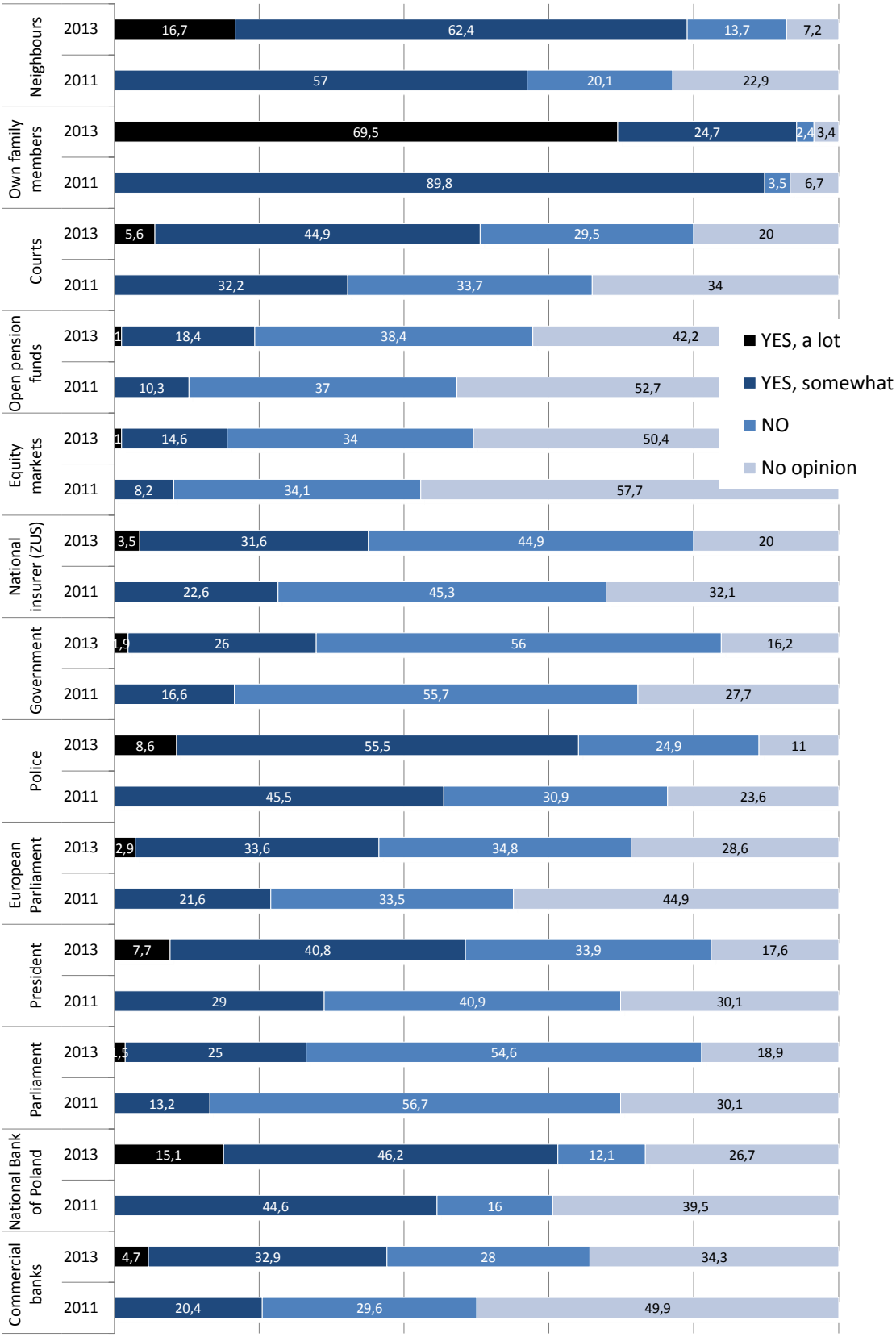
Figure 9.1.1. Cumulative percentage real value change in annual household income per equivalent unit and GDP and state budget between 1999 and 2012

Table 9.1.1. Percentage of households declaring that their stable income does not cover current needs, and percentage of Poles satisfied with the situation in the country in 1992-2013

Indicator	1992	1993	1994	1995	1996	1997	2000	2003	2005	2007	2009	2011	2013
Share of households with income too low to cover current needs	70.6	74.2	68.8	64.5	64.8	66.2	46.7	42.3	37.0	30.2	28.0	25.7	24.8
Share of satisfied with the situation in the country	9.4	8.2	11.2	16.4	20.1	25.7	19.7	14.1	12.6	19.3	27.0	26.0	23.5

Data source: 1992-1997 — Czapiński, 1998; 2000-2013 — *Social Diagnosis*

[106] The data concern monthly income per equivalent unit from the year before the survey; i.e. 2010 in the case of the 2011 survey. A comparison of income from the month prior to the survey (March-April in 2011) does not reveal any such growth between 2009 and 2011 (cf. section 4.1).



NOTE: In 2013, the range of answers was very differentiated – the "YES" category was divided into "YES, a lot of trust" and "YES, moderate trust". As regards the European Parliament, and the Polish Parliament, the results of the European Social Survey of 2010 were similar.

Figure 9.1.2. Percentage declaring trust in various institutions and persons

The Poles have become fairly good at playing with the State and see less and less connection between what the authorities do and what their lives look like.

The resourcefulness of the Poles helps them improve their own existence without concern for anyone else or the condition of the wider community. The deepening rupture between citizens and their State is best illustrated by the contrast between the evaluation of the domestic situation and the percentage of respondents who live in households with income insufficient for satisfying ongoing needs (Table 9.1.1). Even though existence at the individual level has been improving systematically (the number of poor households has dropped nearly three times since 1992), we remain dissatisfied with the situation in the country (consistently since the beginning of the transition this has been the lowest indicator of satisfaction in a set of sixteen various aspects of life – cf. section 5.2).

This perfectly illustrates the progress the Poles have made in enhancing their quality of life and progress made by Poland in the eyes of its citizens. We are still developing in a molecular manner rather than collectively (Czapiński, 2008). Presumably, the fundamental reason for that is the lack of social capital (Czapiński, 2011b).

Growing individual resourcefulness is not matched by an increase in the ability to cooperate (cf. section 6.3). We are not learning to cooperate because we generally do not trust each other; we only make an exception for family members and less often for neighbours. We also do not trust institutions in general (with the exception of the NBP) (Figure 9.1.2).

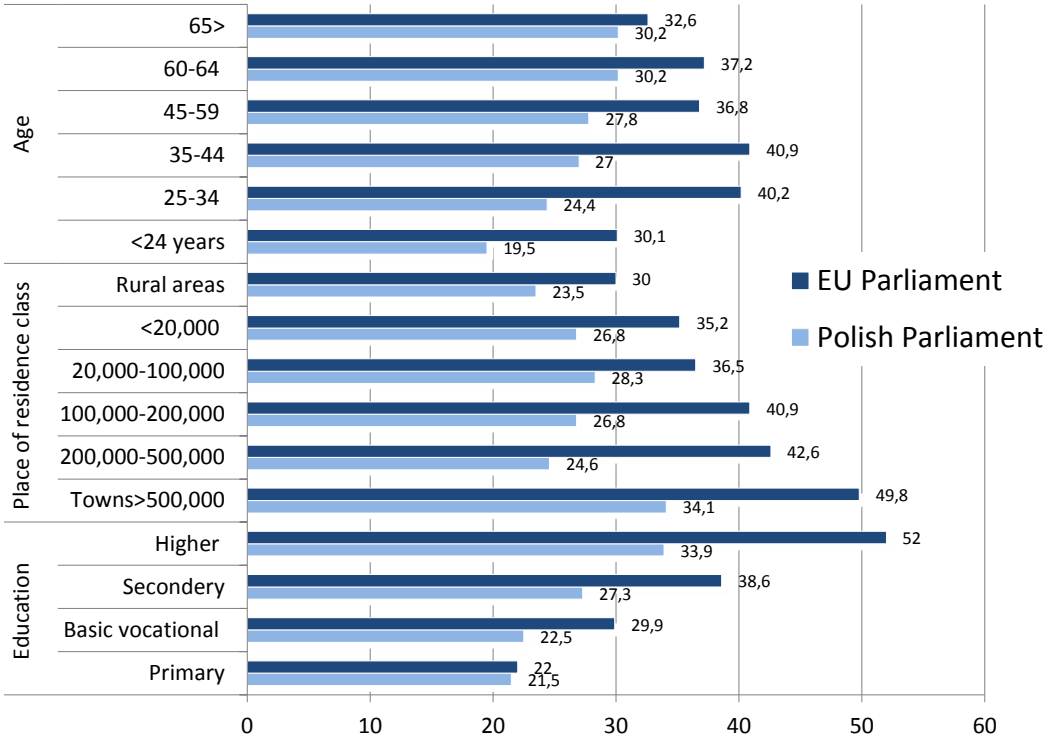


Figure 9.1.3. Trust in Polish and European Parliaments in various socio-demographic groups

Poland, after Bulgaria, is an EU Member State where the difference between confidence in the European Parliament and in the national legislative body is the greatest in favour of the former.[107] It is also alarming that in social groups which have or will have a decisive influence on the development of the country; i.e. among residents of large agglomerations, young people and the well-educated, the hiatus between confidence in national and European authorities is the greatest (Figure 9.1.3). If we want to - and in our opinion we should - develop collectively, we urgently need to introduce a special subject, provisionally called civil skills in schools and perhaps even already in kindergartens. Young Poles have a fairly good knowledge of society and in this respect they win international rankings, but at the same time they are last in the same rankings in terms of applying civil knowledge in practice. They do not know how to get organised, to cooperate, they do not get involved in volunteer activities and they are

[107] In all new EU Member States citizens place more confidence in the European Parliament rather than in the national assembly, as opposed to "old" EU countries.

as "molecular" as their parents (see www.szkolabezprzemocy.pl). Thus, they do not need classes in the standard lecture-and-textbook form, but rather such forms of education (or actually upbringing) that will show them the real benefits that come with "taking the risk" of cooperation. Without serious investments in social capital we may forget the dreams of thousands of kilometres of motorways.

Apart from schools, there are also two other milieus where one could successfully persuade fellow citizens to trust more and to cooperate; i.e. public administration offices and enterprises. Regarding offices, legal regulations and the culture of officials are the key issues. The regulations followed by officers are designed to counter potential fraud, making it impossible to stop the vicious circle of distrust. Obviously, many enterprises appreciate the value of social capital, yet most do not know how to build it. This calls for training advisors and trainers in this particular respect, HR on its own will not suffice.

9.2. Quality of life of various socio-demographic groups

It is worth concluding with one general question: how varied are Poles' living conditions and their quality of life today and how has this variation changed in the past years? Is society becoming more deeply or less stratified? For who is life easier and for who is it more difficult? Are the weak becoming even weaker and the strong even stronger?

Let us see how the multi-dimensional quality of life, which covers the most important indicators discussed separately in the chapters above, stratifies Polish society today. Can we speak of straightforward winners and losers, how big are the differences between them, and are these differences getting bigger or smaller in different dimensions of the quality of life?

When designing synthetic indicators of the quality of life, we endeavoured to strike a balance between objective and subjective indicators, as well as to take possibly the widest spectrum of various aspects into account. We distinguished eight dimensions assumed to cover independent content areas, which served to build up a general synthetic indicator of the quality of life:

- **social capital** – activity for the benefit of the local community, participation in parliamentary elections in 2011 (in 2011 participation in elections in 2010, 2009 participation in parliamentary elections in 2007, in 2007 participation in parliamentary elections and participation in the EU referendum in 2005), participation in non-obligatory meetings, positive attitude to democracy, membership in organisations and serving functions in them, the belief that most people can be trusted;
- **psychological well-being** – sense of happiness, assessment of life-as-a-whole, incidence of mental depression symptoms, assessment of the past year;
- **physical well-being** – incidence of somatic symptoms, serious disease in the past year, degree of disability, intensity of health-related stress;
- **social well-being** – lack of the feeling of loneliness, a sense of being loved and respected, number of friends;
- **civilisation level** – educational level, ownership of modern communication devices and familiarity with them (satellite or cable TV, laptop, desktop computer, mobile phone, Internet connection, computer skills, Internet use), active command of foreign languages, driving license;
- **material well-being** – household income per equivalent unit, number of goods and appliances owned, ranging from automatic washing-machine to a motorboat or summer house (excluding appliances included in the civilisation level indicator);
- **stress in life** – a sum of six categories of stress measured by experiences related to finance, work, liaison with public administration offices, bringing up children, the marriage relationship, environmental protection (home, surroundings);
- **pathology** – alcohol abuse and drug use, smoking, consulting a psychiatrist or psychologist, being a criminal or victim of crime (burglaries, assaults, thefts).

Each partial indicator was a sum of standardised component variables, each of the latter measured on a different scale. Partial indicators were then standardized themselves and the sum of their standardized values formed the general indicator of the quality of life, which in turn was also standardized at the end. In such a form, these indicators are relative in nature and only show the position of particular groups and individuals in relation to the average of the sample.

Before we go on to discuss social differences in the general indicator of the quality of life, let us see to what extent partial indicators correlate with one another, whether they form one coherent syndrome or whether similarly to exclusion indicators they constitute several relatively independent factors which make it possible for individuals and social groups to compensate for shortages in one area with a better position in other areas.

Factor analysis with varimax rotation reveals two independent explanatory factors in four waves, which together explain a total of approx. 50% of variance in partial indicators (Table 9.2.1). The first factor, which explains the greatest proportion of variance (approx. 30%), may be described as civilisation-related living conditions (shortened to living conditions); these are mainly defined by the civilisation level and material well-being, but they also include social capital, physical well-being and psychological well-being. The other factor, which explains 18% to 19% of variation, is lifestyle mainly defined by stress in life, social well-being and pathology. It shares two aspects with the category of living conditions, namely psychological well-being and physical well-being. Thus, (mental and physical) health is determined both by living conditions and by lifestyle.

This pattern of results confirms the statement that there is no single dimension of the quality of life in Poland at present. Thus, the less well-off are not very modern and show little social activity, but may nevertheless enjoy other favours of fate: absence of pathology, little stress and considerable social support.

However, the above-mentioned independence of two factors of the quality of life at the level of the individuals may disappear or radically diminish in cross-section by socio-demographic group. It is not impossible that some segments of society suffer, like the biblical Job, all possible calamities while others enjoy the good life in all its aspects. In order to see whether this indeed is the case, we specified the position on the scale of one general and eight specific aspects of the quality of life of 197 groups determined by a range of not fully separable demographic and social criteria such as age, gender, educational level, class of place of residence, Voivodeship, subregion, town, family type, social and professional status, occupation as currently pursued and marital status. The results are presented in Tables 9.2.2 to 9.2.9 (general indicator of the quality of life in 2011, 2009, 2007 and 2005) and in Tables 1-8 in Annex 6 (partial indicators of the quality of life in 2013).

Table 9.2.1. Results of factor analysis with varimax rotation for aspects of quality of life

Aspects of quality of life	Factor loadings									
	Standard of living					Lifestyle				
	2013	2011	2009	2007	2005	2013	2011	2009	2007	2005
Civilisation level	0.854	0.848	0.851	0.845	0.832					
Material well-being	0.749	0.747	0.742	0.720	0.722					
Social capital	0.524	0.461	0.497	0.481	0.528					
Physical well-being	0.413	0.492	0.508	0.514	0.448	0.466	0.449	0.441	0.422	0.481
Psychological well-being	0.558	0.604	0.619	0.609	0.560	0.622	0.607	0.592	0.599	0.653
Social well-being						0.442	0.577	0.595	0.628	0.612
Life stress						-0.720	-0.690	-0.659	-0.673	-0.643
Pathologies						-0.553	-0.546	-0.547	-0.524	-0.559
Percentage of explained variance	30.2	31.2	31.8	30.4	29.8	18.2	18.7	18.2	18.4	19.4

NOTE: factor-loadings over 0.4 only.

Despite the fact that particular groups have different positions in respect of individual partial aspects, the general indicator of the quality of life clearly shows for whom life is good at present in Poland and for whom it is difficult, who has recently experienced an improvement and for whom there has been a deterioration. Undoubted beneficiaries include those with higher education, young people, entrepreneurs, residents of the largest cities (e.g. of Warsaw, Poznań, Kraków), the Małopolskie, Pomorskie, Opolskie, Mazowieckie and Wielkopolskie Voivodeships, the Tyski, Trójmiejski, Słupski, Opolski, Gdański, Warszawski Zachodni subregions, university teachers, civil servant, directors and engineers. The poorest quality of life is definitely experienced by pensioners those with primary education, widowed persons, the elderly (aged 65 years and above), those who live on their own, divorcees and unemployed persons, residents of the Świętokrzyskie, Lubuskie, Warmińsko-Mazurskie Voivodeships, of Włocławek, Sosnowiec, Wałbrzych, the Radomski, Sandomiersko-Jędrzejowski and Wałbrzyski subregions, farmers who produce for their own needs only.

However, the question arises as to how durable these differences are. Do they remain the same, or are they growing or perhaps diminishing? A comparison of data from a few measurements proves that the ranking of quality of life is essentially stable. Few groups have changed their position to an extent that could be deemed statistically significant.

Table 9.2.2. General indicator of the quality of life between 2005 - 2011 in entire samples n by socio-demographic group

Ranking					Socio-demographic group	Quality of life				
2013	2011	2009	2007	2005		2013	2011	2009	2007	2005
1	1	1	1	2	Higher and post-secondary education	0.68	0.60	0.65	0.65	0.62
2	2	2	2	1	School and university students	0.56	0.56	0.53	0.56	0.63
3	3	3	3	4	Private entrepreneurs	0.52	0.48	0.50	0.49	0.45
4	5	4	4	5	18-24 year-olds	0.49	0.41	0.46	0.44	0.44
5	4	5	5	3	Public sector workers	0.34	0.43	0.41	0.40	0.48
6	6	6	6	7	25-34 year-olds	0.30	0.35	0.38	0.33	0.30
7	7	7	9	13	Towns of over 500,000 residents	0.27	0.31	0.28	0.20	0.11
8	8	8	8	9	Couples with 2 children	0.25	0.27	0.25	0.24	0.21
9	11	11	11	12	Couples with 1 child	0.19	0.17	0.22	0.15	0.13
10	12	13	19	21	35-44 year-olds	0.18	0.16	0.15	0.03	-0.03
11	10	9	12	8	Private sector workers	0.16	0.18	0.25	0.11	0.21
12	9	10	7	6	Unmarried singles	0.16	0.22	0.22	0.26	0.32
13	13	12	10	10	Middle education	0.13	0.12	0.18	0.17	0.20
14	16	16	14	15	Towns of 200,000-500,000	0.12	0.06	0.08	0.07	0.09
15	14	14	17	17	Couples with 3 or more children	0.11	0.08	0.10	0.03	0.03
16	15	15	18	20	Married couples	0.10	0.08	0.09	0.03	-0.01
17	17	17	15	14	Man	0.04	0.06	0.07	0.06	0.09
18	20	20	22	18	Childless couples	0.04	-0.01	0.01	-0.05	0.02
19	18	21	21	19	Multi-family households	0.00	0.02	-0.02	0.01	0.00
20	21	19	20	22	Towns of 20,000-100,000	-0.01	-0.02	0.04	0.02	-0.06
21	19	22	16	16	Towns of less than 20,000	-0.02	0.00	-0.03	0.03	0.09
22	22	18	13	11	Towns of 100,000-200,000	-0.02	-0.04	0.04	0.10	0.18
23	24	25	24	26	Farmers	-0.04	-0.05	-0.11	-0.06	-0.13
24	23	23	23	23	Women	-0.04	-0.05	-0.06	-0.05	-0.07
25	26	26	25	24	Rural areas	-0.09	-0.10	-0.12	-0.12	-0.09
26	28	27	27	27	45-59 year-olds	-0.11	-0.15	-0.15	-0.16	-0.16
27	25	24	33	36	Non-family multi-person households	-0.19	-0.09	-0.09	-0.40	-0.63
28	30	30	29	29	60-64 year-olds	-0.22	-0.24	-0.27	-0.21	-0.28
29	29	28	26	25	Basic education	-0.24	-0.16	-0.17	-0.14	-0.11
30	27	29	28	28	Other passive labour	-0.26	-0.15	-0.19	-0.18	-0.21
31	33	33	31	31	Retirees	-0.30	-0.39	-0.39	-0.33	-0.31
32	31	32	30	30	Incomplete families	-0.33	-0.27	-0.36	-0.30	-0.30
33	32	31	32	32	Unemployed	-0.40	-0.33	-0.35	-0.40	-0.35
34	35	34	36	35	Non-family single-person	-0.46	-0.57	-0.53	-0.58	-0.56
35	36	36	35	33	65+ year-olds	-0.47	-0.61	-0.62	-0.53	-0.50
36	34	35	34	34	Divorced	-0.53	-0.52	-0.56	-0.44	-0.52
37	37	37	37	38	Widowed	-0.66	-0.72	-0.73	-0.71	-0.69
38	39	38	39	39	Pensioners	-0.76	-0.88	-0.82	-0.77	-0.80
39	38	39	38	37	Basic education	-0.86	-0.86	-0.85	-0.76	-0.68

In the last eight years there have not been greater changes in the highest and lowest quality of life groups. Only the residents of the largest cities advanced (from 13th to 7th place) and persons between 35 and 44 (from 21st to 10th place), while over this time the quality of life of the unmarried, dwellers of towns of 100-200 thousand residents and the smallest towns (less that 20 thousand). In the last two years of panel sample there are practically no changes in the ranking of socio-demographic groups' quality of life.

As far as professional groups are concerned, in the panel sample for the last two years the following advanced: academic teachers (from 4th to 2nd place), post-primary school teachers (from 11th to 7th place), nurses and midwifes (from 24th to 16th place), cooks (from 43rd to 31st place), security staff (police and wardens etc. from 42nd to 35th place), while the following dropped in the ranking: civil servants (from 16th to 19th place), railway staff (18th to 26th place), hairdressers and cosmeticians (from 26th to 36th place) and food processing workers (36th to 45th place).

Table 9.2.3. General indicators of quality of life in panel samples from 2011-2013 by socio-demographic group

Ranking		Socio demographic group	Average	
2013	2011		2013	
1	1	Higher education	0.69	0.58
2	2	Pupils and students	0.61	0.56
3	3	Private entrepreneurs	0.56	0.54
4	5	Public sector worker	0.46	0.40
5	4	Age 16-24	0.39	0.42
6	6	Age 25-34	0.34	0.33
7	7	Towns of 500,000 and more	0.26	0.24
8	8	Married couples with 2 children	0.25	0.24
9	11	Married couples with 1 child	0.18	0.17
10	12	Unmarried man/woman	0.18	0.14
11	9	Age 35-44	0.17	0.20
12	10	Private sector workers	0.15	0.19
13	13	Secondary education	0.12	0.10
14	14	Married couples with 3 or more	0.10	0.09
15	17	Towns of 200-500,000	0.09	0.02
16	15	Married man/woman	0.06	0.08
17	18	Man	0.03	0.02
18	16	Multifamily	0.00	0.03
19	23	Towns of 20-100,000	-0.02	-0.04
20	24	Towns of 100-200,000	-0.03	-0.04
21	25	Towns below 20,000	-0.05	-0.02
22	22	Married couple without children	-0.06	-0.05
23	20	Woman	-0.08	-0.09
24	21	Farmers	-0.09	-0.08
25	19	Age 45-59	-0.10	-0.10
26	26	Rural areas	-0.14	-0.14
27	29	Age 60-64	-0.24	-0.27
28	28	Basic education	-0.27	-0.24
29	27	Others professionally passive	-0.29	-0.22
30	30	Numerous non-family	-0.29	-0.31
31	31	Pensioners	-0.32	-0.35
32	33	Incomplete families	-0.33	-0.33
33	32	Unemployed	-0.40	-0.29
34	34	Divorced	-0.48	-0.53
35	36	Age 65+	-0.48	-0.51
36	35	Single non-family	-0.55	-0.64
37	37	Widowed	-0.67	-0.71
38	38	Retirees	-0.75	-0.82
39	39	Primary education	-0.85	-0.86

Table 9.2.4. Quality of life of professional groups in entire samples for 2011-2013

Ranking		Professional group	Average	
2013	2011		2013	2011
1	1	Chief executives, senior officials and legislators	1.29	1.32
2	4	Academic teachers	1.21	0.98
3	10	Other specialisations	1.06	0.74
4	2	Doctors, vets, dentists	1.05	1.06
5	3	Lawyers	1.00	1.02
6	8	Creative, artists, writers, journalists	0.98	0.79
7	9	Administration specialists and managers	0.96	0.78
8	6	Engineers, architects, designers etc.	0.91	0.82
9	12	Non-primary school teachers	0.91	0.71
10	13	Drivers of various specialisations	0.86	0.69
11	16	Professional soldiers	0.85	0.56
12	7	Marketing specialists	0.79	0.80
13	14	Primary school teachers	0.79	0.67
14	5	IT and similar	0.73	0.88
15	11	Financial specialists	0.71	0.73
16	18	Other health service workers	0.65	0.48
17	19	Business salespersons	0.50	0.47
18	20	Other middle personnel	0.45	0.41
19	15	Civil servants	0.44	0.64
20	21	Nursing and midwifery professionals	0.41	0.39
21	24	Middle financial personnel	0.41	0.36
22	17	Technicians	0.30	0.51
23	22	Office service staff	0.30	0.39
24	29	Electricians and electronics specialists	0.26	0.17
25	40	Mining machines operators	0.19	0.02
26	33	Drivers of personal and delivery vehicles	0.17	0.14
27	37	Mechanics	0.17	0.10
28	23	Railway workers	0.15	0.38
29	34	Material recording and transport clerks	0.12	0.13
30	25	Hairdressers and beauticians	0.11	0.34
31	36	Bus and truck drivers	0.11	0.12
32	31	Waiters, barmen and stewards	0.09	0.14
33	42	Security service staff (firemen, police etc.)	0.09	-0.03
34	27	Shop assistants	0.06	0.20
35	50	Cooks	0.06	-0.19
36	26	Steel-mill workers	0.04	0.28
37	28	Arable farmers	0.04	0.18
38	45	Craftsmen	0.04	-0.07
39	35	Smelters and welders	0.01	0.12
40	41	Painters and decorators	-0.02	-0.01
41	32	Other personal service workers	-0.03	0.14
42	38	Other machine operators	-0.03	0.04
43	47	Assembly workers	-0.05	-0.11
44	30	Carpenters, paper and pulp workers	-0.06	0.15
45	43	Interior decorators	-0.06	-0.03
46	44	Blacksmiths and laith operators	-0.11	-0.03
47	48	Arible and cattle farmers	-0.11	-0.13
48	49	Construction workers	-0.14	-0.14
49	39	Food-processing workers	-0.15	0.02
50	54	Otherwise unclassified workers	-0.17	-0.42
51	53	Subsistence farmers	-0.21	-0.41
52	52	Personal care workers	-0.23	-0.24
53	46	Textile workers	-0.25	-0.07
54	55	Helpers and cleaners	-0.35	-0.42
55	51	Other physical labourers	-0.38	-0.20
56	56	Auxiliary workers in mining and construction	-0.57	-0.55

Table 9.2.5. Quality of life by professional groups in the 2011-2013 panel samples

Ranking		Professional group	Average	
2013	2011		2013	2011
1	1	Chief executives, senior officials and	1,37	1,24
2	4	Academic teachers	1,28	0,86
3	2	Lawyers	1,11	0,94
4	3	Physicians, veterinaries, dentists	1,01	0,92
5	5	Engineers, architects, designers and	0,97	0,83
6	7	Administration and management	0,96	0,74
7	11	Secondary school teachers	0,89	0,66
8	9	Various drivers	0,88	0,69
9	6	Marketing specialists	0,84	0,81
10	8	Primary school teachers	0,82	0,71
11	13	Financial specialists	0,67	0,56
12	10	IT specialists and related	0,66	0,68
13	12	Other healthcare specialists	0,52	0,61
14	15	Business salespersons	0,49	0,45
15	17	Other middle personnel	0,49	0,45
16	24	Nurses and midwives	0,42	0,32
17	19	Middle financial personnel	0,41	0,38
18	20	Technicians	0,40	0,35
19	16	Civil servants	0,35	0,45
20	21	Office workers	0,35	0,35
21	14	Waiters, bartenders and stewards	0,33	0,54
22	30	Mining machines operators	0,23	0,12
23	22	Electricians and electronical engineers	0,21	0,35
24	27	Material recording and transport clerks	0,20	0,19
25	23	Mechanics	0,18	0,34
26	18	Railway workers	0,17	0,41
27	25	Truck and bus drivers	0,13	0,31
28	28	Personal and delivery vehicle drivers	0,13	0,17
29	29	Arable farmers	0,13	0,15
30	35	Painters and decorators	0,12	-0,02
31	43	Cooks	0,07	-0,13
32	31	Machinery operators	0,05	0,12
33	32	Manual labourers	0,05	0,12
34	33	Shop assistants	0,05	0,11
35	42	Security staff (firemen, police etc.)	0,04	-0,09
36	26	Hairdressers, beauticians	-0,05	0,22
37	37	Interior decorators	-0,06	-0,04
38	34	Carpenters, paper and pulp workers	-0,07	0,09
39	44	Smelters and welders	-0,07	-0,13
40	40	Assembly workers	-0,10	-0,07
41	38	Steel-mill workers	-0,14	-0,05
42	39	Construction workers	-0,15	-0,06
43	46	Arable and cattle farmers	-0,15	-0,16
44	47	Otherwise unclassified workers	-0,15	-0,18
45	36	Food processing workers	-0,16	-0,03
46	41	Personal care workers	-0,21	-0,09
47	45	Textile production workers	-0,28	-0,15
48	48	Subsistence farmers	-0,30	-0,20
49	49	Helpers and cleaners	-0,38	-0,29

Table 9.2.6. General indicator of quality of life in entire samples from 2001 - 2013 by larger towns represented by at least 60 respondents

Ranking			Town	Average		
2013	2011	2009		2013	2011	2009
1	2	1	Toruń	0,44	0,41	0,42
2	1	2	Warszawa	0,42	0,47	0,42
3	3	4	Poznań	0,40	0,37	0,33
4	4	5	Kraków	0,35	0,36	0,29
5	5	13	Jaworzno	0,35	0,32	0,18
6	6	3	Gdynia	0,35	0,26	0,35
7	17	10	Olsztyn	0,28	-0,04	0,21
8	10	6	Gdańsk	0,27	0,11	0,27
9	11	7	Gorzów Wlk.	0,21	0,09	0,25
10	7	9	Szczecin	0,20	0,23	0,23
11	13	19	Katowice	0,20	0,01	-0,04
12	18	11	Rzeszów	0,16	-0,05	0,20
13	9	8	Wrocław	0,13	0,13	0,24
14	14	12	Lublin	0,12	-0,01	0,19
15	19	23	Zabrze	0,09	-0,06	-0,10
16	25	22	Kielce	0,08	-0,23	-0,09
17	8	14	Bydgoszcz	0,05	0,14	0,09
18	12	17	Łódź	0,03	0,09	-0,03
19	23	16	Gliwice	0,01	-0,14	0,07
20	20	24	Białystok	-0,02	-0,06	-0,12
21	26	25	Radom	-0,12	-0,24	-0,23
22	21	18	Bielsko-Biała	-0,13	-0,12	-0,03
23	15	15	Częstochowa	-0,14	-0,02	0,08
24	22	20	Wałbrzych	-0,15	-0,13	-0,06
25	16	21	Sosnowiec	-0,20	-0,03	-0,08
26	24	26	Włocławek	-0,21	-0,17	-0,43

Table 9.2.7. General indicator of quality of life in entire samples from 2001 - 2013 by larger towns represented by at least 50 respondents

Ranking		Town	Average	
2013	2011		2013	2011
1	3	Toruń	0,79	0,38
2	2	Warszawa	0,45	0,40
3	4	Jaworzno	0,40	0,30
4	1	Poznań	0,34	0,48
5	6	Kraków	0,33	0,26
6	5	Szczecin	0,31	0,27
7	9	Gdańsk	0,28	0,08
8	10	Gorzów Wlk.	0,26	0,06
9	8	Gdynia	0,24	0,13
10	11	Olsztyn	0,18	0,04
11	12	Opole	0,14	0,04
12	13	Katowice	0,13	0,03
13	17	Zabrze	0,11	-0,02
14	14	Wrocław	0,09	0,03
15	7	Bydgoszcz	0,04	0,24
16	15	Łódź	0,02	0,03
17	19	Białystok	-0,02	-0,08
18	20	Lublin	-0,05	-0,10
19	18	Gliwice	-0,08	-0,02
20	16	Sosnowiec	-0,13	-0,01
21	24	Radom	-0,15	-0,24
22	21	Częstochowa	-0,19	-0,12
23	26	Kielce	-0,21	-0,40
24	22	Bielsko-Biała	-0,24	-0,5
25	25	Ruda Śląska	-0,25	-0,30
26	23	Wałbrzych	-0,29	-0,16

Table 9.2.8. General indicator of quality of life between 2005 and 2013 by Voivodeship in entire samples

Ranking					Voivodeship	Average				
2013	2011	2009	2007	2005		2013	2011	2009	2007	2005
1	3	5	5	5	Małopolskie	0,15	0,07	0,04	0,05	0,05
2	4	1	1	1	Pomorskie	0,15	0,06	0,12	0,20	0,22
3	6	2	3	3	Opolskie	0,09	0,02	0,12	0,08	0,13
4	1	6	6	6	Mazowieckie	0,05	0,10	0,04	0,05	0,04
5	2	3	2	2	Wielkopolskie	0,02	0,07	0,10	0,14	0,16
6	5	8	4	8	Śląskie	0,01	0,03	0,03	0,07	0,03
7	8	11	9	9	Podkarpackie	-0,01	-0,02	-0,08	-0,06	-0,02
8	9	7	13	7	Zachodniopomorskie	-0,01	-0,06	0,04	-0,11	0,04
9	13	14	16	16	Lubelskie	-0,02	-0,08	-0,17	-0,27	-0,28
10	7	4	7	4	Dolnośląskie	-0,03	0,01	0,06	-0,01	0,11
11	14	13	8	11	Podlaskie	-0,04	-0,09	-0,15	-0,02	-0,12
12	12	10	14	15	Kujawsko-pomorskie	-0,05	-0,08	-0,03	-0,15	-0,16
13	11	12	11	13	Łódzkie	-0,08	-0,07	-0,11	-0,07	-0,15
14	10	9	10	10	Warmińsko-mazurskie	-0,09	-0,07	-0,03	-0,07	-0,08
15	15	16	12	12	Lubuskie	-0,10	-0,13	-0,20	-0,09	-0,13
16	16	15	15	14	Świętokrzyskie	-0,21	-0,27	-0,18	-0,22	-0,15

Table 9.2.9. General indicator of quality of life by Voivodeship in 2011 and 2013 panel samples

Ranking		Voivodeship	Average	
2013	2011		2013	2011
1	2	Małopolskie	0,09	0,03
2	5	Pomorskie	0,09	0,00
3	6	Opolskie	0,05	-0,03
4	1	Wielkopolskie	0,00	0,07
5	3	Mazowieckie	0,00	0,03
6	4	Śląskie	0,00	0,02
7	8	Zachodniopomorskie	-0,04	-0,04
8	9	Warmińsko-mazurskie	-0,05	-0,07
9	12	Kujawsko-pomorskie	-0,06	-0,10
10	7	Dolnośląskie	-0,08	-0,04
11	11	Podkarpackie	-0,08	-0,09
12	14	Lubuskie	-0,09	-0,15
13	10	Łódzkie	-0,10	-0,08
14	13	Podlaskie	-0,10	-0,13
15	15	Lubelskie	-0,10	-0,17
16	16	Świętokrzyskie	-0,23	-0,24

In the last 6 years the quality of life of residents of the following towns improved: Katowice, Zabrze, Jaworzno, Kielce, Białystok and Olsztyn. The quality of life at this time deteriorated in Wrocław, Bydgoszcz, Częstochowa, Wałbrzych and Sosnowieć. In the last two years of panel sample the following advanced: Toruń. Gdańsk and Gorzów Wielkopolski while the following retreated: Bydgoszcz, Sosnowiec and Wałbrzych

In terms of Voivodeship the quality of life most increased for the residents of Małopolskie in the period of the last eight years and most deteriorated for that of Wielkopolskie and Dolnośląskie. In the last two years, the Voivodeship that advanced in panel samples were Małpolska and Pomorze, and those that fell the most were Opolskie, Wielkopolskie, Dolnośląskie and Łódzkie. The subregions that most advanced in panel samples for the last two years were Gdańskie (from 31st to 17th place), Nyskie (from 43rd to 29th place), Lubelskie (27th to 14th place), Gliwickie (29th to 16th place), Rzeszowskie (22nd to 10th place), Opolskie (17th to 6th place) and Słupskie (10th to 5th place). The quality of life most fell in the following subregions: Łódzki, Starogardski, Bytomski and Jeleniogórski.

Table 9.2.10. Quality of life in entire samples from 2011 and 2013 by subregion (NUTS3)

Ranking		Subregion	Average	
2013	2011		2013	2011
1	4	Trójmiejski	0,30	0,17
2	1	Tyski	0,28	0,25
3	11	Słupski	0,21	0,09
4	12	Opolski	0,20	0,09
5	31	Gdański	0,16	-0,03
6	2	Warszawski-zachodni	0,14	0,21
7	16	Tarnowski	0,13	0,07
8	7	Bydgosko-toruński	0,12	0,15
9	33	Krakowski	0,12	-0,05
10	5	Rybnicki	0,10	0,16
11	25	Lubelski	0,08	0,00
12	13	Rzeszowski	0,07	0,08
13	10	Jeleniogórski	0,06	0,10
14	29	Białostocki	0,06	-0,02
15	37	Gliwicki	0,04	-0,08
16	14	Elbląski	0,03	0,08
17	15	Warszawski-wschodni	0,03	0,07
18	17	Wrocławski	0,03	0,04
19	20	Bielski	0,03	0,03
20	22	Nowosądecki	0,03	0,01
21	3	Poznański	0,02	0,19
22	28	Sosnowiecki	0,01	-0,02
23	27	Krośnieński	0,00	-0,01
24	19	Kaliski	-0,01	0,03
25	30	Puławski	-0,02	-0,03
26	36	Katowicki	-0,02	-0,08
27	41	Stargardzki	-0,02	-0,13
28	47	Bialski	-0,02	-0,18
29	9	Legnicko-głogowski	-0,03	0,11
30	23	Leszczyński	-0,03	0,01
31	24	Przemyski	-0,03	0,00
32	21	Pilski	-0,04	0,02
33	34	Gorzowski	-0,04	-0,06
34	43	Oświęcimski	-0,04	-0,16
35	6	Łódzki	-0,05	0,15
36	51	Szczeciński	-0,06	-0,20
37	35	Nyski	-0,07	-0,07
38	8	Bytomski	-0,08	0,14
39	40	Łomżyński	-0,08	-0,11
40	32	Skierniewicki	-0,09	-0,04
41	42	Koniński	-0,09	-0,13
42	45	Tarnobrzeski	-0,09	-0,17
43	44	Chełmsko-zamojski	-0,11	-0,16
44	46	Ciechanowsko-płocki	-0,11	-0,17
45	38	Ostrołęcko-siedlecki	-0,12	-0,09
46	50	Włocławski	-0,13	-0,20
47	18	Częstochowski	-0,14	0,04
48	49	Zielonogórski	-0,14	-0,20
49	55	Grudziądzki	-0,14	-0,26
50	26	Starogardzki	-0,15	-0,01
51	48	Koszaliński	-0,15	-0,19
52	52	Suwalski	-0,15	-0,21
53	53	Kielecki	-0,17	-0,22
54	54	Olsztyński	-0,17	-0,24
55	57	Piotrkowski	-0,17	-0,28
56	59	Sieradzki	-0,18	-0,35
57	39	Ełcki	-0,21	-0,09
58	56	Wałbrzyski	-0,26	-0,27
59	60	Sandomiersko-jędrzejowski	-0,27	-0,37
60	58	Radomski	-0,28	-0,33

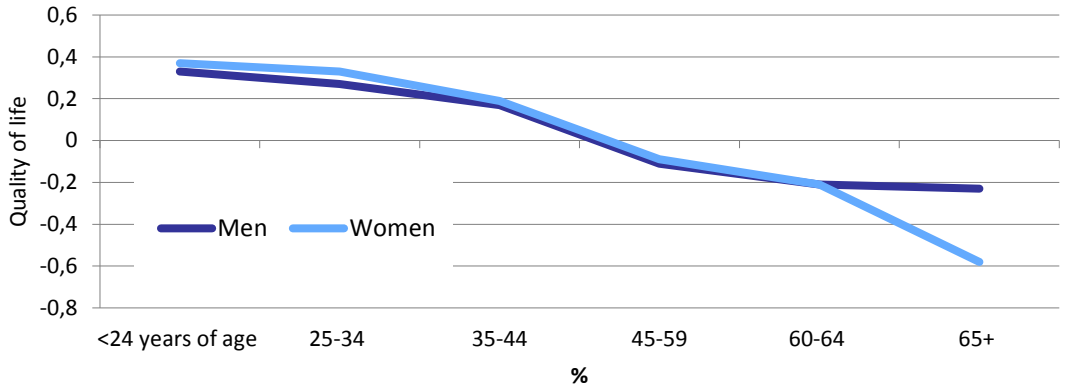
Table 9.2.11. Quality of life in panel samples for 2011 and 2013 by subregion (NUTS3)

Ranking		Subregion	Average	
2013	2011		2013	2011
1	2	Bydgosko-toruński	0,31	0,24
2	5	Rybnicki	0,31	0,19
3	3	Tyski	0,26	0,22
4	8	Trójmiejski	0,25	0,13
5	10	Słupski	0,16	0,09
6	17	Opolski	0,15	0,00
7	1	Warszawski-zachodni	0,14	0,29
8	9	Elbląski	0,12	0,12
9	19	Sosnowiecki	0,10	0,00
10	22	Rzeszowski	0,10	-0,02
11	7	Legnicko-głogowski	0,09	0,16
12	13	Tarnowski	0,09	0,03
13	14	Poznański	0,06	0,02
14	27	Lubelski	0,06	-0,06
15	21	Białostocki	0,05	-0,01
16	29	Gliwicki	0,05	-0,06
17	31	Gdański	0,05	-0,08
18	4	Bytomski	0,02	0,19
19	15	Wrocławski	0,01	0,01
20	24	Gorzowski	0,01	-0,05
21	12	Kaliski	0,00	0,04
22	16	Nowosądecki	0,00	0,01
23	25	Ciechanowsko-płocki	-0,03	-0,05
24	34	Szczeciński	-0,03	-0,09
25	33	Koniński	-0,04	-0,09
26	20	Leszczyński	-0,05	0,00
27	30	Krośnieński	-0,05	-0,08
28	39	Warszawski-wschodni	-0,06	-0,15
29	43	Nyski	-0,06	-0,16
30	35	Skierniewicki	-0,07	-0,10
31	36	Ełcki	-0,07	-0,11
32	18	Bielski	-0,08	0,00
33	44	Krakowski	-0,08	-0,18
34	11	Jeleniogórski	-0,10	0,08
35	23	Puławski	-0,10	-0,05
36	41	Stargardzki	-0,10	-0,15
37	42	Bialski	-0,10	-0,16
38	6	Łódzki	-0,14	0,18
39	26	Przemyski	-0,14	-0,05
40	49	Włocławski	-0,14	-0,24
41	28	Częstochowski	-0,16	-0,06
42	37	Pilski	-0,17	-0,12
43	40	Ostrołęcko-siedlecki	-0,17	-0,15
44	51	Zielonogórski	-0,17	-0,25
45	38	Katowicki	-0,18	-0,14
46	32	Starogardzki	-0,19	-0,08
47	55	Oświęcimski	-0,19	-0,32
48	48	Łomżyński	-0,20	-0,21
49	52	Sieradzki	-0,20	-0,25
50	53	Sandomiersko-jędrzejowski	-0,23	-0,28
51	58	Kielecki	-0,23	-0,34
52	46	Grudziądzki	-0,24	-0,20
53	47	Chełmsko-zamojski	-0,25	-0,20
54	56	Tarnobrzeski	-0,26	-0,32
55	45	Koszaliński	-0,28	-0,19
56	57	Piotrkowski	-0,28	-0,34
57	50	Wałbrzyski	-0,33	-0,25
58	54	Suwalski	-0,33	-0,30
59	59	Olsztyński	-0,34	-0,34
60	60	Radomski	-0,41	-0,41

The categories of respondents as defined by some of the criteria may differ only apparently in the sense that they are determined by some other criterion of division into groups correlated with a given group. Gender may serve as an example here. In all waves men score higher in terms of the value of the

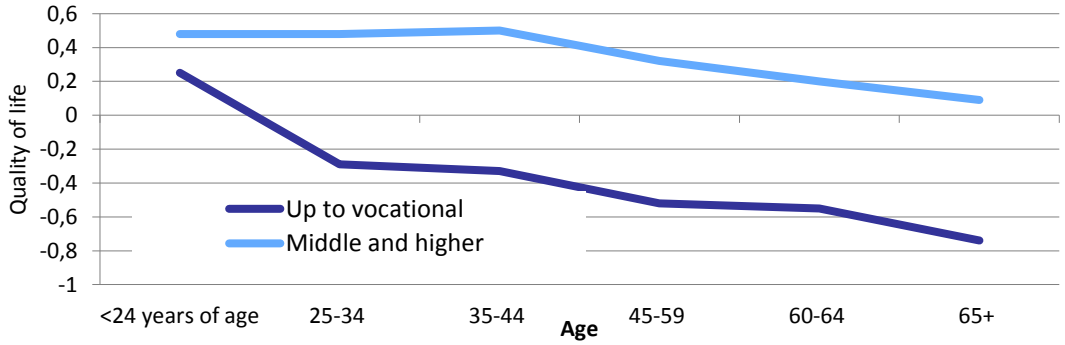
indicator of the quality of life. This, however, may result from the fact that women live longer and the quality of life deteriorates with age. Indeed, in the 2013 sample women's average life expectancy was more than 3 years longer than that of men while in the eldest group (65 years and above), where the quality of life is the worst, the proportion of women is nearly twice as large as that of men (62% to 38%). Results of the analysis of variance prove that indeed, the difference between men and women in respect of the quality of life is primarily determined by age (Figure 9.2.1). Only in the group of the eldest people is men's quality of life considerably better than that of women[108]; in other age groups, gender does not differentiate the quality of life.

The differentiating role of the age variable in respect of the quality of life may also be inflated due to the fact that in Poland there is a strong correlation between age and the level of education[109], with the latter certainly important for the quality of life. The question therefore is whether the low quality of life of the elderly is only attributable to their age, or maybe also to the fact that on average they are much worse educated than younger people. It turns out that the indicator for determinative role of age in the regression analysis decreases nearly three times (from 13.1% to 4.6% of independently explained variance in the quality of life) when the equation is expanded to also include the level of education as well. The analysis of variance reveals a significant effect of interaction of age and educational level in respect of the quality of life (Figure 9.2.2). Higher education clearly mitigates the negative impact of age on the quality of life; the difference between those with better and poorer education in the eldest group is nearly four times as big as in the youngest group, which is mainly due to the fact that the quality of life changes considerably with age among those with poor education and virtually does not change among those with better education.



NOTE: main effect of age $F(5, 21294)=333{,}732$, $p<0.000$, $\eta^2= 0.073$; main effect of gender $F(1, 21294)=5.132$, $p<0.01$, $\eta^2= 0.000$; effect of age and gender interaction $F(5, 21294)=23{,}170$, $p<0.000$, $\eta^2= 0.005$.

Figure 9.2.1. General indicator of the quality of life by age and gender



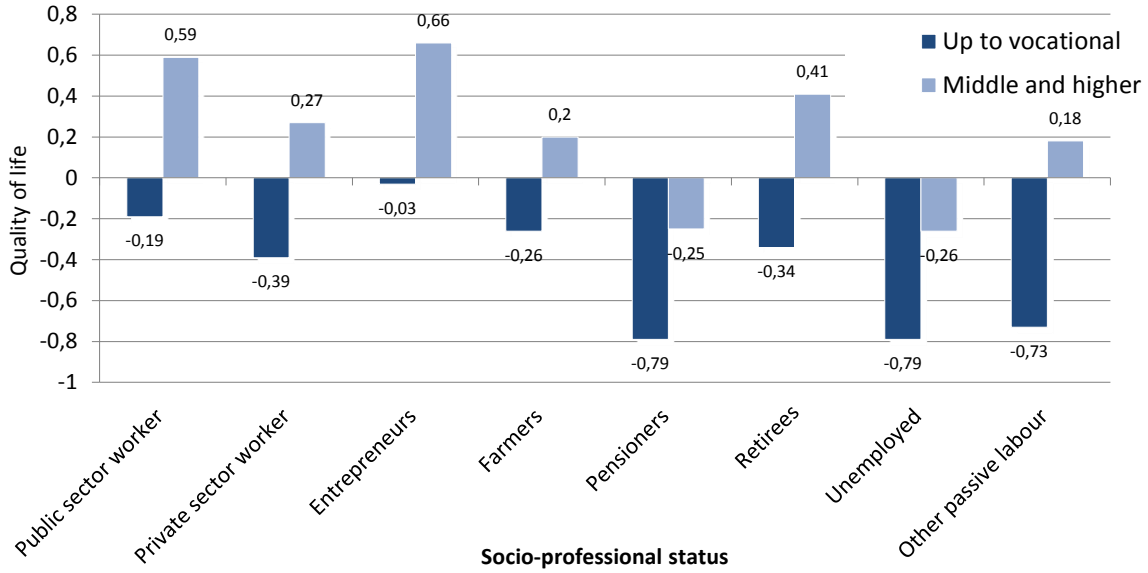
NOTE: main effect of age $F(5, 21232)=220{,}607$, $p<0.000$, $\eta^2= 0.049$; main effect of education $F(1, 21232)=2731.491$, $p<0.000$, $\eta^2= 0.144$; effect of age and education interaction $F(5, 222232)=51{,}636$, $p<0.000$, $\eta^2= 0.012$.

Figure 9.2.2. General indicator of quality of life by age and level of educational with control for gender

[108] Average age of women in this group is more than one year more than that of men.

[109] The correlation coefficient of age and educational level as measured by the number of years of schooling (together with those who have not completed education yet) amounts to -0.303 in the entire sample and to -0.441 in the sample of those who have already completed education .

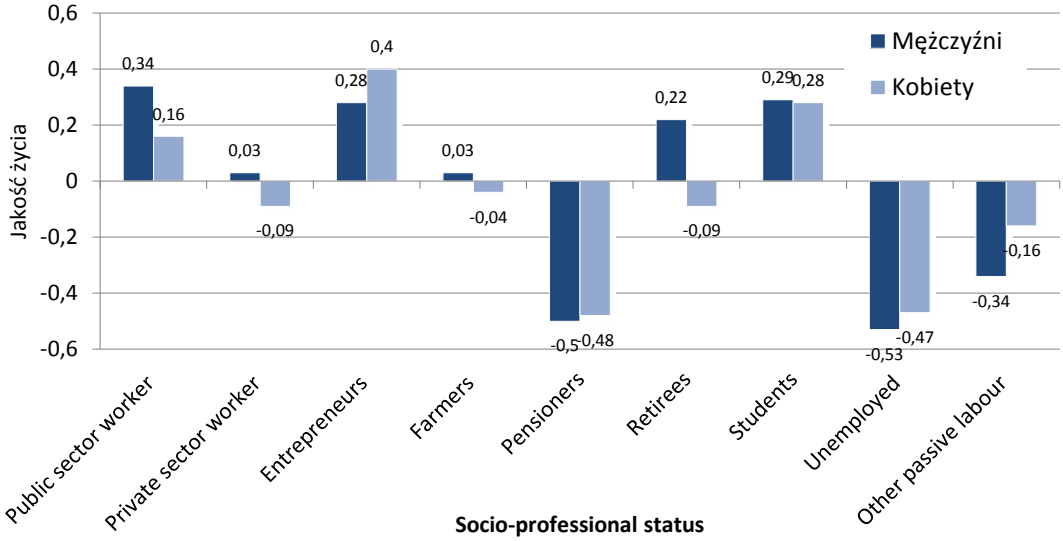
Education also influences the differences in the quality of life of groups determined by social and professional status (Figure 9.2.3). Even though those with better education live a better life in all groups, their predominance over those with lower education is not always the same. It is relatively small among farmers but enormous among employees, entrepreneurs, retirees, pensioners and unemployed persons.



NOTE: main effect of status $F(7, 19406)=151,187$, $p<0.000$, $\eta^2= 0.052$; main effect of education $F(1, 19406)=1262,988$, $p<0.000$, $\eta^2= 0.061$; effect of status and education interaction $F(7, 19406)=9.852$, $p<0.000$, $\eta^2=0.003$.

Figure 9.2.3. General indicator of quality of life by social and professional status and level of education with control for age and gender

Similarly to education, gender also modifies the differences in the quality of life of groups defined by social and professional status (figure 9.2.4). In principle, there are no differences between men and women among farmers, those receiving welfare benefits and school and university students. In the groups of hired workers and retirees men enjoy a better quality of life, but among entrepreneurs and other professionally inactive women's quality of life is better than that of men.

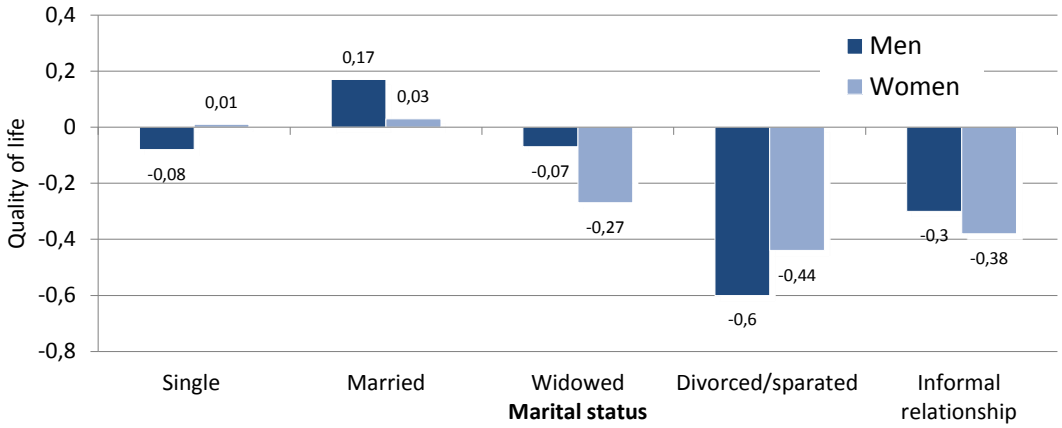


NOTE: main effect of status $F(8, 21176)=173.947$, $p<0.000$, $\eta^2= 0.062$; main effect of gender $F(1, 21176)=5.447$, $p<0.05$, $\eta^2=0.000$; effect of status and gender interaction $F(8, 21176)=1400.313$, $p<0.000$, $\eta^2=0.062$.

Figure 9.2.4. General indicator of quality of life by socio-professional status and gender with control for age and level of educational level

Gender and educational level, with age control, also plays a significant role in explaining the difference in the quality of life of groups defined by marital status (Figures 9.2.5 and 9.2.6). Widowers and men living in separation feel definitely better and husbands slightly better than widows, women

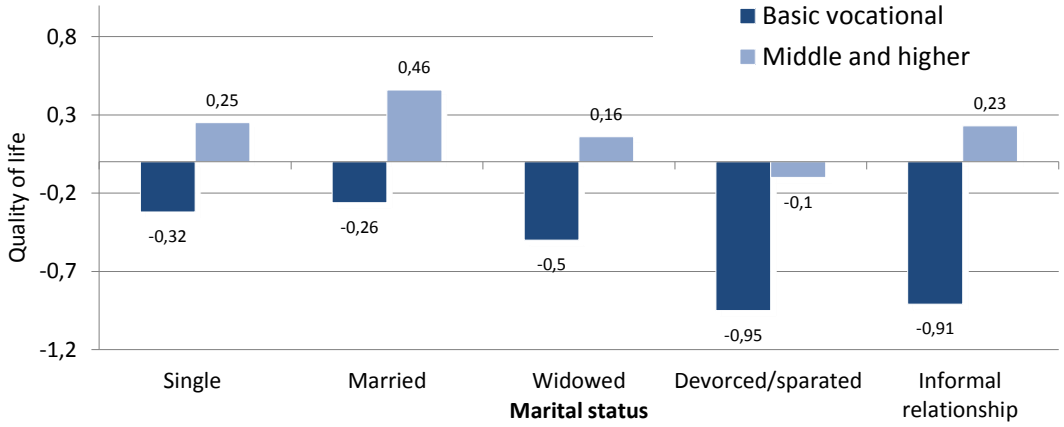
living in separation and wives respectively though divorce and unmarried status more affects men's quality of life.



NOTE: main effect of marital status $F(4,21170)=148,171$, $p<0.000$, $\eta^2= 0.027$; main effect of gender not significant.; effect of marital status and gender interaction $F(4,21170)=20,497$, $p<0.000$, $\eta^2=0.004$.

Figure 9.2.5. General indicator of quality of life by marital status and gender with control for age and level of education

On the other hand, education nearly eliminates the differences in the quality of life that arise due to marital status (Figure 9.2.6). Although being widowed and divorced and living in an informal relationship especially entails a significant decrease in the quality of life among persons with poorer education, a university diploma or even high school graduation relatively ensures that a high quality of life is retained also by those widowed, divorced and living in informal relationships ..



NOTE: main effect of marital status $F(4,21170)=148,171$, $p<0.000$, $\eta^2= 0.027$; main effect of education $F(1, 21170)=1261,361$, $p<0.000$, $\eta^2= 0.056$; the effect of marital status and education interaction $F(4,21170)=19,297$, $p<0.000$, $\eta^2=0.004$

Figure 9.2.6. General indicator of the quality of life by marital status and level of educational level with control for age and gender

When all previous factors and additionally the class of place of residence and bringing up children are taken into account in one multiple regression equation, we will be able to control the mutual relationships between those factors and thus better estimate the role of each of them as predictor (and perhaps even as determinant) of the quality of life and its individual dimensions. We carried out such analyses both for the general indicator of the quality of life and for eight component indicators. The results are presented in Tables 9.2.10 to 9.2.18.

The level of education is the best predictor of the general quality of life, which is independent of other factors[110], with age the second-best (negative effect), unemployment (negative effect), living on social security (negative effect), marriage (a positive effect) divorce and informal relationship (negative

[110] It must be borne in mind, however, that the level of education was one of the variables taken into account in the civilisation level, a component of the quality of life.

effect), and bringing up children (a negative effect), work in the private sector (negative effect) and being an entrepreneur and work in the public sector (positive effect). What also matters is divorce (negative effect), being an entrepreneur (positive effect), employment in the public sector (positive effect), being widowed (negative effect), being a pensioner (positive effect) and gender (the quality of life is somewhat worse for women).

Table 9.2.12. Multiple regression analysis for general quality of life

Predictor	Non-standardized indicators		Standardized indicator	*t*	p
	B	Standard error	Beta		
(Constant)	-0.831	0.044		-18.910	0.000
Level of Education	0.125	0.002	0.413	60.670	0.000
Age	-0.014	0.001	-0.255	-23.462	0.000
Gender (1 M, 2 F)	-0.047	0.012	-0.023	-3.981	0.000
Place of residence class (1 largest towns, 6 rural areas)	0.007	0.003	0.012	1.934	0.053
Pensioners	-0.385	0.029	-0.097	-13.171	0.000
Farmers	-0.040	0.030	-0.009	-1.320	0.187
Private sector workers	-0.112	0.019	-0.050	-5.825	0.000
Public sector workers	0.082	0.023	0.028	3.482	0.000
Retirees	0.118	0.027	0.048	4.387	0.000
Entrepreneurs	0.226	0.032	0.046	7.043	0.000
Children supported	-0.190	0.015	-0.093	-12.383	0.000
Unemployed	-0.495	0.025	-0.133	-19.841	0.000
Married couples	0.242	0.020	0.121	12.157	0.000
Widowed	0.060	0.029	0.018	2.064	0.039
Divorced	-0.321	0.032	-0.067	-10.025	0.000
Unmarried couple	-0.125	0.034	-0.022	-3.644	0.000
$R^2 = 0.32$					

Bringing up children is the most significant predictor of stress in life (increases stress), followed by employment in the private sector (increases stress) and employment in the public sector (reduces stress). More stress is also experienced by entrepreneurs, unemployed persons, married as well as divorced people and living in an informal relationship, the elderly. Less stress is experienced by residents of rural areas, pensioners and widowed persons.

Table 9.2.13. Multiple regression analysis for life-stress

Predictor	Non-standardized indicators		Standardized indicator	*t*	p
	B	Standard error	Beta		
(Constant)	-0.522	0.043		-12.205	0.000
Level of Education	-0.004	0.002	-0.012	-1.875	0.061
Age	0.004	0.001	0.079	7.600	0.000
Gender (1 M, 2 F)	-0.015	0.011	-0.007	-1.303	0.193
Place of residence class (1 largest towns, 6 rural areas)	-0.040	0.003	-0.070	-11.904	0.000
Pensioners	0.007	0.028	0.002	0.238	0.812
Farmers	0.445	0.029	0.099	15.431	0.000
Private sector workers	0.449	0.019	0.199	24.239	0.000
Public sector workers	0.384	0.023	0.130	16.959	0.000
Retirees	-0.213	0.026	-0.086	-8.219	0.000
Entrepreneurs	0.465	0.030	0.097	15.296	0.000
Children supported	0.543	0.015	0.264	36.404	0.000
Unemployed	0.370	0.024	0.100	15.393	0.000
Married couples	0.250	0.019	0.124	12.942	0.000
Widowed	-0.099	0.028	-0.030	-3.487	0.000
Divorced	0.181	0.031	0.037	5.798	0.000
Unmarried couple	0.173	0.034	0.029	5.055	0.000
$R^2 = 0.251$					

Age is the best predictor of psychological well-being (negative effect), followed by education (positive effect), marriage (positive effect), unemployment (negative effect) and divorce (negative

effect). Also living on social security (negative effect), being an entrepreneur (positive effect), a pensioner or a hired employee (positive effect) is significant. Bringing up children and being a woman is a moderately negative predictor of psychological well-being. These predictors explain over one fifth of all variation in psychological well-being in the sample.

Table 9.2.14. Multiple regression analysis for psychological well-being

Predictor	Non-standardized indicators		Standardized indicator	*t*	p
	B	Standard error	Beta		
(Constant)	0.252	0.044		5.694	0.000
Level of Education	0.045	0.002	0.147	21.659	0.000
Age	-0.020	0.001	-0.358	-33.080	0.000
Gender (1 M, 2 F)	-0.036	0.012	-0.018	-3.074	0.002
Place of residence class (1 largest towns, 6 rural areas)	-0.001	0.003	-0.001	-.220	0.826
Pensioners	-0.178	0.029	-0.044	-6.041	0.000
Farmers	0.074	0.030	0.016	2.483	0.013
Private sector workers	0.090	0.019	0.040	4.670	0.000
Public sector workers	0.125	0.024	0.042	5.328	0.000
Retirees	0.148	0.027	0.059	5.476	0.000
Entrepreneurs	0.211	0.032	0.044	6.681	0.000
Children supported	-0.092	0.015	-0.045	-5.971	0.000
Unemployed	-0.452	0.025	-0.121	-18.099	0.000
Married couples	0.327	0.020	0.162	16.324	0.000
Widowed	-0.051	0.030	-0.015	-1.717	0.086
Divorced	-0.389	0.032	-0.080	-12.054	0.000
Unmarried couple	-0.045	0.035	-0.008	-1.265	0.206
$R^2 = 0.22$					

Independently of all other factors, physical well-being is worse among the elderly, pensioners, women, retirees and those with poorer education. Being a farmer, living in a rural area or small town, being an employee (irrespective of the sector), an entrepreneur. These predictors explain nearly 30% of differences in physical well-being.

Table 9.2.15. Multiple regression analysis for physical well-being

Predictor	Non-standardized indicators		Standardized indicator	*t*	p
	B	Standard error	Beta		
(Constant)	0.718	0.041		17.489	0.000
Level of Education	0.020	0.002	0.068	10.662	0.000
Age	-0.019	0.001	-0.347	-34.200	0.000
Gender (1 M, 2 F)	-0.095	0.011	-0.048	-8.622	0.000
Place of residence class (1 largest towns, 6 rural areas)	0.023	0.003	0.041	7.187	0.000
Pensioners	-0.960	0.027	-0.240	-35.244	0.000
Farmers	0.139	0.028	0.031	5.004	0.000
Private sector workers	0.128	0.018	0.057	7.195	0.000
Public sector workers	0.133	0.022	0.045	6.104	0.000
Retirees	-0.155	0.025	-0.063	-6.207	0.000
Entrepreneurs	0.170	0.029	0.035	5.768	0.000
Children supported	-0.022	0.014	-0.011	-1.538	0.124
Unemployed	0.074	0.023	0.020	3.189	0.001
Married couples	0.001	0.019	0.000	0.047	0.963
Widowed	0.033	0.027	0.010	1.203	0.229
Divorced	-0.054	0.030	-0.011	-1.783	0.075
Unmarried couple	-0.041	0.033	-0.007	-1.232	0.218
$R^2 = 0.298$					

The level of social capital is determined first and foremost by the level of education. The paradox however is that despite the fast growth in the number of people with higher education, social capital in Poland is not growing (see section 6.3). Slightly less significant but still fairly important are such factors as age (positive effect), gender (men score higher), class of place of residence (the smaller the town, the lower the level of social capital), being a farmer (positive effect), employment in the private sector

(negative effect), employment in the public sector (positive effect), being an entrepreneur (positive effect), bringing up children (positive effect), unemployment (negative effect) and divorce (weak negative effect). Summed up, all these predictors explain only 12% of variation in the value of the standardized indicator of social capital.

Table 9.2.16. Multiple regression analysis for social capital

Predictor	Non-standardized indicators		Standardized indicator	*t*	p
	B	Standard error	Beta		
(Constant)	-1.210	0.046		-26.379	0.000
Level of Education	0.093	0.002	0.306	43.444	0.000
Age	0.005	0.001	0.100	8.883	0.000
Gender (1 M, 2 F)	-0.100	0.012	-0.050	-8.203	0.000
Place of residence class (1 largest towns, 6 rural areas)	-0.014	0.004	-0.025	-3.881	0.000
Pensioners	-0.075	0.030	-0.019	-2.471	0.013
Farmers	0.101	0.031	0.022	3.260	0.001
Private sector workers	-0.104	0.020	-0.046	-5.231	0.000
Public sector workers	0.182	0.024	0.061	7.466	0.000
Retirees	0.053	0.028	0.021	1.888	0.059
Entrepreneurs	0.131	0.033	0.027	3.998	0.000
Children supported	0.074	0.016	0.036	4.649	0.000
Unemployed	-0.176	0.026	-0.047	-6.828	0.000
Married couples	0.023	0.021	0.011	1.093	0.274
Widowed	-0.047	0.031	-0.014	-1.526	0.127
Divorced	-0.084	0.034	-0.017	-2.487	0.013
Unmarried couple	-0.045	0.037	-0.008	-1.218	0.223
R^2 = 0.121					

The incidence of pathology diminishes with age and education, but gender is its strongest predictor: the pathology indicator is much higher among men than among women. The larger the place of residence, the more pathologies there are. Unemployment, divorce and bringing up children, life in an informal relationship increase pathology while marriage, employment in the private and public sector and being a farmer diminish it. Only 5% of variation in that indicator of the quality of life is explained by all the predictors.

Table 9.2.17. Multiple regression analysis for pathology (reversed scale)

Predictor	Non-standardized indicators		Standardized indicator	*t*	p
	B	Standard error	Beta		
(Constant)	1.153	0.048		23.805	0.000
Level of Education	-0.025	0.002	-0.081	-11.056	0.000
Age	-0.004	0.001	-0.078	-6.681	0.000
Gender (1 M, 2 F)	-0.320	0.013	-0.157	-24.787	0.000
Place of residence class (1 largest towns, 6 rural areas)	-0.049	0.004	-0.086	-13.023	0.000
Pensioners	0.149	0.032	0.036	4.661	0.000
Farmers	0.038	0.033	0.008	1.154	0.248
Private sector workers	0.129	0.021	0.056	6.141	0.000
Public sector workers	0.073	0.026	0.024	2.830	0.005
Retirees	-0.052	0.029	-0.021	-1.769	0.077
Entrepreneurs	0.100	0.034	0.020	2.911	0.004
Children supported	0.065	0.017	0.031	3.833	0.000
Unemployed	0.320	0.027	0.084	11.757	0.000
Married couples	-0.079	0.022	-0.039	-3.616	0.000
Widowed	-0.041	0.032	-0.012	-1.278	0.201
Divorced	0.250	0.035	0.050	7.066	0.000
Unmarried couple	0.118	0.039	0.019	3.017	0.003
R^2 = 0.062					

The greatest proportion of variation in material well-being is explained by educational level. Education remains the most reliable guarantor of affluence (cf. section 5.5.3). People in rural areas

continue to be worse-off that residents of towns, while inhabitants of small towns are worse-off than those who live in the large towns. Also marriage, as a community which accumulates material goods, is a strong predictor. It is not surprising that entrepreneurs are significantly better-off than others though also employees, both in the public and in the private sector, turn out to be better-off especially when compared to unemployed persons. Bringing up children is costly and thus diminishes the family's material well-being. Also divorce negatively affects well-being and so does being pensioner. On the other hand, widowers and widows are better-off; also men fare better, as already discussed in the chapter on discrimination (8.3). Even though living in a rural area entails a lower average material standard, this does not concern farmers; these do not depart from the national average in terms of material well-being. This does not mean that they do not obtain lower incomes, yet they may own more goods, which to some extent compensates for lower income. The predictors included in the regression equation explain a total of nearly 26% of variation in material well-being.

Table 9.2.18. Multiple regression analysis for material well-being

Predictor	Non-standardized indicators		Standardized indicator	*t*	*p*
	B	Standard error	Beta		
(Constant)	-0.912	0.044		-20.886	0.000
Level of Education	0.099	0.002	0.327	48.474	0.000
Age	-0.006	0.001	-0.119	-10.948	0.000
Gender (1 M, 2 F)	-0.046	0.012	-0.023	-3.920	0.000
Place of residence class (1 largest towns, 6 rural areas)	-0.039	0.003	-0.069	-11.367	0.000
Pensioners	-0.135	0.029	-0.034	-4.694	0.000
Farmers	-0.013	0.030	-0.003	-0.417	0.676
Private sector workers	0.102	0.019	0.045	5.362	0.000
Public sector workers	0.139	0.023	0.047	5.967	0.000
Retirees	0.036	0.027	0.015	1.359	0.174
Entrepreneurs	0.544	0.032	0.111	17.058	0.000
Children supported	-0.180	0.015	-0.088	-11.746	0.000
Unemployed	-0.443	0.025	-0.119	-17.934	0.000
Married couples	0.457	0.020	0.228	22.994	0.000
Widowed	0.093	0.029	0.029	3.215	0.001
Divorced	-0.227	0.032	-0.047	-7.115	0.000
Unmarried couple	0.034	0.035	0.006	0.976	0.329
$R^2 = 0.259$					

Marriage and young age ensure the greatest social support. Divorce negatively affects social well-being and so does bringing up children and unemployment. Retirees and men enjoy greater social support than others. Also educational level is favourable for social well-being. In general however only 3% of variation in the value of that indicator of the quality of life is explained, which is the lowest of all proportions.

In the regression analysis of civilisation level, education was removed from the list of predictors as it was already one of the components of that indicator. This gives the role of the strongest predictor to age, a strong negative correlate of the level of education. Place of residence class, and also employment, especially in the public sector, is also very important. Positive influence is exerted by being an entrepreneur or pensioner (obviously, after excluding the age effect), being married and bringing up children; a negative effect is characteristic of unemployment, living on social security and being a widow(er). Civilisation level is very strongly differentiated by the size of place of residence: the smaller it is, the lower the civilisation level. Overall, the predictors included in the regression equation explain nearly half of the variance of the civilisation level indicator.

The criteria of the quality of life adopted here are not fully objective but also a good life is also simply a happy life not just what meets some objective standards (of affluence, health, respect, etc.) and it remains an open question what could measure the truth in respect this respect. Researchers from diverse fields of science have debated on that topic for years (cf. Czapiński, 2002b, 2004b; Lewicka, 2005), which in the last decade gave rise to the development of a new branch of study called positive psychology.

Table 9.2.19. Multiple regression analysis for social well-being

Predictor	Non-standardized indicators		Standardized indicator	*t*	*p*
	B	Standard error	Beta		
(Constant)	0.196	0.049		4.032	0.000
Level of Education	0.015	0.002	0.050	6.694	0.000
Age	-0.007	0.001	-0.120	-10.104	0.000
Gender (1 M, 2 F)	-0.090	0.013	-0.045	-6.943	0.000
Place of residence class (1 largest towns, 6 rural areas)	0.008	0.004	0.014	2.147	0.032
Pensioners	-0.062	0.032	-0.015	-1.934	0.053
Farmers	0.007	0.033	0.002	0.219	0.827
Private sector workers	-0.094	0.021	-0.041	-4.476	0.000
Public sector workers	-0.020	0.026	-0.007	-0.791	0.429
Retirees	0.135	0.030	0.054	4.563	0.000
Entrepreneurs	0.018	0.035	0.004	0.510	0.610
Children supported	-0.110	0.017	-0.053	-6.480	0.000
Unemployed	-0.198	0.027	-0.053	-7.251	0.000
Married couples	0.194	0.022	0.096	8.798	0.000
Widowed	-0.044	0.032	-0.013	-1.346	0.178
Divorced	-0.237	0.036	-0.048	-6.658	0.000
Unmarried couple	-0.027	0.039	-0.004	-0.677	0.498
$R^2 = 0.028$					

Table 9.2.20. Multiple regression analysis for the civilisation level

Predictor	Non-standardized indicators		Standardized indicator	*t*	*p*
	B	Standard error	Beta		
(Constant)	1,546	0,027		58,285	0,000
Level of Education	-0,030	0,000	-0,529	-2,176	0,000
Age	0,027	0,010	0,013	2,789	0,005
Gender (1 M, 2 F)	-0,139	0,003	-0,243	-1,752	0,000
Place of residence class (1 largest towns,	-0,055	0,024	-0,014	-2,321	0,020
Pensioners	0,041	0,024	0,009	1,685	0,092
Farmers	0,392	0,015	0,170	25,586	0,000
Public sector workers	0,767	0,018	0,254	42,235	0,000
Retirees	0,216	0,022	0,085	9,928	0,000
Entrepreneurs	0,781	0,025	0,160	30,901	0,000
Children supported	0,106	0,013	0,051	8,410	0,000
Unemployed	-0,070	0,020	-0,019	-3,482	0,000
Married couples	0,245	0,016	0,120	15,021	0,000
Widowed	-0,096	0,024	-0,029	-4,028	0,000
Divorced	-0,021	0,026	-0,004	-0,811	0,417
Unmarried couple	-0,040	0,029	-0,007	-1,379	0,168
$R^2 = 0.476$					

9.3. Is Polish society becoming increasingly stratified?

In the opinion of many economists, economic growth of a relatively poor country should entail its greater socio-economic stratification. Indeed, throughout the period when *Social Diagnosis* has been carried out, the proportion of income of the richest 20% of households to that of the poorest 20% increased until 2009. It is worth noting that the growing stratification resulted first and foremost from the higher growth rate of the highest incomes (Figure 9.3.1). The value of the 9th decile of household income per equivalent unit in terms of constant prices increased by 45.6% between 2000 and 2009, which is much more than the average for entire samples (38.9%), while the value of the 1st decile increased by 27.6% over that period. However, over the following two years the increase in 1st decile real income was greater than the growth of the 9th decile for the first time since the beginning of the survey (8% and 4% respectively) and thus the proportion of the 9th to the 1st decile diminished (Table 9.3.1). In the last two years there was a fall in real income both in the first and the ninth decimal of a similar size. It can therefore be accepted that despite the economic crisis, income stratification remains at a lower level than before the crisis.

Thus, Poles have not been getting richer at the same pace. This, however, does not mean that the poor have had fewer opportunities for economic advancement than the rich. Quite on the contrary, while the income scale increased up to 2011, poor households were catching up on the richer ones. The income of the poorest 10% of households grew at a much faster pace over the past four years and slightly faster over the last two years than the income of the richest 10% of households (Figure 9.3.2)[111]. The fall in the Gini coefficient from 0.313 in 2009 to 0.299 in 2013 also demonstrates the minor fall in economic stratification.

Table 9.3.1. Household net income variation in entire samples between 2003-2013

Year of study	Ratio of the 4th to the 1st quintile of household income		Ratio of the 9th to the 1st decile of household income	
	Total	Per equivalent unit	Total	Per equivalent unit
2000	2.82	2.33	4.62	3.94
2003	2.80	2.36	4.67	3.98
2005	3.00	2.41	5.12	4.15
2007	3.15	2.48	5.56	4.10
2009	3.00	2.46	5.28	3.96
2011	3.07	2.43	5.00	4.09
Difference between:				
2011 and 2000	0.25	0.10	0.38	0.15
2011 and 2009	0.07	-0.03	-0.28	0.13

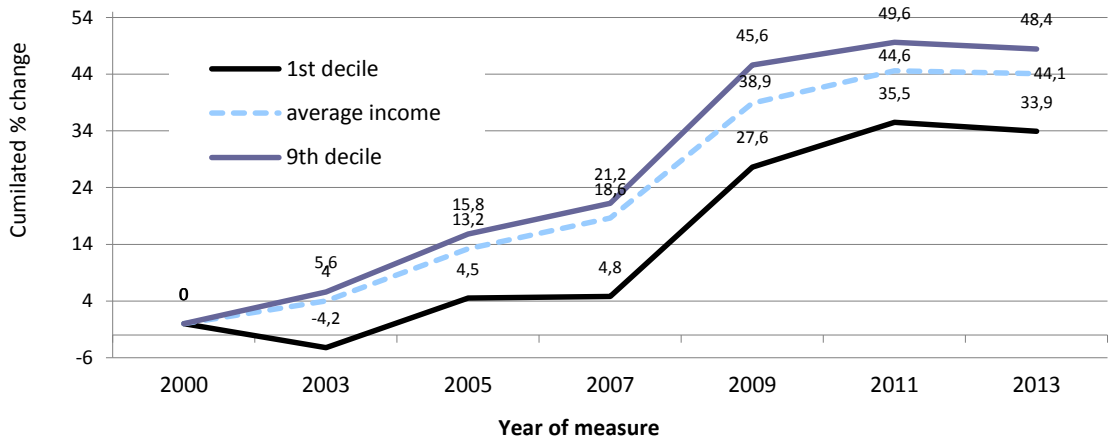


Figure 9.3.1. Cumulative percentage change for middle, 1st and 9th decile of household income per equivalent unit in the previous month in terms of prices from 2000 between 2000-2013

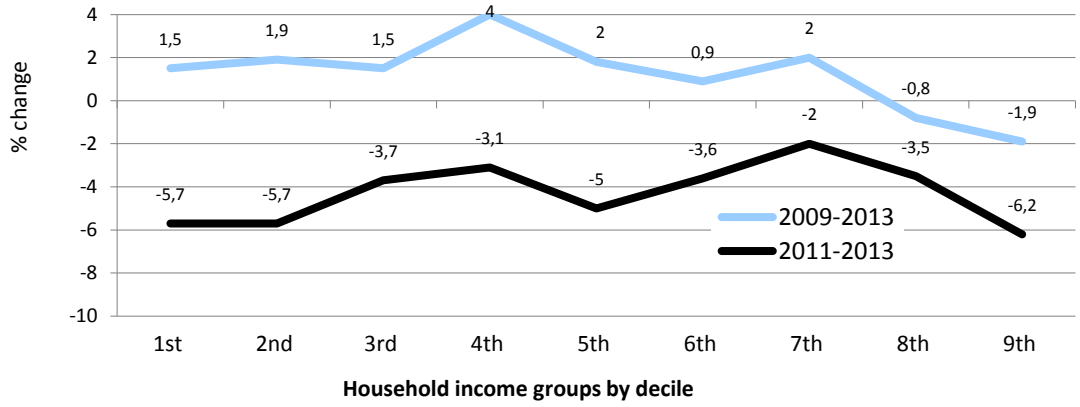
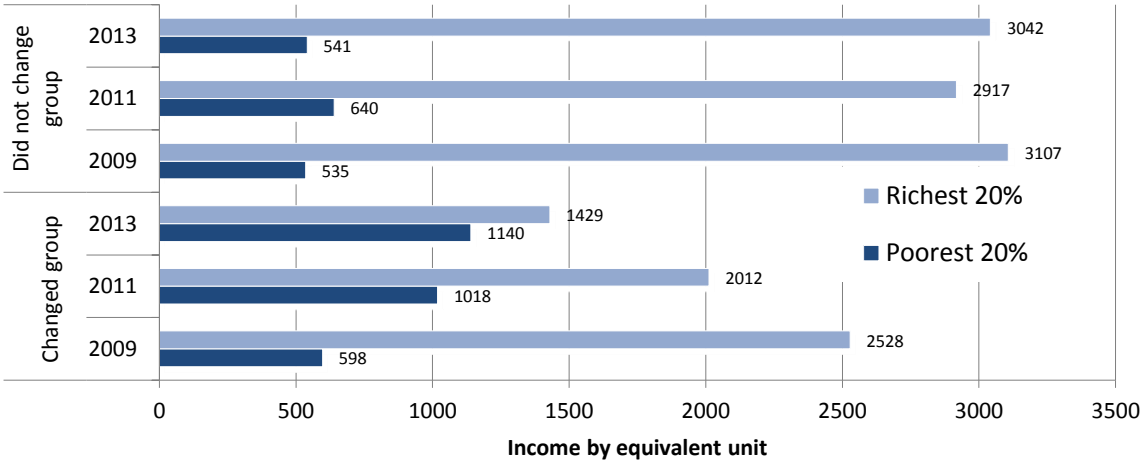


Figure 9.3.2. Percentage change in household income per equivalent unit in terms of prices for 2009 in 2009-2013 and 2011-2013 for household group panel samples by income deciles

[111] The objection that this is an instance of the base effect (an increase in nominal income by X yields a greater percentage growth when the initial level is low than when it is high) may be countered by stating that irrespective of the base effect this means that income differences between the rich and the poor have been diminishing rather than growing. Moreover, base effect does not explain why the smallest percentage increases in income were in middle-income household groups (the 3rd and 7th decile).

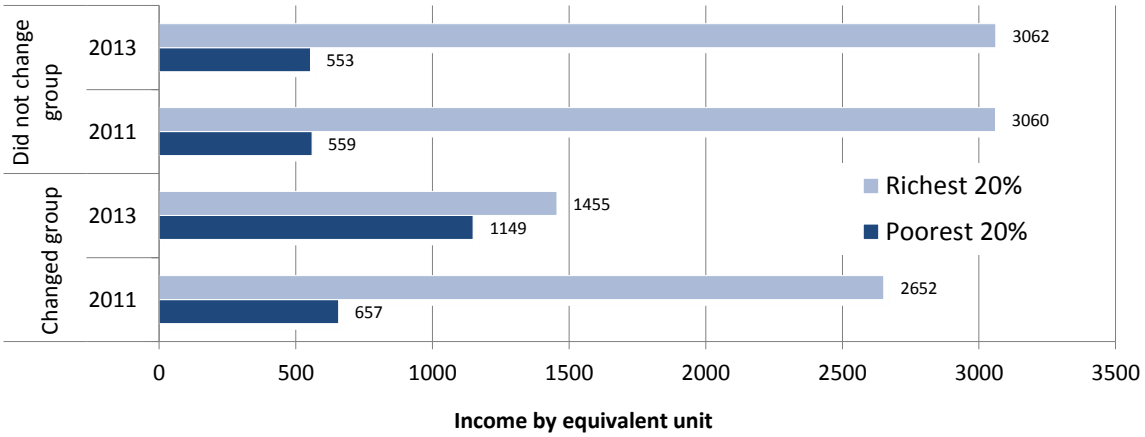
The statement that Polish society is increasingly stratified in economic terms is proved false by the symmetric, two-directional mobility of households on the income axis. Only 57,2% of households from the group of the 20% who were the poorest in 2009 remained in that group after four years and nearly exactly the same proportion (56%) from the group of the richest 20% remained in that group in 2013. Thus, 43% of the poorest moved to higher income groups (a majority of 25.4% only moved one level up) and 44% of the richest moved to lower income groups (a majority of 23.3% moved one quintile down). With the shorter time span of two years between 2011 and 2013, 64% remained in the lowest group of households and 62% remained in the top group. Thus we have a nearly full symmetry of the changes in the position of the richest 20% and the poorest 20% of households in terms of income.

The economic distance between the poorest and the richest households that remained in their income groups basically did not change over four and two years (Figures 9.3.3 and 9.3.4), while in the case of households that did change position in terms of income, the distance diminished almost 9-fold over four years and over 2-fold over the past two years.



NOTE: effect of changing group F(1, 2183)=104,463, p<0.000, η^2= 0.046; effect of the date of measurement F(1, 2183)=52.063, p<0.000, η^2= 0.023; effect of interaction of changing group, initial group and date of measurement F(1,2183)=340.078; p<0.000, η^2= 0.135; effect of initial group and date of measurement interaction F(2, 2183)=404.363, p<0.000, η^2= 0.156; effect of changing group and date of measurement interaction F(2, 2183)=34.703, p<0.000, η^2= 0.015.

Figure 9.3.3. Household income per equivalent unit in 2009, 2011and 2013 in terms of prices for 2009 in the poorest and richest 20% households by equivalent per capita income quintiles in 2007, which remained or did not remain in the same quintile groups in the 2013 panel sample



NOTE: effect of changing group F(1, 3132)=123.363, p<0.000, η^2= 0.038; effect of date of measurement F(1, 3132)=96.405, p<0.000, η^2= 0.030; effect of changing group, the initial group and date of measurement interaction F(1, 3132)=550.441; p<0.000, η^2= 0.149; effect of initial group and date of measurement interaction F(1, 3132)=540.063, p<0.000, η^2= 0.147; effect of changing group and of date of measurement interaction F(1,3132)=93.547, p<0.000, η^2= 0.029.

Figure 9.3.4. Household income per equivalent unit in 2011 and 2013 in terms of prices from 2009 in the poorest and richest 20% households by equivalent per capita income quintiles in 2011, which remained or did not remain in the same quintile groups in the 2013 panel sample

One may add that the difference between the groups on the extremes in terms of the standardized indicator of the quality of life was nearly the same in 2013 as two and four years before (1.5-1.6 of standard deviation) and between 2005 and 2013 the difference only rose by 0.2 of standard deviation (table 9.2.2). This suggests that the distance between the social groups with the highest and the lowest quality of life is not increasing. The Poles are improving their quality of life together rather than at each other's expense.

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Annex 1. Questionnaires and instructions

1.1. Household questionnaire

Subsequent number of the questionnaire in the Voivodeship □□□□
Fixed household number (for previously studied households) □□□□□

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SOCIAL DIAGNOSIS 2013
An independent survey of the conditions and quality of life in Poland

PART I

A. HOUSEHOLD CHARACTERISTICS

0. Household status in the survey □

Voivodeship poviat gmina

1. Territorial symbol □□ □□ □□□
2. Address (street, house no., flat no., postcode and town/city)
   .....

area code landline mobile (if there is no landline phone)

2b. telephone no. □□ □□□□□□□ □□□□□□□□□

and – if available – e-mail address.....

3. Symbol of the place of residence category □
4. Household identification number □□□□□
5. Number of families in the household □
6. Symbol of the source of income for the household □
7. Number of all persons in the household □□
8. Number of all persons in the household aged at least 15 as of 1 March 2011 □□

B. INFORMATION ON THE CONDUCTED INTERVIEW

1. Course of the visits to the household's dwelling

Visit number	Date of the visit day/month	Time of the visit	Duration of the visit in minutes	Notes
1				
2				
3				

2. The interview in the household was:

1. □ conducted
2. □ not conducted.

If the interview was not conducted (answer no. 2), provide the reasons (point 3). If the interview was conducted, fill in the collective information on the individual interviews.

3. The reasons for the interview being not conducted □□

Choose one of the options given below and write its number in the boxes.

Although the household was contacted, the interview was not conducted because
1. the household is unable to take part in the survey (old age, illness, alcohol intoxication)
2. the household members are foreigners (beyond the scope of the survey)
3. the household initially refused to take part in the survey (it is possible it will be willing to take part in the survey in the coming years)
4. the household definitely refused to take part in the survey now or in the future
It was not possible to contact the household (although it was localised) because:
5. all household members were temporarily absent due to their stay abroad
6. all household members were temporarily absent due to a holiday trip
7. all household members were temporarily absent due to other or unknown reasons
8. no one was present at home.
The household could not be localised because:
9. the address provided on the list could not be localised (e.g. the address was incorrect, the dwelling was unoccupied, the dwelling had been liquidated)
10. the household changed the place of residence and the new address could not be established
11. the interview was not conducted due to other reasons (e.g. all persons from the household moved to a multi-occupancy accommodation facility).

4. Collective information on the individual interviews (all household members aged at least 16 as of 1 March 2013 are to complete an individual interview)
4.1. Number of persons in the household to complete an individual interview □□
4.2. Number of conducted individual interviews □□
4.3. Number of individual questionnaires recognised as not filled in accordance with the instructions □□
5. Does the household consent to take part in the survey in the subsequent years?
(Choose one of the options given below and mark the appropriate box)
1 □ YES 2 v NO 3 □ HAS NOT DECIDED YET
I confirm that the information presented in the questionnaire was collected in accordance with the procedure under the survey.

<table>
<tr><td colspan="6">date month year</td><td rowspan="2">Name of the interviewer</td></tr>
<tr><td></td><td></td><td></td><td></td><td>1</td><td>1</td></tr>
<tr><td colspan="6">Signature of the interviewer</td><td>Name of the person checking the form:</td></tr>
</table>

C. HOUSEHOLD COMPOSITION

1. THE PERSON'S REFERENCE NUMBER[112]	**2. FIXED NUMBER**[113]	**NAME OF THE HOUSEHOLD MEMBER**
1		
2		
3		
4		
5		
6		
7		
8		
9 (additional sheet C)		
10 (additional sheet C)		
11 (additional sheet C)		
12 (additional sheet C)		

			1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
1	**The person's reference number**									
4	**Relationship to the household head**									
5	**Family number**									
6	**Relationship to the family head**									
7	**Date of birth**	day								
8		month								
9		year *(two last digits)*								
10	**Gender** *1 – man, 2 – woman*									
11	**Marital status** *if unmarried → line 16*									
12	**Date of current marriage**	month								
13		year *(two last digits)*								
14	**Date of the breakdown of last marriage** *(divorce, death of the spouse)*	month								
15		year *(two last digits)*								
16	**Educational attainment** *(if 99 → line 19)*									
17	**Years of education completed**									
18	**Specialisation of the completed education**									

[112] For households surveyed in 2009, the same as in 2009, successive numbers for persons not on the list.
[113] Only for households surveyed in 2009; a number from the 6th column of the surveyed person's list; an empty space for persons not on the list.

1	Personal reference number			1	2	3	4	5	6	7	8
19	**Educational status** *(5,8 → line 22)*										
20	**Type of education service**										
21											
22	**Driving licence** *1 YES, 2 NO; 8 – not applicable*										
23	**Command of foreign languages** *1. active* *2. passive* 3. *none*		English								
24			German								
25			French								
26			Russian								
27			Spanish								
28			other								
29	**Does he/she have a mobile phone?** *(1 YES with keys,* *2 YES with touchscreen, 3 more than one and at least one with a touchscreen,* *4 no mobile phone)*										
30	**Disability** *1, 2, 3 → 31; others →32*										
31	**Disability certificate?**										
32	**Source of income**		main								
33			additional								
34	**Reasons for temporary absence** *concerning the persons who are temporarily absent from the household*										
35	**Being a household member or not**										
36	**Movement of persons in the household** (only for the households interviewed *previously)*	date of arrival	month								
37			year *(two last digits)*								
38		date of leaving	month								
39			year *(two last digits)*								
40		reason for arrival									
41		reason for leaving									
42	**Result of the individual interview**										

43. Reference number of the persons answering the questions on behalf of the household □□

D. ECONOMIC ACTIVITY OF THE HOUSEHOLD MEMBERS AGED 15 AND ABOVE
(economic activity as defined in the Labour Force Survey (BAEL); **the person's reference number is the same as in part C**)

1	**Reference number of the person (the same as in part C)**						
2	During the last 7 days, has this person performed any paid work or helped without pay in the family business? *1 YES → 4, 2 NO → 3*						
3	During the last 7 days, has this person been an employee, a self-employed person or helped without pay in the family business but has temporarily not performed his/her work? *1 YES → 5; 2 NO → 8*						
4	How many hours has this person worked during the last 7 days?						
5	What is the type of work this person performs at his/her main job?						
6	Is this a full-time job? *1 YES → 8; 2 NO → 7*						
7	Why does this person work part-time?						
8	Is this person registered as an unemployed person in the Labour Office? *1 YES → 9, 2 NO → 10*						
9	Does this person receive the unemployment benefits? *1 YES, 2 NO*						
10	During the last 4 weeks, has this person been seeking a job or a different job? *1 YES (currently unemployed) → 12; 2 YES (currently employed) or 5 NO (currently employed) →15; 3 NO (already found a job) → 13; 4 NO (currently unemployed)→11*						
11	Why is this person not seeking a job?						
12	Is this person ready to start a job this or next week? *1 YES, 2 NO*						
13	For how long has this person been unemployed? *(applicable also to retirees and pensioners; in the case of persons who have never worked, enter 97 in the line "years")* — years						
14	months						
15	Ownership structure of the institution being the main workplace of the person (*in the case of currently employed persons*)						
16	Ownership structure of the institution being the additional workplace of the person (*in the case of currently employed persons*)						
17	Is the main workplace located in the city/town of residence? *(in the case of currently employed persons) 1 YES, 2 NO*						
18	Current profession						
19	Profession at the last job (*in the case of currently unemployed persons who worked in the past*)						
20	During the last 2 years, how many times has this person been registered in the Labour Office as an unemployed person?						
21	During the last 2 years, how long in total has this person been unemployed? (*in months*)						

1	**Reference number of the person (the same as in part C)**						
22	During the last 2 years, has this person participated in any activity related with gaining new professional qualifications or other skills? *1 YES, 2 NO – go to line 26*						
23	Specify the type (*up to three types*) of educational activity						
24							
25							
26	Did this person work abroad in the period 2011-2013? *1 YES, 2 NO*						
27	Did this person study abroad in the period 2011-2013? *1 YES, 2 NO (if the answer "NO" is given to questions 26 and 27 – go to part E)*						
28	How many times did this person go abroad to work or study there in the period 2011-2013?						
29	In which countries did this person work or study? (*if in more than two, write those two in which the person spent most time*)						
30							
31	Provide the total time of working or studying abroad in the period 2011-2013 (*in months*). Working						
32	Studying						
33	If this person has returned after a stay abroad longer than 6 months in the period 2011-2013, then why? *(if this condition is not fulfilled, do not enter anything)*						

E. NUTRITION

I would like to ask you about meeting the nutritional needs in your household.

1. Can your household afford to buy a sufficient amount of the following food items?
Provide the answers for each of the following items separately, by crossing the appropriate box.

1.1. vegetables and vegetable preserves	1 □ YES	2 □ NO
1.2. fruit and fruit preserves	1 □ YES	2 □ NO
1.3. meat (including poultry)	1 □ YES	2 □ NO
1.4. meat and poultry products	1 □ YES	2 □ NO
1.5. fish and fish products	1 □ YES	2 □ NO
1.6. butter and other edible fats	1 □ YES	2 □ NO
1.7. milk	1 □ YES	2 □ NO
1.8. dairy products	1 □ YES	2 □ NO
1.9. sugar	1 □ YES	2 □ NO
1.10. confectionary (sweets, chocolate, etc.)	1 □ YES	2 □ NO
1.11. stimulants (coffee, tea, alcohol, tobacco)	1 □ YES	2 □ NO

2. In comparison with the situation two years ago, has the ability to meet the nutritional needs in your household:
Choose one of the options given below by crossing the appropriate box.
1. □ declined
2. □ improved
3. □ remained unchanged

F. HOUSEHOLD MATERIAL WEALTH

Now, I would like to ask you whether you possess certain goods and/or savings and whether you have taken out any banking services, credits or loans.

1. Does your household use the service of any bank? 1. □ YES 2. □ NO
If "yes" please go to question 4.
2. Why does the household **not use** the services of a bank? *Please show CARD no. 1 and request the choice of two answer variants and ticking of the appropriate square*

2.1. □ lack of trust in banks
2.2. □ too far to go to nearest bank or cash machine
2.3. □ lack of regular income/savings
2.4. □ bank services are too dear
2.5. □ loan application rejected
2.6. □ bank services are too complicated
2.7. □ no need for bank services
2.8. □ of other financial institutions (SKOK, Provident etc) are sufficient
2.9. □ 9 lack of remote access to products/services (by internet, telephone)
2.10. □ other reasons

3. Does your household intend to start using bank services this year? 1.□ YES 2.□ NO

4. 4. Has anyone in your household given up cooperation with a bank (not a branch, but any bank) in the last year? 1. □ YES 2. □ NO

If no resignations, please go to question 6.

5. What was the bank? *(you can indicate more than one answer)*

1. □ Alior Bank	11. □ Getin Bank
2. □ Bank Gospodarki Żywnościowej	12. □ ING Bank Śląski
3. □ Bank Millennium	13. □ Kredyt Bank
4. □ Bank Pekao SA	14. □ mBank
5. □ Bank Pocztowy	15. □ MultiBank
6. □ bank spółdzielczy	16. □ PKO Bank Polski
7. □ Bank Zachodni WBK	18. □ Polbank
8. □ Citi Handlowy	19. □ SKOK
9. □ Credit Agricole	20. □ another
10. □ Eurobank	

6. Does your household have any savings? 1.□ YES 2.□ NO

If the household has savings, go to question 2, if not – go to question 5.

7. What is the approximate total amount of your household savings?
Show CARD 2, ask to choose one of the options and cross the appropriate box.
1 □ up to the equivalent of the household's monthly income
2 □ above the equivalent of the household's monthly income – up to the equivalent of the household's
3-months' income
3 □ above the equivalent of the household's 3-months' income – up to the equivalent of the household's
6-months' income
4 □ above the equivalent of the household's 6-months' income – up to the equivalent of the household's yearly income
5 □ above the equivalent of the household's yearly to 3-year income
6 □ over 3-year household income
7 □ it is hard to say [NOT TO BE READ]

8. What is the form of your household savings?
Provide the answers for each of the following forms separately, by crossing the appropriate box.

8.1. bank deposits in PLN	1 □ YES 2 □ NO
8.2. bank deposits in foreign currencies	1 □ YES 2 □ NO
8.3. bonds	1 □ YES 2 □ NO
8.4. investment funds	1 □ YES 2 □ NO
8.5. Individual Pension Fund/ Pension Security	1 □ YES 2 □ NO
8.6. securities quoted on the stock exchange	1 □ YES 2 □ NO
8.7. shares and stocks in companies not listed on the stock exchange	1 □ YES 2 □ NO
8.8. investments in property	1 □ YES 2 □ NO
8.9. investments in material goods other than real property	1 □ YES 2 □ NO
8.10. cash	1 □ YES 2 □ NO
8.11. insurance policy	1 □ YES 2 □ NO
8.12. long-term savings programmes	1 □ YES 2 □ NO
8.13. other forms	1 □ YES 2 □NO

9. What is the purpose of your household savings?

Provide the answers for each of the following purposes separately, by crossing the appropriate box.

9.1. reserves for everyday consumer needs (e.g. food, clothes)	1□ YES 2□ NO
9.2. regular fees (e.g. home payments)	1□ YES 2□ NO
9.3. purchase of consumer durables	1□ YES 2□ NO
9.4. purchase of a house or an apartment, payments to the housing cooperative	1□ YES 2□ NO
9.5. renovation of the house or apartment	1□ YES 2□ NO
9.6. medical treatment	1□ YES 2□ NO
9.7. medical rehabilitation	1□ YES 2□ NO
9.8. leisure	1□ YES 2□ NO
9.9. reserves for unexpected events	1□ YES 2□ NO
9.10. securing the children's future	1□ YES 2□ NO
9.11. security for the old age	1□ YES 2□ NO
9.12. to develop one's own business	1□ YES 2□ NO
9.13. other purposes	1□ YES 2□ NO
9.14. no special purpose	1□ YES 2□ NO

10. Does your household have any loans or credits to repay? 1 □ YES 2 □ NO

If the household has loans or credits to repay, go to question 11, if not – go to question 17.

11. Where did your household take out the loans or credits?

Provide the answers for each of the following sources of loans or credits separately, by crossing the appropriate box.

11.1. banks	1 □ YES 2 □ NO
11.2. SKOK	1 □ YES 2 □ NO
11.3. from credit agencies (Żagiel), shops	1 □ YES 2 □ NO
11.4. other companies providing loans (Provident, SMS loans, etc)	1 □ YES 2 □ NO
11.5 from private persons	1 □ YES 2 □ NO

12. In which currency do you borrow? (please indicate all the currencies in which you have loans)

1. □ in PLN
2. □ in Euro
3. □ in Swiss Franks
4. □ in other currencies

13. What is the total amount of your household's debt (value of all loans, debts and borrowings) outstanding?

Show CARD no. 2, ask to choose one of the options and cross the appropriate box.

1 □ up to the amount of the household's monthly income

2 □ above the equivalent of the household's monthly income – up to the equivalent of the household's 3-months' income

3 □ above the equivalent of the household's 3-months' income – up to the equivalent of the household's 6-months' income

4 □ above the equivalent of the household's 6-months' income – up to the equivalent of the household's yearly income

5 □ above the equivalent of the household's yearly – up to 3-year income

6 □ over 3-years household income

7 □ it is hard to say

14. How much of your average monthly income have you devoted to servicing your borrowings in the last 3 months?

1. □ less than 10%
2. □ between 10% and 20%
3. □ between 20% and 30%
4. □ between 30% and 40%
5. □ between 40% and 50%
6. □ over 50%

15. How long do you have left before you repay your current borrowings?

1. □ less than one year
2. □ at least one year (please fill In the number of years)

16. What was the purpose of the loans or credits taken out by your household?
Provide the answers for each of the following purposes separately, by crossing the appropriate box.

16.1. everyday consumer needs (e.g. food, clothes, footwear)	1 □ YES 2 □ NO
16.2. regular payments (e.g. home payments)	1 □ YES 2 □NO
16.3. purchase of consumer durables	1 □ YES 2 □ NO
16.4. purchase of a house or an apartment, payments to the housing cooperative	1 □ YES 2 □ NO
16.5. renovation of the house or apartment	1 □ YES 2 □ NO
16.6. medical treatment	1 □ YES 2 □ NO
16.7. purchase or lease of the tools necessary for work (machines, lease of a facility, etc.)	1 □ YES 2 □ NO
16.8. leisure	1 □ YES 2 □ NO
16.9. purchase of securities	1 □ YES 2 □ NO
16.10. repayment of earlier debts	1 □ YES 2 □ NO
16.11. developing own business	1 □ YES 2 □ NO
16.12. own education	1 □ YES 2 □ NO
16.13. children's education	1 □ YES 2 □ NO
16.14. children's future	1 □ YES 2 □ NO
16.15. other purposes	1 □ YES 2 □ NO

17. Has your household's material situation, in the last two years,

1 □ worsened
2 □ improved
3 □ remained unchanged

18. Does your household or any of its members possess the following goods? It does not matter whether such goods are owned, leased or made available in any other manner (provide the answers in the column "*Does the household possess*?"). If the household does not possess a specific item, please specify (provide the answer in the column "*If not, is it due to financial reasons?*") whether this is due to financial reasons (answer "*YES*") or any other reasons, for example such item is redundant (answer "*NO*"). In the case of three lines (desktop computer, portable computer, car), enter the number in the column "*How many items*?".

Provide the answers for each of the following items.

	Does the household possess…?		If not, is it due to financial reasons?		How many items?
18.1. automatic washing machine	1 □ YES	2 □ NO	1 □ YES	2 □ NO	
18.2. dishwasher	1 □ YES	2 □ NO	1 □ YES	2 □ NO	
18.3. microwave oven	1 □ YES	2 □ NO	1 □ YES	2 □ NO	
18.4. LCD/plasma TV set	1 □ YES	2 □ NO	1 □ YES	2 □ NO	
18.5. paid satellite or cable TV	1 □ YES	2 □ NO	1 □ YES	2 □ NO	
18.6. DVD player	1 □ YES	2 □ NO	1 □ YES	2 □ NO	
18.7. home cinema set	1 □ YES	2 □ NO	1 □ YES	2 □ NO	
18.8. summer house	1 □ YES	2 □ NO	1 □ YES	2 □ NO	
18.9. desktop computer	1 □ YES	2 □ NO	1 □ YES	2 □ NO	
18.10. portable computer (laptop, notebook, iPad, tablet)	1 □ YES	2 □ NO	1 □ YES	2 □ NO	
18.11 Ipad or other tablet	1 □ YES	2 □ NO	1 □ YES	2 □ NO	
18.12. e-book reader	1 □ YES	2 □ NO	1 □ YES	2 □ NO	
18.13. passenger car (also semi-truck)	1 □ YES	2 □ NO	1 □ YES	2 □ NO	
18.14. Internet access from the home desktop computer, laptop or mobile phone	1 □ YES	2 □ NO	1 □ YES	2 □ NO	
18.15. landline phone	1 □ YES	2 □ NO	1 □ YES	2 □ NO	
18.16. motorboat, sailboat	1 □ YES	2 □ NO	1 □ YES	2 □ NO	
18.17. garden plot	1 □ YES	2 □ NO	1 □ YES	2 □ NO	
18.18. own house/flat	1 □ YES	2 □ NO	1 □ YES	2 □ NO	
18.19. other property	1 □ YES	2 □ NO	1 □ YES	2 □ NO	

G. HOUSING CONDITIONS

Now I would like to ask you about your housing conditions.

1. Does your household share your dwelling with any other household? 1 □ YES 2 □ NO

2. What is the total useable floor space of the dwelling your household lives in, in full square metres?
□□□

3. I would also like to ask you about the equipment at your dwelling. Is your dwelling equipped with:
Provide the answers for each of the following installations and devices separately, by crossing the appropriate box.

3.1. water supply system	1 □ YES	2 □ NO
3.2. toilet flushed with running water	1 □ YES	2 □ NO
3.3. bathroom with a bathtub or a shower	1 □ YES	2 □ NO
3.4. hot running water	1 □ YES	2 □ NO
3.5. gas supply system	1 □ YES	2 □ NO
3.6. gas from a cylinder	1 □ YES	2 □ NO

4. How is your dwelling heated?
Choose one of the options given below by crossing the appropriate box.
1 □ collective central heating
2 □ individual central heating (using gas, coal, coke, electricity, other fuel)
3 □ fuel-fired furnaces (using coal, wood, sawdust, etc.)
4 □ other

5. Does your household have currently any overdue:
Provide the answers for each of the following payments/bills, by crossing the appropriate box.
Options: 1 – yes, for 1 month; 2 – yes, for 2 months; 3 – yes, for 3 months; 4 – yes, for 4-6 months; 5 – yes, for 7-12 months; 6 – yes, for more than 12 months; 7 – no; 8 – not applicable.

5.1. payments for the dwelling (rent)	1□ 2□ 3□ 4□ 5□ 6□ 7□ 8□
5.2. gas or electricity bills	1□ 2□ 3□ 4□ 5□ 6□ 7□ 8□
5.3. repayment of the home loan	1□ 2□ 3□ 4□ 5□ 6□ 7□ 8□

6. In comparison with the situation two years ago, have the housing conditions of your household:
Choose one of the options given below by crossing the appropriate box.
1 □ improved
2 □ deteriorated
3 □ remained unchanged.

H. EDUCATION
Now I would like to ask you about the education of your children.

NOTE: QUESTIONS 1-5 CONCERN ONLY THE HOUSEHOLDS WITH CHILDREN AGED UP TO 26

1., 2. What level of education would you like your children to attain?
(For each child choose one of the levels of education given below, by entering the appropriate number in the box in the column "level of education" (show Card 3)).
level of education:
1 □ basic vocational school
2 □ profiled secondary school
3 □ technical or vocational secondary school
4 □ higher education (Bachelor's degree)
5 □ higher education (Master's degree)
(Enter the answers in line 2 in the table below.)

3., 4. Does your child use the computer and Internet at home? *(show CARD 4)*
1 Yes, but only under supervision of other household members
2 Yes, he/she uses them on his/her own
3 No, he/she cannot use them due to an illness
4 No, he/she does not know how to use the computer/Internet
5 No, although he/she knows how to do it, there is no computer/Internet access at home
6 No, he/she is too young for it
(Enter the answers in lines 3 and 4 in the table below.)

1. Child's number*	1.1 …….	2.1 …….	3.1 …….	4.1 …….	5.1 …….
2. Level of education	1.2 □	2.2 □	3.2 □	4.2 □	5.2 □
3. Computer use	1.3 □	2.3 □	3.3 □	4.3 □	5.3 □
4. Internet use	1.4 □	2.4 □	3.4 □	4.4 □	5.4 □

** The child's number is the same as the reference number assigned to this person in part C, line 1.*

NOTE: QUESTIONS 5 and 6 CONCERN ONLY THE HOUSEHOLDS WITH CHILDREN AT SCHOOL AGE (above the reception class)

5. During the current school year, have you – due to financial reasons – had to:
Provide the answers for each of the following decisions separately, by crossing the appropriate box.

5.1. decide not to enrol the child on extra-curricular classes?	1 □ YES 2 □ NO
5.2. limit or suspend the payment of school fees?	1 □ YES 2 □ NO
5.3. stop paying for the child's meals at school?	1 □ YES 2 □ NO
5.4. withdraw the child from any private lessons?	1 □ YES 2 □ NO
5.5. change the school for one with lower or no fees?	1 □ YES 2 □ NO
5.6. introduce other restrictions?	1 □ YES 2 □ NO

6. In comparison with the situation two years ago, has your household's ability to meet the needs connected with the education of your children:
Choose one of the options given below by crossing the appropriate box.

1 □ declined
2 □ improved
3 □ remained unchanged.

I. SOCIAL ASSISTANCE

Now I would like to ask you about any assistance your household receives.

1. Does your household receive any external assistance? 1. □ YES 2.v NO

If the household receives assistance, go to question 2, if not – go to Section J "Culture and Leisure".

2. What is the form of assistance your household receives?
Provide the answers for each of the following forms of assistance separately, by crossing the appropriate box.

2.1. financial	1 □ YES 2 □ NO
2.2. in the form of goods	1 □ YES 2 □ NO
2.3. in the form of services	1 □ YES 2 □ NO

J. CULTURE AND LEISURE

Now I would like to ask you about the matters connected with culture and leisure.

1. In the last year, has any of the members of your household been unable to afford: *(The answer DOES NOT APPLY means lack of the given need)*

1.1. cinema	1. □ YES 2. □ NO 3. □ NOT APPLICABLE
1.2. theatre, opera, operetta, philharmonic concert, other concert	1. □ YES 2. □ NO 3. □ NOT APPLICABLE
1.3. museum or exhibition	1. □YES 2. □ NO 3. □ NOT APPLICABLE
1.4. purchase of a book	1. □ YES 2. □ NO 3. □ NOT APPLICABLE
1.5. purchase of press (daily newspapers, weeklies, monthlies)	1. □YES 2. □ NO 3. □ NOT APPLICABLE

2. How many books (approximately) are there at your home (excluding school books and manuals; also in the electronic version)?

1 □ none
2 □ up to 25 volumes
3 □ 26-50 volumes
4 □ 51-100 volumes
5 □ 101-500 volumes
6 □ more than 500 volumes

3. If, in question 2, you answer different than 1: Have you purchased any books in the last year other than school text-books or instruction (paper or electronic version) 1□ YES, how many …….. 2 □ NO
4. Is there any musical instrument (piano, guitar, other) in your household? 1□ YES 2 □ NO
5. – if YES, does any of the household members play it? 1□ YES 2 □ NO
6. In comparison with the situation two years ago, has your household's ability to meet the needs connected with culture:

Choose one of the options given below by crossing the appropriate box.

1 □ declined
2 □ improved
3 □ remained unchanged

7. In the last year, have you (any adult or child) been unable to afford: *(The answer DOES NOT APPLY means lack of the given need)*

7.1. summer camp or other group trips for (minor) children
1 □ YES 2 □ NO, the children have participated 3□ NOT APPLICABLE

7.2. holiday leave, trips for adults
1 □ YES 2 □ NO, the adults have participated 3□ NOT APPLICABLE

7.3. family trips (adults and minor children)
1 □ YES 2 □ NO, the family has participated 3□ NOT APPLICABLE

8. In comparison with the situation two years ago, has your household's ability to meet the needs connected with leisure:

Choose one of the options given below by crossing the appropriate box.

1 □ declined
2 □ improved
3 □ remained unchanged.

K. HEALTHCARE

Now I would like to ask you about the matters connected with health.

1. In the last year, has any member of your household used the services of:

1.1. healthcare units providing services financed by the National Health Fund 1. □ YES 2. □ NO
1.2. healthcare units providing services paid for by the patient 1. □ YES 2. □ NO
1.3. healthcare units providing services paid for by the employer (under a medical services plan or health insurance) 1. □ YES 2. □ NO

2. In the last year, has any member of your household been hospitalised:
(for reasons other than pregnancy)?
1. □ YES reference number of the person(s) from part C □□ □□ □□
2. □ NO

If the answers to both question 1 and 2 are NO, go to question 4.

3. During the last 3 months, how much in total (in PLN) has the household spent on:
   3.1. medical treatment or various medical tests in the clinics where the services were officially paid for (including also non-standard services provided by dentists and orthodontists, orthopaedic equipment, also when at least partially financed by the National Health Fund, etc.) PLN □□□□□
   3.2. informal payments, the so-called "gifts of gratitude", meant to secure a better or quicker care PLN □□□□□
   3.3. gifts being tokens of real gratitude for the received care PLN □□□□□
   3.4. fees in a public hospital (e.g. gifts, fees for the night care, anaesthesia, purchase of medicines in the pharmacy for an in-patient, etc.) PLN □□□□□

4. Please state the total amount of expenditures incurred in the last 3 months on medicines and other pharmaceutical items connected with any illness in your household: PLN□□□□□

5. **In the last year**, has your household experienced any of the following situations?
Provide the answers for each of the following situations separately, by crossing the appropriate box.

5.1. there has not been enough money to buy a prescribed or recommended medicine
1 □ YES 2 □ NO 3□ NO SUCH NEED HAS OCCURRED

5.2. you have not been able to afford to treat your teeth
1 □ YES 2 □ NO 3□ NO SUCH NEEDS HAVE OCCURRED

5.3. you have not been able to afford dental prostheses
1 □ YES 2 □ NO 3э NO SUCH NEED HAS OCCURRED

5.4. you have not been able to afford to visit a doctor
1 □ YES 2 □ NO 3□ NO SUCH NEED HAS OCCURRED

5.5. you have not been able to afford medical tests (such as laboratory tests, X-ray examination, electrocardiography)
1 □ YES 2 □ NO 3□ NO SUCH NEED HAS OCCURRED

5.6. you have not been able to afford to undergo a rehabilitation treatment
1 □ YES 2 v NO 3□ NO SUCH NEED HAS OCCURRED

5.7. you have not been able to afford a stay at a sanatorium
1 □ YES 2 □ NO 3□ NO SUCH NEED HAS OCCURRED

5.8. you have not been able to afford hospital treatment
1 □ YES 2 □ NO 3□ NO SUCH NEED HAS OCCURRED

6. If an additional health insurance policy guaranteed an improved access to medical services and their higher quality, would your household be willing to buy such an insurance policy?

1 □ NO
2 □ YES, up to PLN 100 monthly
3 □ YES, also above PLN 100 monthly

7. In comparison with the situation two years ago, has the ability of your household to meet the health needs:
Choose one of the options given below by crossing the appropriate box.

1 □ declined
2 □ improved
3 □ remained unchanged

L. INCOME SITUATION AND INCOME MANAGEMENT

Now I would like to ask you about your household's financial situation and income. Please take into account the income earned by all persons from your household (from any source), which to any extent is added to the common budget.

1. What was the net income (in PLN) of your household last month? □□□□□
in the case of refusal to answer, please specify the range □□ *(show Card 5)*

2. What was the average monthly net income (in PLN) of your household in 2012? □□□□□ in the case of refusal to answer – please specify the range □□ *(show Card 5)*

3. Is your household able to make ends meet with the current net income (cash in hand)?
Choose one of the options given below by crossing the appropriate box.
1 □ with great difficulty
2 □ with difficulty
3 □ with some difficulty
4 □ rather easily
5 □ easily

4. What is the lowest monthly net income (in PLN) needed to make ends meet for your household?
PLN □□□□□

5. Which of the following statements characterises best the income management in your household? *Show CARD 6, ask to choose one of the options and cross the appropriate box.*
1 □ we can afford everything and make savings for the future
2 □ we can afford everything without any particular problems but we do not make savings for the future
3 □ we live thriftily and thus can afford everything
4 □ we live very thriftily in order to save money for important purchases
5 □ we can afford only the cheapest food, clothes and rent, and (if the household is in debt) – for the loan repayment
6 □ we can afford the cheapest food, clothes and rent but we have no money to repay the loan
7 □ we can afford the cheapest food and clothes but we have no money to pay the rent
8 □ we can afford the cheapest food but we have no money to buy clothes
9 □ we cannot afford even the cheapest food

6. Does the regular income of your household allow you to meet the everyday needs?
1. □ YES 2. □ NO

If the regular income of the household allows to meet the everyday needs, go to question 7, if not – go to question 8.

7. What does your household do to meet the everyday needs?
Provide the answers for each of the following solutions, by crossing the appropriate box.

7.1. uses the savings	1. □ YES 2. □ NO
7.2. sells or pawns its property (material goods)	1. □ YES 2. □ NO
7.3. limits the everyday needs	1. □ YES 2. □ NO
7.4 takes out loans and credits	1. □ YES 2. □ NO
7.5. uses the assistance of relatives	1. □ YES 2. □ NO
7.6. uses the assistance of the Church/Caritas	1. □ YES 2. □ NO
7.7. applies for social assistance	1. □ YES 2. □ NO
7.8. a household member takes up an additional job	1. □ YES 2. □ NO
7.9. other actions	1. □ YES 2. □ NO
7.10. does not take any actions	1. □ YES 2. □ NO

8. How does your household pay regular telephone, television or electricity bills (or all other bills with a fixed amount)?
Mark all methods used.
8.1. □ via direct debit through the bank account
8.2. □ via an online bank account
8.3. □ via a bank account at a bank unit
8.4. □ at the post office
8.5. □ at a cash register where bills can be paid (e.g. at the supermarket)
8.6. □ directly at the provider's customer service point
8.7. □ by other method
8.8. □ no such bills are paid

If the household does not use direct debit, answer 8.1 should not be marked →question 9, if not, question 10

9. Why does the household not use the direct debit service to pay its bills?
If the household has a bank account, show CARD 7, ask to choose one of the options and cross the appropriate box.
9.1. □ we do not have bank account
9.2. □ current way is most convenient
9.3. □ we pay our bills when we have the funds - direct debit would be problematic
9.4. □ we pay a small amount of bills and we do not want to set up that kind of service
9.5. □ we didn't know of any such service
9.6. □ we do not know how to set up such a service
9.7. □ activation of such a service is too complicated
9.8. □ it is too expensive
9.9. □ we do not trust that the payment will be made on time
9.10. □ we fear loss of control over our finances
9.11. □ we fear that the invoice may be issued to an incorrect amount
9.12. □ invoice issuers do not give us the option of direct debit

10. In comparison with the situation two years ago, has the income situation of your household:
Choose one of the options given below by crossing the appropriate box.
1 □ worsened.....
2 □ improved .....
3 □ remained unchanged .....

M. COMPUTER AND INTERNET

Now I would like to ask you about the matters connected with the Internet.

Questions 1 and 2 are asked to the households with a computer and Internet access (answer "YES" to question F. 18.14)

1. How do the members of your household connect to the Internet at home? *Show CARD 8, more than one answer may be checked, by crossing the appropriate boxes.*
1.1. □ dial-up access (the telephone and Internet cannot be used at the same time)
1.2. □ permanent connection via a landline phone operator
1.3. □ permanent connection through a cable TV provider
1.4. □ other types of permanent connection, such as a local area network, local provider or shared connection in the neighbourhood
1.5. □ permanent connection through a mobile network, such as Orange Free, Blueconnect, iPlus, Play Online
1.6. □ access through a mobile phone (modem in the mobile phone)
1.7. □ other

2. If there is a permanent connection in the household, what is its speed? *Mb/s read as megabytes per second. If the speed varies depending on the time of day, ask about the maximum speed stated in the contract with the provider.*

1 □ up to 1Mb/s	5 □ 20 to 29Mb/s
2 □ 2 to 6 Mb/s	6 □ 30 to 59Mb/s
3 □ 7 to 10Mb/s	7 □ over 60Mb/s
4 □ 11 to 19Mb/s	8 □ it is hard to say

Question 3 is asked to the households without Internet access (answer "NO" to question F.18.14.)

3. Why is there no Internet access in your household? Show CARD 9, up to 3 answers may be checked, by crossing the appropriate boxes.

1. □ no appropriate equipment
2. □ no technical possibility of using a permanent Internet connection
3. □ sufficient possibility of using the Internet elsewhere
4. □ we do not need the Internet
5. □there is nothing interesting on the Internet
6. □ privacy and security reasons
7. □ the Internet may be harmful, it may deprave the children, consume time
8. □ the costs of access are too high
9. □ no appropriate skills to use the Internet
10. □ other reasons
11. □ we plan to set up the access this year

THANK YOU FOR YOUR TIME.

1.2. Individual questionnaire

Subsequent number of the questionnaire in the Voivodeship □□□□ **fixed personal number** (only for previously studied respondents, to be copied from PART 1/C) □□□□□

COUNCIL FOR SOCIAL MONITORING

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SOCIAL DIAGNOSIS 2013
An independent survey of the conditions and quality of life in Poland

PART II, individual

FEMALE | 2 |

Identification number of the household (*as in Part I/A*) □□□□□

Reference number of the person (*to be copied from Part I/C*) □□

Name (to be copied from Part I/C)

People differ between each other. They live in various conditions, they react to everyday events in a different manner, and they have varied ways to deal with what life brings.

This questionnaire concerns your personal perception of your own life. The majority of questions should be interesting for you, some of them may seem boring and tiresome but many will be easy to answer – after all it is your life they concern; although some of them may prove to be difficult as well. Please answer them the best way you can.

Sometimes you may have the impression that certain topics reappear and the same questions are asked, only in a changed manner. And you will be right. We are searching for the best way to ask questions. Do not be surprised if we jump from topic to topic – the questions in the sets have been listed randomly.

You may be sure you answers will remain confidential. All answers will be used only for scientific purposes as part of collective statistical analyses.

In the case of some questions various possible answers may be given to choose from. Please mark the one which describes your situation best. In some cases more than one answer can be checked. If the question has no ready answers to choose from, please enter the appropriate information in the indicated space.

We kindly ask you to fill in this questionnaire on your own, without any help from other family members. We would like to learn about your individual assessments and feelings and not the opinions discussed with other persons. If you have any problems with answering any of the questions, please ask the interviewer for help.

INSTRUCTION

In the questions where one or more answers may be selected please mark your choice by crossing the appropriate box, in the following manner: □.

In the questions where your assessment should be given, please enter the digit matching your assessment in the box. If the scale of assessment for such questions looks as the one below

1	2	3	4	5	6	7
completely						very
not important						important

Then the intermediate numbers (2, 3, 4, 5, 6) mean that the lower the number, the less important a given issue is (2 is less important than 3) and the greater the number, the more important the issue is (6 more important than 5).

In questions which a numerical value should be provided, please put it in the correct squares, making sure that the last digit is in the last square, for example: if a number of friends is 12 | 1 | 2 |, and if it is 5 | | 5 | .

1. Your **date of birth** □□ □□ □□□□
day month year

2. What in your opinion is **the most important condition of a successful, happy life** (*PLEASE FIRST READ THROUGH ALL THE ANSWERS AND THEN CHOOSE NO MORE THAN THREE, by crossing the appropriate boxes*):

1 □ MONEY
2 □ CHILDREN
3 □ SUCCESSFUL MARRIAGE
4 □ WORK
5 □ FRIENDS
6 □ PROVIDENCE, GOD
7 □ CHEERFULNESS, OPTIMISM
8 □ HONESTY
9 □ KINDNESS AND BEING RESPECTED
10 □ FREEDOM
11 □ GOOD HEALTH
12 □ EDUCATION
13 □ STRONG PERSONALITY
14 □ OTHER

3. **How do you perceive your entire life? Could you say it was…** *(please cross the appropriate box)*

1 □ DELIGHTED
2 □ PLEASED
3 □ MOSTLY SATISFYING
4 □ MIXED
5 □ MOSTLY DISSATISFYING
6 □ UNHAPPY
7 □ TERRIBLE

In the recent months: ("NOT APPLICABLE" means unmarried)

4. Your husband's expectations towards you have been so high you have not been able to meet them
1 □ OFTEN 2 □ ONCE OR TWICE 3 □ NEVER 4□ NOT APPLICABLE

5. Your husband has spent your shared money in a careless manner
1 □ OFTEN 2 □ ONCE OR TWICE 3 □ NEVER 4□ NOT APPLICABLE

6. Your husband's problems have worried you and made your life harder
1 □ OFTEN 2 □ ONCE OR TWICE 3 □ NEVER 4□ NOT APPLICABLE

In the recent months: ("NOT APPLICABLE" means no financially dependent children)

7. You have had to listen to some complaints concerning you child/children (e.g. at school, from neighbours or other parents)
1 □ OFTEN 2 □ ONCE OR TWICE 3 □ NEVER 4□ NOT APPLICABLE

8. You have incurred some financial costs as a result of your child/children's behaviour
1 □ OFTEN 2 □ ONCE OR TWICE 3 □ NEVER 4□ NOT APPLICABLE

9. Your child/children has disregarded you and your help and advice and instructions
1 □ OFTEN 2 □ ONCE OR TWICE 3 □ NEVER 4□ NOT APPLICABLE

10. You have felt you are losing control over your child/children
1 □ OFTEN 2 □ ONCE OR TWICE 3 □ NEVER 4□ NOT APPLICABLE

11. You have spent too little time with your child
1 □ OFTEN 2 □ ONCE OR TWICE 3 □ NEVER 4□ NOT APPLICABLE

In the last months: (DOES NOT APPLY means a lack of elderly parents, parents-in-law, or relatives)
11. Did you feel responsible for ensuring the care and well-being of elderly relatives 1 □ OFTEN 2 □ SOMETIMES 3 □ NEVER 4 □ DOES NOT APPLY
12. The state of health or mental state of an elderly relative concerns me. 1 □ OFTEN 2 □ SOMETIMES 3 □ NEVER 4 □ DOES NOT APPLY
In the recent months:
13. You have felt your source of income is uncertain and unstable 1 □ OFTEN 2 □ ONCE OR TWICE 3 □ NEVER 4□ NOT APPLICABLE (no income)
14. Your financial problems have worried you and made your life harder 1 □ OFTEN 2 □ ONCE OR TWICE 3 □ NEVER

In the recent months: ("NOT APPLICABLE" means no paid job)
15. You have felt your work is too tiresome, dirty or dangerous 1 □ OFTEN 2 □ ONCE OR TWICE 3 □ NEVER 4□ NOT APPLICABLE
16. You have felt overburdened with work duties which you have been unable to cope with 1 □ OFTEN 2 □ ONCE OR TWICE 3 □ NEVER 4□ NOT APPLICABLE
17. You have been unfairly treated by others at work 1 □ OFTEN 2 □ ONCE OR TWICE 3 □ NEVER 4□ NOT APPLICABLE

In the recent months:
18. You have felt that the place you live in is too crowded, for instance, that there are too many persons living in your apartment, the neighbouring apartments or in the entire building 1 □ OFTEN 2 □ ONCE OR TWICE 3 □ NEVER
19. You have feared because of crime, drug addiction and hooliganism in your district, housing estate or neighbourhood 1 □ OFTEN 2 □ ONCE OR TWICE 3 □ NEVER
20. The problems connected with your neighbours or other persons in the neighbourhood have poisoned your life 1 □ OFTEN 2 □ ONCE OR TWICE 3 □ NEVER
21. You have been annoyed with the decisions and actions taken by the local authorities 1 □ OFTEN 2 □ ONCE OR TWICE 3 □ NEVER

In the recent months:
22. You have suffered from ailments, such as bones aching or shortness of breath, etc., which has made it difficult for you to leave home, climb the stairs, etc. 1 □ OFTEN 2 □ ONCE OR TWICE 3 □ NEVER
23. Your health problems have made it difficult for you to perform everyday activities or to take part in other activities 1 □ OFTEN 2 □ ONCE OR TWICE 3 □ NEVER

In the recent months:

24. You have dealt with some administrative matter
1 □ YES 2 □ NO (if the answer is "NO", go to question 28)

25. You have been unable to deal with an administrative matter in an efficient, quick and easy manner

1 □ OFTEN 2 □ ONCE OR TWICE 3 □ NEVER

26. You have had to use connections or other ways to deal with some formal matter
1 □ OFTEN 2 □ SOMETIMES 3 □ NEVER

27. You have felt entirely helpless and humiliated while dealing with some formal matter
1 □ OFTEN 2 □ SOMETIMES 3 □ NEVER

28 **Did you vote in the last parliamentary elections in 2011?** 1 □ YES 2 □ NO 3 □ I was too young to vote

29. **What, in your opinion, is most important in life?**
1. □ fun, well-being, lack of stress
2. □ sense of purpose, achieving important goals despite difficulties, pain and sacrifice

In the last year, have you…?

30. started a better paid or an additional job 1 □ YES 2 □ NO

31. invested any money in production, trade or services 1 □ YES 2 □ NO

32. earned money in connection with the stocks, bonds or participation units in some fund
1 □ YES 2 □ NO

33. gained new qualifications or skills in order to have a higher salary
1 □ YES 2 □ NO

34. Considering all, **how would you assess your life in the recent times** – would you say you are…:
1 □ VERY HAPPY
2 □ RATHER HAPPY
3 □ RATHER UNHAPPY
4 □ UNHAPPY

35. **In the last year, have you used the services of healthcare units?**

35.1. financed by the National Health Fund 1 □ YES 2 □ NO

35.2. paid for from own pocket 1 □ YES 2 □ NO

35.3. paid for by the employer (under a medical services plan or health insurance)
1 □ YES 2 □ NO

36. **In the recent months, how often have you been so depressed you have thought about suicide?**

1□ VERY OFTEN
2 □ RATHER OFTEN
3 □ RARELY
4 □ NEVER

37. **Do you feel loved and trusted?** 1 □ YES 2 □ NO

38. **On average, how often in a month do you take part in a church service or other religious meetings?** *(if less often than once in a month, please enter 0)*
□□ times a month

39. **How many persons do you consider to be your friends?** □□

40. **At present, how strong is your willingness to live?** *(please cross the appropriate box on the scale below)*

□	□	□	□	□	□	□	□	□	□
1	2	3	4	5	6	7	8	9	10

I do not want to live at all — **I want to live very strong**

41. **Do you feel lonely, though you would prefer not to?** 1□ YES 2□ NO

42. **In your opinion, were the reforms in Poland after 1989 in general successful or unsuccessful?**

1 □ successful
2 □ unsuccessful
3 □ it is hard to say

43. **Do you smoke?** 1 □ YES 2 □ NO
44. — if **YES, how many cigarettes a day do you smoke on average?** □□ cigarettes
45. — if **NO, have you ever smoked?** 1 □ YES 2 □ NO

46. **During the last two years, have you been involved in any actions for the benefit of your local community** (gmina, housing estate, town or neighbourhood)?
1 ə YES 2 ə NO

47. Please specify, **how you usually react to problems or difficult situations in your life.** *(more than one answer may be checked, by crossing the appropriate boxes)*

47.1. □ I seek advice and help from others
47.2. □ I pull myself together and start to act
47.3. □ I drink alcohol
47.4. □ I console myself that it could have been worse or that other have worse problems
47.5. □ I give up, I do not know what to do
47.6. □ I take tranquilisers
47.7. □ I pray to God for help
47.8. □ I do other things that help me forget about my problems and put me in a better mood

48. **Are you a member of any organisations, associations, parties, committees, councils, religious groups or clubs?**

1 □ YES, one
2 □ YES, two
3 □ YES, three or more
4□ NO

49. — if **YES, have you ever fulfilled any roles in such organisations**? 1 □ YES 2 □ NO

50 - if question 48 is **YES**, then **do you currently take active part in such organisations?**
1□ YES 2□ NO

51 – if question 51 is **YES**, then what kind of organisation is it? (please indicate all **you take active part in**)

51.1 □ sports club
51.2 □ business, profesional or agricultural organisation
51.3 □ political party
51.4 □ an organisation supporting entrepreneurs, acting to protect the weak or human rights
51.5 □ trade union
51.6 □ union or interest club (anglers' stamp-collectors' motorists')
51.7 □ residents' association
51.8 □ parents' association
51.9 □. environmental protection, animal rights or nature reserve organisation
51.10 □ consumers' organisation
51.11 □ social club - youth, elderly, women, common interest
51.12 □ church or religious orgnisation
51.13 □ educational organisation (e.g Uniwersytet Trzeciego Wieku, book club)
51.14 □ elected local authority (e.g local or regional council)
51.15 □ support group
51.16 □ other, not mentioned above

In the boxes separated with horizontal lines below (N, O, P, etc.) there are various categories of feelings and behaviours. Read the four statements in each point carefully and then choose one that describes best your feelings and beliefs during the last month.

Please mark your choice by crossing the appropriate box (next to 0, 1, 2 or 3).

N. □0. I think that I don‘t look worse than I used to
□1. I am worried because I think I look old and I am not attractive
□2. I feel that I look worse than I used to
□3. I am sure that I look terrible.

O. □0. I have as much energy as ever to work.
□1. I have less energy than I used to have.
□2. I don‘t have enough energy to do much.
□3. I don‘t have enough energy to do anything.

P. □0. I have not experienced any change in my sleeping pattern.
□1. I do not sleep as well as I used to.
□2. In the morning, I wake up 1-2 hours earlier and find it difficult to fall asleep again.
□3. I wake up several hours too early and I can‘t get back to sleep.

Q. □0. I am no more tired or fatigued than usual.
□1. I get tired or fatigued more easily than usual.
□2. I am too tired or fatigued to do a lot of things I used to do.
□3. I am too tired or fatigued to do most of the things I used to do.

R. □ 0. I have not experienced any change in my appetite.
□1. My appetite is somewhat less than usual.
□2. My appetite is much less than before.
□3. I have no appetite at all.

T. □ 0. I am not worried about my health any more than I used to be.
□1. I am worried about such ailments as: stomach pains, upset stomach, or constipation.
□2. I am very worried about my health; I think about it constantly.
□3. My health condition is so worrying that I cannot think of anything else.

U. □ 0. I have not noticed any recent change in my interest in sex.
□1. I am less interested in sex than I used to be.
□2. I am much less interested in sex now.
□3. I have lost interest in sex completely.

53. **Have you attended any public meeting in the last year (but not at your workplace)?**
1 YES 2 NO

54. **Below you will find several statements. Please specify to what extent these statements match your beliefs and attitudes. Provide your opinions by entering the selected digit in the appropriate box.**

The specific digits mean:
1 - DEFINITELY YES
2 - YES
3 - RATHER YES
4 - NEITHER YES NOR NOT
5 - RATHER NOT
6 – NO
7 - DEFINITELY NOT

54.1. I admire people who have expensive houses, cars and clothes.
54.2. Despite some painful experiences, my life has sense and a great value.
54.3. In life the most important thing is to have a lot of fun.
54.4. The measure of a successful life is the possession of various material goods.
54.5. I like buying things that have no practical purpose.
54.6. Shopping itself gives me a lot of joy.
54.7. There is nothing wrong in housing one's parents in a old person's home.
54.8. People above all try to help others.
54.9. Homosexuals should be allowed to live according to their beliefs.
54.10. A true patriot should not speak ill of Poland and the Polish people.
54.11. Children ought to help their elderly parents.
54.12. In our country foreigners have too much say.
54.13. Some people are just more worthy than others
54.14. I would like to look good and attractive.
54.15. Material goods are very important to me.
54.16. We should do our best to treat people equally.
54.17. Some groups of persons are not worthy of respect.
54.18. We should seek to make the income of all persons more or less equal.
54.19. You cannot raise children well without corporal punishment.
54.20. Every man is the architect of his own fortune.
54.21. The elderly are respected in Poland.
54.22. Parents should take advantage of parental leave more often and take care of their children.

55. Generally, **do you believe that you can trust most people, or do you think you can never be too careful?**
1 you can trust most people
2 you can never be too careful
3 difficult to say

56. **Have you in the last year done any voluntary work for people outside the family or for a social organisation**?
1 YES, OFTEN 2 YES, RARELY 3 NO

57. Considering all, **do you think the last year was a good one for you?**
1 YES 2 NO

58. **On what or on who would depend, in your opinion, the last year being either a success or a failure?** *(you can indicate more than one answer)*
58.1. authorities
58.2. myself
58.3. other people
58.4. fate (providence)

59. **Below you will find a list of some ailments. Please specify whether you suffered from them LAST MONTH.**
If you did not suffer from a particular ailment last month, please cross the box in the column "I did not". If you suffered from a particular ailment for less than half of the month, cross the box in the middle column. If you suffered from a particular ailment for at least half of the month, please cross the box in the last column.

IN THE PAST MONTH:	I did not suffer	I suffered less than 15 days	I suffered at least for one half of the month
59.1. strong headaches	1□	2□	3□
59.2. stomach pains or flatulence	1□	2□	3□
59.3. pain or tension in the neck or arm muscles	1□	2□	3□
59.4. chest or heart pains	1□	2□	3□
59.5. dry mouth or throat	1□	2□	3□
59.6. *attacks* of excessive *sweating*	1□	2□	3□
59.7. shortness of breath	1□	2□	3□
59.8. shortness of breath	1□	2□	3□
59.9. accelerated heartbeat (palpitation)	1□	2□	3□
59.10. shivers or convulsions	1□	2□	3□
59.11. pressure on the bladder and more frequent urinating	1□	2□	3□
59.12. a feeling tiredness not associated with work	1□	2□	3□
59.13. constipation	1□	2□	3□
59.14. nosebleeds	1□	2□	3□
59.15. sudden changes of blood pressure	1□	2□	3□

60. How tall are you? (cm) □□□

61. What is your weight? (kg) □□□

62. **Please assess the specific areas of your life** and state to what extent you are satisfied with them. Please give your answers by crossing the box next to the appropriate digit for the given area of life. The specific digits mean:

1 – VERY SATISFIED
2 – SATISFIED
3 – RATHER SATISFIED
4 – RATHER NOT SATISFIED
5 – NOT SATISFIED
6 – VERY NOT SATISFIED
7 – not applicable

To what extent are you satisfied with:	
62.1. your relations with your close family members	1□ 2□ 3□ 4□ 5□ 6□ 7□
62.2. the financial situation of your family	1□ 2□ 3□ 4□ 5□ 6□ 7□
62.3. your relations with friends (a group of friends)	1□ 2□ 3□ 4□ 5□ 6□ 7□
62.4. your health condition	1□ 2□ 3□ 4□ 5□ 6□ 7□
62.5. your life achievements	1□ 2□ 3□ 4□ 5□ 6□ 7□
62.6. the situation in the country	1□ 2□ 3□ 4□ 5□ 6□ 7□
62.7. your housing conditions	1□ 2□ 3□ 4□ 5□ 6□ 7□
62.8. the town/city you live in	1□ 2□ 3□ 4□ 5□ 6□ 7□

62.9. your future prospects	1□ 2□ 3□ 4□ 5□ 6□ 7□
62.10. your sexual life	1□ 2□ 3□ 4□ 5□ 6□ 7□
62.11. your education	1□ 2□ 3□ 4□ 5□ 6□ 7□
62.12. the manner in which you spend your free time	1□ 2□ 3□ 4□ 5□ 6□ 7□
62.13. your work	1□ 2□ 3□ 4□ 5□ 6□ 7□
62.14. children	1□ 2□ 3□ 4□ 5□ 6□ 7□
62.15. marriage	1□ 2□ 3□ 4□ 5□ 6□ 7□
62.16. safety in your town/city of residence	1□ 2□ 3□ 4□ 5□ 6□ 7□

63. **With which of the following statements on democracy do you agree most?**
- 1 □ democracy is a superior form of governance
- 2 □ sometimes non-democratic rule is better than democracy
- 3 □ it does not really matter whether the government is democratic or not
- 4 □ democracy is a bad form of government
- 5 □ it is hard to say

64. **During the last three months, your own (personal) <u>monthly</u> net income (less taxes) has on average amounted to:** PLN □□□□□

65**. What <u>monthly</u> net income (less taxes) do you expect to receive in two years?**
PLN □□□□□

66. **Below you will find a list of various behaviours. Some of them may concern you directly, others may concern only other people. Please specify your attitude towards the behaviours listed below.**

Mark the answers by entering the appropriate number (1-5) into the boxes next to each example. The specific digits mean:

1 - I DO NOT CARE AT ALL
2 - I CARE LITTLE ABOUT IT
3 - I CARE ABOUT IT TO SOME EXTENT
4 - I CARE ABOUT IT VERY MUCH
5 - IT IS HARD TO SAY

Do you care if:

66.1. □ someone pays lower taxes than he/she should
66.2. □ someone avoids paying the fares for the public transport (e.g. buses, trains)
66.3. □ someone unjustly draws unemployment benefit
66.4. □ someone unjustly receives disability benefits (on the grounds of being unable to work)
66.5. □ someone files an insurance claim under false pretences

67. We would like to know **how many persons you contact with regularly for social and personal reasons (at least several times a year). Please give the approximate number of such persons:**
- 67.1. among close family members □□
- 67.2. among friends □□
- 67.3. among acquaintances (work/school colleagues, neighbours and others) □□

68. How many of them live in the same town/city or within 10 km from you? □□

69. **In the last week, how much time on average have you spent daily watching TV?**
- 1 □ I do not watch TV
- 2 □ less than an hour
- 3 □ one to two hours
- 4 □ two to three hours
- 5 □ three to four hours
- 6 □ more than four hours

70. **In the last month, how many times have you gone to:**
    70.1. cinema, theatre, concert □□
    70.2. restaurant, cafe, pub □□
    70.3. meeting with friends □□

IN THE LAST YEAR, have you:			
71. visited a psychologist (psychiatrist)	1 □ YES	2 □ NO	
72. drunk too much alcohol	1 □ YES	2 □ NO	
73. tried drugs/designer drugs	1 □ YES	2 □ NO	
74. lost a close person	1 □ YES	2 □ NO	
75. been unable to find a job after graduation	1 □ YES	2 □ NO	3□ NOT APPLICABLE
76. been moved to a lower position at work	1 □ YES	2 □ NO	3□ NOT APPLICABLE
77. been omitted in promotions at work	1 □ YES	2 □ NO	3□ NOT APPLICABLE
78. been promoted at work	1 □ YES	2 □ NO	3□ NOT APPLICABLE
79. had serious problems with your superior	1 □ YES	2 □ NO	3□ NOT APPLICABLE
80. started your own business	1 □ YES	2 □ NO	
81. lost a lot of money doing business	1 □ YES	2 □ NO	3□ NOT APPLICABLE
82. been robbed	1 □ YES	2 □ NO	
83. been mugged and beaten	1 □ YES	2 □ NO	
84. your home or car have been broken into	1 □ YES	2 □ NO	
85. been charged with a criminal offence	1 □ YES	2 □ NO	
86. been detained by the police	1 □ YES	2 □ NO	
87. been accused in a civil court case	1 □ YES	2 □ NO	
88. caused a traffic collision or accident	1 □ YES	2 □ NO	
89. a close acquaintance of yours has been arrested or has broken the law	1 □ YES	2 □ NO	
90. been discriminated (humiliated) against on the basis of your nationality, appearance, beliefs or other reasons	1 □ YES	2 □ NO	
91. your apartment (house) has been seriously damaged	1 □ YES	2 □ NO	
92. had your apartment (house) renovated	1 □ YES	2 □ NO	
93. had problems with the owner or administrator of the building you live in (lived in)	1 □ YES	2 □ NO	3 □ NOT APPLICABLE
94. been seriously ill	1 □ YES	2 □ NO	

95. **When, in your opinion, should Poland join the Eurozone?**

1 □ as soon as possible
2 □ when the situation in the Eurozone improves
3 □ never
4 □ hard to say

96. **Do you plan to go abroad within the next two years, in order to work?**

1 □ YES, to the European Union country – state which one.....
2 □ YES, to a country outside the European Union – state which one.....
3□ NO

97. –**if the answer to question96 is YES**, then what is **the main reason for your wish to travel**? *(please read all reasons carefully and indicate no more than tree of the most important in your opinion)*
97.1 □ I've lost all hope in finding any kind of work in this country
97.2 □ I've lost hope in finding the right work for my qualifications
97.3 □ I'm counting on much higher earnings than at Home
97.4 □ I've got no opportunity for professional development at Home
97.5 □ I'm fed up with the general atmosphere at home
97.6 □ In Poland, everything depends on who you know and not on what you can do
97.7 □ I'm expecting better social benefits in another country (child or unemployment)
97.8 □ It'll be easier to become independent abroad
97.9 □ I'd like to join my family/partner living abroad
97.10 □ People abroad are much more friendly and helpful
97.11 □ It's easier to set up one's own company abroad
97.12 □ My employer is sending me abroad
97.13 □ I want to challenge myself
97.14 □ I want to earn some money to set up my own business at home
97.15 □ I want to earn some money for my needs at home (support the family/pay off a loan/build a house/flat/buy land/equipment)
97.16 □ other reason. Which?.....

98. **Which political party do you support?** *(leader's name in brackets)*

1 □ Prawo i Sprawiedliwość (Jarosław Kaczyński)
2 □ Polskie Stronnictwo Ludowe (Janusz Piechociński)
3 □ Sojusz Lewicy Demokratycznej (Leszek Miller)
4 □ Polska Jest Najważniejsza (Paweł Kowal)
5 □ Solidarna Polska (Zbigniew Ziobro)
6 □ Ruch Palikota (Janusz Palikot)
7 □ Platforma Obywatelska (Donald Tusk)
8 □ Other
9 □ None
10 □ Difficult to say

99. **Do you use a computer?** 1□ YES 2□ NO

100. **Do you use the internet?** 1□ YES 2□ NO

101. **Do you use the services of a bank?** 1□ YES 2□ NO
102. **- if YES, then which services?**
1. □ an account
2. □ debit card
3. □ savings account
4. □ credit card
5. □ overdraft
6. □ electronic/internet banking

103. - **which bank?** *(please indicate your main bank for salaries, pension and day-to-day transactions)*

1. □ Alior Bank
2. □ Bank Gospodarki Żywnościowej
3. □ Bank Millennium
4. □ Bank Pekao SA
5. □ Bank Pocztowy
6. □ bank spółdzielczy
7. □ Bank Zachodni WBK
8. □ Citi Handlowy
9. □ Credit Agricole
10. □ Eurobank
11. □ Getin Bank
12. □ ING Bank Śląski
13. □ Kredyt Bank
14. □ mBank
15. □ MultiBank
16. □ PKO Bank Polski
18. □ Polbank
19. □ SKOK
20. □ other

104. **Do you trust:**

104.1. commercial banks?	1 □ YES, large2 □ YES, limited 3 □NO 4 □ NO OPINION
104.2. National Bank of Poland	1 □ YES, large2 □ YES, limited 3 □NO 4 □ NO OPINION
104.3. Sejm	1 □ YES, large2 □ YES, limited 3 □NO 4 □ NO OPINION
104.4. President	1 □ YES, large2 □ YES, limited 3 □NO 4 □ NO OPINION
104.5. European Parliament	1 □ YES, large2 □ YES, limited 3 □NO 4 □ NO OPINION
104.6. police	1 □ YES, large2 □ YES, limited 3 □NO 4 □ NO OPINION
104.7. government	1 □ YES, large2 □ YES, limited 3 □NO 4 □ NO OPINION
104.1. Social Insurance Institution (ZUS)	1 □ YES, large2 □ YES, limited 3 □NO 4 □ NO OPINION
104.9. stock exchange	1 □ YES, large2 □ YES, limited 3 □NO 4 □ NO OPINION
104.10. Open Pension Funds (OFE)	1 □ YES, large 2 □ YES, limited 3 □NO 4 □ NO OPINION
104.11. courts	1 □ YES, large2 □ YES, limited 3 □NO 4 □ NO OPINION
104.12. life insurance companies	1 □ YES, large2 □ YES, limited 3 □NO 4 □ NO OPINION
104.13. insurance companies	1 □ YES, LARGE 2 □ YES, LIMITED 3 □NO 4 □ NO OPINION
104.14. own family members	1 □ YES, large2 □ YES, limited 3 □NO 4 □ NO OPINION
104.15. neighbours	1 □ YES, large2 □ YES, limited 3 □NO 4 □ NO OPINION

105. **Why, in your opinion do people in Poland decide not to have children**? Please indicate your answer by writing the chosen number in the square on the side.

The following numbers indicate

1 – VERY IMPORTANT REASON
2 – IMPORTANT REASON
3 – NOT SO IMPORTANT REASON
4 - UNIMPORTANT REASON
5 –TOTALLY UNIMPORTANT REASON

1 □ inability to conceive/infertility
2 □ risk of genetic illness in the child
3 □ difficult material conditions, lack or instability of work
4 □ problems with reconciling work and parenting
5 □ a very uncertain future

6 □ partner does not want children
7 □ too short maternal leave
8 □ too short parental leave
9 □ too low child benefit
10 □ poor living conditions
11 □ too expensive or lack of places in playschools
12 □ threat to children (drugs, aggression, paedophilia)
13 □ children take away life freedom
14 □ desire for a professional career
15 □ ease of contraception
16 □ excessive putting off the decision to have a child
17 □ children are no longer needed in old age
18 □ high cost of upbringing
19 □ lack of the right, dependable partner
20 □ children are to much of a responsibility
21 □ other reason. Which?.....

106. **Do any of the above reasons** for deciding against having a first or another child **apply to you now?**

1 □ YES 2 □ NO

107, -- **If YES,** please write below the number of up to three reasons from the list in question 105

1 □ most important reason
2 □ second reason
3 □ third reason

108. **Do you practise any sport or physical activity?**

108.1. □ no, I do not practise any sport or physical activity
108.2. □ aerobics
108.3. □ running/jogging/nordic walking
108.4. □gym
108.5. □ cycling
108.6. □ skiing or other winter sports
108.7. □ swimming
108.8. □ football or other team sports
108.9. □ yoga
108.10. □ martial arts
108.11. □ another sport or type of physical activity

109. **In your opinion, which features distinguish a reliable bank?**
(you may check no more than 3 answers)

109.1 □ many years' presence on the market
109.2 □ being a private bank
109.3 □ being a state-owned bank
109.4 □ high quality customer service
109.5 □ individual consulting
109.6 □ the most functional online service
109.7 □ a consultant whom I have known for many years
109.8 □ recommendations from friends
109.9 □ frequent advertisements on TV and in other media
109.10 □ advertisements with famous persons
109.11 □ large number of units
109.12 □ vast product range
109.13.□ number of clients
109.14. significant State Treasury share in the bank's capital (providing the bank is Polish)

Which of the causes of the Polish airplane's catastrophe in Smoleńsk on 10 April 2010 is in your opinion most probable? *(please mark no more than two of the following causes)*

1 □ the pilots' or flight controllers' error
2 □ attack or conspiracy against the Polish president
3 □ the pilots being under pressure
4 □ general chaos in the institutions responsible for the flight
5 □ other causes
6 □ it is hard to say

The next pages include the sets of questions addressed only to certain persons. Please check which conditions you meet and go to the appropriate parts of the questionnaire:

the persons currently working professionally – question 111-115
the persons who changed their job in the period 2011-2013 – questions 116-117
the persons who did not work professionally in the period 2011-2013 – questions 118-119
the persons who have a bank account – questions 120-124
the persons who use a computer – questions 125-126
the persons who use the Internet – questions 127-132
persons who have taken part in *Social Diagnosis* for the first time – questions 133-135

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FOR THE PERSONS WHO WORK PROFESSIONALLY AT THE MOMENT

111. **What is in your opinion most important in professional work?** *(please read through all the answers and then choose no more than 3, by crossing the appropriate boxes)*

111.1 □ lack of tensions and stress
111.2 □ high degree of independence
111.3 □ personal development opportunities
111.4 □ work matching one's skills
111.5 □ quick promotion opportunities
111.6 □ stability of employment
111.7 □ convenient work hours
111.8 □ possibility of working at home
111.9 □ long leave
111.10 □ having a profession which is respected by others
111.11 □ appropriate pay
111.12 □ other factors

112. **Which solutions would in your opinion facilitate combining professional and family duties, including parental duties?** *Please indicate at least three answers you consider the most important solutions.*

112.1 □ part-time work
112.2. □ opportunity to share parental leave with the child's father
112.3. □ flexible work hours
112.4. □ possibility of working partly at home
112.5. □ more days off in a week
112.6. □ longer maternity leave
112.7. □ longer paid child care leave
112.8. □ higher social benefits (e.g. child care benefit, benefits for children, etc.)
112.9. □ better possibilities of child care outside home for children under 7 (more nurseries and kindergartens, the time of childcare outside home adjusted to the parents' work hours)
112.10. □ better possibilities of child care outside home for children aged 7-12 (more additional classes at schools, local care centres, etc.)

113. **How many hours a week do you work?** □□

114. **Do you currently work in a managerial capacity?** 1□ YES 2□ NO
115. -- if YES, **how many staff do you have reporting to you?** □□□

****

FOR THE PERSONS WHO CHANGED THEIR JOB IN THE PERIOD 2007-2011, IRRESPECTIVE OF WHETHER THEY WORK AT PRESENT OR NOT

116. Why did you change your job in the period 2011-2013? *(you may choose more than one reason)*
116.1. □ own decision in order to start a better/better paid job
116.2. □ my employment contract for a specified time expired
116.3. □ for reasons outside my control (health condition, dismissal, leave, company's restructuring, company's insolvency, retirement)
116.4. □ other reasons

117. Was the change of job connected also with the change of your profession? 1 □ YES 2 □ NO

****

FOR THE PERSONS WHO DID NOT WORK PROFESSIONALLY IN 2011-2013

118. **Why did you not work in the period 2011-2013?** (please choose up to 3 reasons, by crossing the appropriate boxes)
118.1 □ education, gaining new qualifications
118.2 □ taking care of the home
118.3 □ child-rearing
118.4 □ taking care of the disabled and older household members
118.5 □ health condition, disability
118.6 □ unsuitable age
118.7 □ lack of qualifications required by the employers
118.8 □ retirement
118.9 □ difficulties with finding a job
118.10 □ receiving social benefits
118. 11 □ I did not want to work

119. Which conditions would make you take up a job in Poland? *(please choose and indicate up to 2 answers)*
119.1 □ possibility of working part-time
119.2 □ possibility of working at least partly at home
119.3 □ possibility of having flexible work hours
119.4 □ possibility of receiving more support from other household members in terms of family duties
119.5 □ possibility of using proper care services for the children or the ill
119.6 □ possibility of retaining the right to receive social benefits
119.7 □ convenient conditions of working and commuting for disabled persons
119.8 □ other
119.9 □ I do not want to work at all

****

FOR THE PERSONS WHO HAVE A BANK ACCOUNT

120. **Do you consider the amount of contact on the part of the bank to be**

1 □ Too much
2 □ Correct
3 □ Too little

121. **What is your preferred form of contact on the part of the bank?**

1 □ By telephone
2 □ Email
3 □ Letter on paper
4 □ SMS
5 □ Visit to branch

122.1, 122.2, 122.3. **How frequent contact on the part of the bank would you consider acceptable?**
(please cross each column. If you have no email account, please leave the column empty)

How often?	Telephone	Email	Letter on paper
Once a week	□	□	□
Once a month	□	□	□
Once a quarter	□	□	□
Once every half a year	□	□	□
Less than once a year	□	□	□

123. **Would you be likely to purchase more bank products if it did not require visiting a branch?**
1□ YES 2□ NO3. □ Hard to say

124. How often do you change your main bank?

	Never	once	twice	Three times	Four times or more
In your whole life	□	□	□	□	□
In the last two years	□	□	□	□	□

****

FOR THE PERSONS WHO USE A COMPUTER

125. **How many hours have you spent using a computer in the last week?** □□ hours

126. **Did you perform the following activities when using a computer?**
Please cross the appropriate boxes.

	YES	NO
126.1. copying or moving a file or a folder	1. □	2. □
126.2. copying, cutting and pasting in order to replicate or move the selected fragments of a document	1. □	2. □
126.3. using the basic mathematical functions in a spread sheet	1. □	2. □
126.4. creating an electronic presentation	1. □	2. □
126.5. installing new devices (e.g. printer, modem, scanner)	1. □	2. □
126.6. writing a computer programme in a programming language	1. □	2. □

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FOR THE PERSONS WHO USE THE INTERNET

127. **How many hours have you spent using the internet in the last week?** □□

128. **Please state whether you have performed the following activities when using the Internet:**
(please read through the list of possible Internet activities below and mark which of them you have ever performed and which of them you have performed in the last week, by crossing the appropriate boxes)

Activity	Ever	In the last week
128.1. reading and sending e-mails	1.□	2.□
128.2. using instant messengers allowing conversations with friends (like gadu-gadu, etc.)	1.□	2.□
128.3. using chats	1.□	2.□
128.4. using discussion groups or forums	1.□	2.□
128.5. calling via the Internet (VoIP, Skype)	1.□	2.□
128.6. creating or modifying websites	1.□	2.□
128.7. collecting materials necessary for education or work	1.□	2.□
128.8. participating in online courses or trainings	1.□	2.□
128.9. job seeking, sending offers concerning employment	1.□	2.□
128.10. buying products and services online in Poland	1.□	2.□
128.11. purchase of of products and services by internet from abroad	1.□	2.□
128.12. participating in online auctions	1.□	2.□
128.13. playing network games online	1.□	2.□
128.14. downloading free software	1.□	2.□
128.15. using Facebook	1.□	2.□
128.16. using other social network portals	1.□	2.□
128.17. using internet banking services	1.□	2.□
128.18 downloading free music		
128.19. creating and publishing own texts (e.g. blog, Twitter), images, music or other work online	1.□	2.□
128.20. obtaining information from the websites of public institutions	1.□	2.□
128.21. downloading or filling in official forms	1.□	2.□
128.22. listening to music or a radio station online	1.□	2.□
128.23. watching TV files online	1.□	2.□
128.24. ticket reservation (airplane, cinema, theatre)		
128.25. reading newspapers or books online	1.□	2.□
128.26. using Internet and electronic mail at home for professional reasons	1.□	2.□

129. **Do you use internet through your mobile phone or tablet?**
1□ YES 2□ NO
130. - if **YES** then **how often?**
1 □ everyday or almost everyday
2 □ a few time a day
3 □ once a day
4 □ once a fortnight
5 □ once a month
6 □ less than once a month

131. **Do you use bank services via the internet on a mobile phone or tablet?**
1□ YES 2□ NO
132. - if **YES**, then **how often?**
1 □ a few times a week
2 □ once a week
3 □ once a fortnight
4 □ once a month
5 □ less than once a month

****

FOR PERSONS WHO ARE TAKING PART IN *SOCIAL DIAGNOSIS* FOR THE FIRST TIME

*If you have children who **currently do not live** with you, please answer question 133. If this does not apply to you, please leave question 133 out.*

133. **Please state the age of the children who do not live with you.**

The subsequent number of the child	1	2	3	4	5	6
Year of birth (two last digits)	□□	□□	□□	□□	□□	□□

If you have ever lived with a partner for more than three months, please answer the following. If not, please stop answering the questionnaire here.

134, 135. **Please state the year of starting and finishing your time of living with a partner for over three months**
(please fill in each column for each partner as appropriate)

The subsequent number of the partner	1	2	3	4	5	6
134. . The year in which you started to live with the partner (*two last digits*)	□□	□□	□□	□□	□□	□□
135. The year in which you finished living with the partner *(two last digits*); if this is your current relationship, please leave the space blank	□□	□□	□□	□□	□□	□□

THANK YOU FOR YOUR TIME

WE WOULD LIKE TO ONCE AGAIN ASSURE YOU THAT ALL PROVIDED INFORMATION WILL BE USED ONLY IN COLLECTIVE STATISTICAL SCIENTIFIC STUDIES.

on behalf of the COUNCIL FOR SOCIAL MONITORING

Professor Tomasz Panek - Warsaw School of Economics

1.3 Instructions for interviewers

INSTRUCTIONS CONCERNING THE ORGANISATION AND PRINCIPLES OF FILLING IN THE QUESTIONNAIRES UNDER SOCIAL DIAGNOSIS 2011 R6

Initial notes

The survey "Social Diagnosis" is a cyclical study, repeated on the same sample of households.

In the current seventh wave (*R7*) we are planning to interview all the households which took part in the previous rounds and consented to further participation in the survey, as well as the households from a new sample.

The 2013 study will include only those households (questionnaire for the household) from previous rounds that were present on the collective list sent to the Voivodeship Statistical Offices by e-mail. If this list includes a household, however, any of its present members is absent from such list, such a person is assigned a number following the last number from the 2009 list. If the household no longer includes a person from the list, such person retains its number and in Part I Section C lines 35, 38, 39 and 41 are filled in.

The most important information identifying the persons examined in the previous rounds is their **fixed number** – it should be carefully and visibly rewritten from the collective list.

The information on the household is collected based on the interview with the household head or a person well aware of the household matters (Part I of the questionnaire). All household members aged 16 and above (as of 1 March 2013, i.e. all persons born after 1 March 1997) fill in Part II of the questionnaire on their own in the interviewer's presence. If any respondent is unable to fill in this part on his or her own, the interviewer is obliged to help them. Part II of the questionnaire has been prepared in two versions – a male and a female one. Men may not be given the female versions and vice versa as the questionnaire has the respondent's gender coded in it.

The definitions, classification and groupings are in majority in accordance with the research based on the samples of households conducted by the Central Statistical Office (GUS). The proposed extensions or slightly different classifications come from the recommendations of *Eurostat* for the survey of households.

In the case of the households that were examined under *previous rounds*, apart from the full form for the current wave, you will receive also a part of the information from Section C of the previous rounds.

We ask you to conduct the interview in Section C based on this information from the previous rounds, i.e. taking into account all the persons in the household present on the list of persons from previous rounds as well as any new persons in the households from *R5*.

Remember to retain the previous rounds numbers for the persons in the household and to assign the fixed numbers to them, while the persons who joined the household after the last survey or were not present on the list are assigned with the numbers following the last number of the person from the list. **If the number of persons is higher than 8, all persons with the numbers above 8 are described on a separate sheet for Section C.** For the persons who permanently left the household after the last round, please fill in only the following lines: 35, 38, 39 and 41.

Our aim is to conduct the individual interviews (Part II of the questionnaire) with all household members aged 16 and above, even with those who for various reasons were not interviewed during the previous rounds.

If there is more than one household living at the same address, the household the interviewer visited first and which consented to take part in the survey is examined.

The cards to be shown to respondents do not feature such answers as "I do not know" or "It is hard to say", however, these answers may be present in the questionnaire and may be marked if a respondent spontaneously answers the question this way. In the questions which are not accompanied with the card, such answers are not read to respondents, but are marked (if they are present on the scale of answers) when a respondent spontaneously answers the question this way.

Please inform the examined households that, as in the previous years, they will take part in a lottery with 15 money prizes, with the value of PLN 600 each.

Detailed principles

PART I

Section A. HOUSEHOLD CHARACTERISTICS

point 0 – please enter the one-digit number to mark the status of the household in the survey

symbol
1 the household took part already in the study wave and still lives at the same address ⇒ go to point 1
2 the household took part in the fifth study wave but has changed the place of residence or all household members have moved to a multi-occupancy accommodation facility ⇒ an interview is not conducted
3 a new household (previously did not take part in any study wave), randomly chosen in current round

point 1 – enter the seven-digit number of the territorial unit according to the new territorial division of the country (Voivodeship, poviat, gmina)

point 3 – enter the one-digit number for the place of residence category of the household's present place of residence, according to the list below:
symbol
1 cities with more than 500,000 inhabitants
2 cities with 200,000 to 500,000 inhabitants
3 cities with 100,000 to 200,000 inhabitants
4 cities with 20,000 to 100,000 inhabitants
5 cities below 20,000 inhabitants
6 rural areas

point 4 – enter the household identification number. The identification number was hitherto composed of five digits and did not change in the subsequent survey rounds. Therefore, the households which already took part in the survey will have now the same number in the mailing list; and new households will have a new six-digit number taken from the pool of numbers for the given Voivodeship to be assigned to such household (100,001 to 105,000).

point 5 – A family is composed of the household members bound by marriage/unmarried couple, blood ties or adoption. Thus, the following types of families may be distinguished: regular families – a married or unmarried couple with no children, a married or unmarried couple with children; single-parent family – a mother with children, a father with children.
Non-family households are the household where there is no family (as defined above). There are non-family one-person households and non-family multi-person households (e.g. a grandmother with a grandson, siblings residing together, persons residing together but not related by blood). If there is no family in the household, enter 0.

Point 6 – enter the one-digit number for the main source of income in the household, in accordance with the list of symbols below (if there are several equally important sources of income, enter 7):
symbol
1 households of employees
2 households of farmers
3 households of self-employed persons, except for individual agricultural holding, liberal professions, self-employment
4 households of retirees
5 households of pensioners
6 households with income received but not earned and other than old age or disability pension
7 several equally important sources of income in the household

Section B. INFORMATION ABOUT CONDUCTING THE INTERVIEW

Question 5 – ask whether the household consents to participation in the next survey in 2015

Section C. COMPOSITION OF THE HOUSEHOLD

1 **the person's reference number** – for the households interviewed previously, please assign the household members with the same numbers as in mailing list. If there is a household member who was omitted on the list sent to the Voivodeship Statistical Office, assign the first unoccupied number. A new person in the household previously interviewed is also assigned with a subsequent number. If there are more than 8 household members, in the case of the other persons (number 9, 10, etc.) the data in C section are entered on a separate sheet, which should be folded with the questionnaire after the interview.

2 **fixed number** – the number assigned to the persons who took part in previous rounds and included on the list of the households which qualified for the survey in 2013 in column Q.

point 4 – please enter for the relevant person the one-digit household head's and the remaining persons symbol for the relationship with the household head:

symbol
1 household head
2 husband, wife
3 partner
4 son, daughter
5 son-in-law, daughter-in-law (partner of the child)
6 grandson, granddaughter
7 father, mother, father-in-law, mother-in-law
8 grandfather, grandmother
9 brother, sister
0 other person

The household head is the person who provides the household with all or the majority of the means of living.

line 5 – enter the one-digit symbol of the family number for each person:

symbol
1 for the members of the first family,
2 for the members of the second family,
3 for the members of the third family,
4 – 8 for the members of the fourth and further family,
0 for the persons who are not family members in a family household or for the persons in a non-family or a special household

line 6 – enter the one-digit symbol for the relationship with the family head The family head is the man in the case of a regular family (a married or unmarried couple with or without children) or a single parent in a single-parent family:

symbol
1 family head
2 wife
3 partner
4 son, daughter
5 other person outside the family
0 person in a non-family or special household

Note! In each questionnaire both line 4 and 6 should be filled in.

line 10 – enter the one-digit symbol for gender:

symbol
1 men
2 woman

line 11 – enter the one-digit symbol of the marital status for all household members:

symbol
1 unmarried
2 married
3 widow(er)
4 divorced
5 legally separated (based on a court decision)
6 practically separated (the spouses do not live together without a court decision)

line 16 – enter the two-digit symbol for the educational attainment:

symbol
10 higher education with at least a PhD title
11 higher education with at least an MA degree or an equivalent degree
12 higher education with an Engineer or Bachelor degree
20 post-secondary education
30 secondary vocational
40 secondary general
50 basic vocational
51 lower secondary
60 primary completed
70 no education (primary not completed, no school education)
99 not applicable (person aged 0-12)

line 17 – enter the total number of years in education, regardless of whether the relevant education was completed The years of any postgraduate studies or training courses are not included. A training course is an extra-curricular education aimed at gaining or upgrading one's professional qualifications, any courses aimed at preparing for any exams, as well as language courses, computer courses, driving courses, etc.

line 18 – enter the two-digit symbol for the specialisation of the completed education:

symbol
14 pedagogics
21 art
22 liberal arts (religion, foreign languages, mother tongue, history, archaeology, philosophy)
31 social sciences (psychology, sociology, demography, political science, economy)
32 journalism and information
34 economy and administration (management, marketing, finance, banking, insurance, accounting and taxes, science about management and administration)
38 law
42 biological sciences
44 physical sciences
46 mathematics and statistics
48 computer science
52 technical science (engineering, industry, construction)
54 production and processing
58 architecture and construction
62 agriculture, forestry, fishing
64 veterinary medicine
71 public health
72 healthcare (medicine, dentistry, nursing, pharmacy)
76 social welfare (social services)
81 services for the population and transport services
85 environmental protection and sanitary and public utility services
86 protection and safety
90 armed forces and country protection
91 other

92 no specialisation (e.g. primary, lower secondary or secondary general education)
98 not applicable (persons who have not completed primary education yet or without primary education)
99 lack of data

line 19 – enter the one-digit symbol for the educational attainment of the person, defined as using or not using various educational services provided under the public education system, by other institutions (public and private e.g., participation in a school for the elderly known as "Uniwersytet Trzeciego Wieku") outside the school system (concerns the current situation) or self-education

symbol
1 nursery or kindergarten
2 education in a day school
3 evening, extramural and external education
4 using various forms of education outside the school system (training courses, etc.)
5 individual course of education
8 not using any educational services

For persons with 1, 2, 3 or 4 in line 19, fill in line 20 and possibly 21 (if the person uses more than one educational service). If 5 or 8 is entered in line 19, go to line 22.

lines 20-21 – enter the two-digit symbol of the type of educational service (two most important ones):

symbol
11 nursery, public kindergarten
12 nursery, private kindergarten
21 education in a public primary and lower secondary school
22 education in a private primary and lower secondary school
30 education in a basic vocational school, vocational traineeship
41 education in a public general secondary school
42 education in a private general secondary school
51 education in a public vocational secondary school
52 education in a private vocational secondary school
61 education in a public post-secondary school
62 education in a private post-secondary school
71 public higher education school
72 private higher education school
81 postgraduate studies in a public higher education school
82 postgraduate studies in a private higher education school
83 PhD studies in a public higher education school
84 PhD studies in a private higher education school
90 training courses and trainings financed by the employer
91 training courses and trainings financed from the Labour Fund
92 training courses and trainings financed from the European Social Fund
93 training courses and trainings financed with own resources of the household
94 other forms of mastering skills (such as driving lessons, learning how to play an instrument, learning a foreign language)
98 I do not know

line 22 – enter the symbol

symbol
1 if the person has a driving licence
2 if the person has no driving licence
8 person too young

lines 23-28 – for each language, enter:
1 if the person knows how to speak and write in this language
2 if the person knows how to write in this language

3 if the person does not know this language

line 30 – enter the one-digit symbol for the disability category:

symbol

1 for the persons who have a valid certificate from the Social Insurance Institution (ZUS)

2 for the persons who have a valid certificate from the Disability Evaluation Board at the Poviat Centre of Family Support (ZOoN at PCPR)

3 for the persons who have a valid certificate from the Social Insurance Institution and ZOoN at PCPR

4 for the persons who have stated that due to disability or disease they have completely or partly limited ability to perform such activities as learning, working or taking care of own household but they do not have a certificate from the medical board

5 disability of children aged below 16

0 other cases

8 not applicable (the person is not a disabled person)

line 31 – for the persons with 1, 2 or 3 in line 31

symbol

1 certificate on a severe disability or complete inability to work and live alone or on the first invalidity class

2 certificate on a moderate disability or a considerable inability to work or on the second invalidity class

3 certificate on a slight disability or a considerable inability to work or advisability of changing one's profession or on the third invalidity class

lines 32-33 – these concern a source of income of specific persons; please enter the two-digit symbols for the main and the additional source of income

symbol

11 permanent paid employment in the public sector

12 permanent paid employment in the private sector

13 temporary paid employment in the public sector

14 temporary paid employment in the private sector

15 use of an agricultural holding

16 helping in an agricultural holding

17 employer outside an individual holding in agriculture

18 permanent work for one's own account (also self-employment)

19 temporary work for one's own account

20 Helping in work for one's own account

21 old age pension (apart from the agricultural social insurance system)

22 old age pensions for individual farmers (under insurance in the Agricultural Social Insurance Fund, KRUS)

23 disability pensions

24 family pensions

25 maternity benefits

26 unemployment benefits

27 other benefits from the Labour Fund

28 allowance for persons on child care leaves (former child care benefits)

29 other social insurance benefits (such as child birth allowance, funeral allowance, sickness allowance)

30 family benefits and allowance in accordance with the Act on Family Benefits of 2003, as amended, housing allowance

31 social assistance benefits

32 other social assistance benefits (such as benefits for persons brining up children, special purpose benefits and extraordinary benefits)

33 children maintenance

34 other income of a social benefit nature (including scholarships)

35 income from own property (interest, dividends, etc.)

36 income from the rental of a house, apartment or garage
37 foreign old age and disability pensions
38 benefits under a voluntary sickness and accident insurance system
39 compensation under other insurance schemes
40 donations, maintenance from private persons
41 other income
42 other revenues (sale of property, savings, credits)
43 being supported by other household members

line 34 – enter the one-digit symbol concerning the reasons for a temporary absence (absence to date or expected absence longer than 1 months)

symbol
1 stay at a hospital or nursing home
2 stay away from the household due to education
3 military service
4 other institutions (jail, prison, etc.)
5 work in the country, outside the place of residence
6 work abroad
7 education in the country, outside the place of residence
8 education abroad
9 business travel
0 other

line 35 – enter the one-digit symbol for the membership of the person in the household

symbol

1 the person was a member of the household subjected to the study under the previous rounds (and is in the panel sample of persons) and still is a member of this household

2 the person permanently left the household

3 the person died

4 a new person born after the previous study wave, of a mother who took part in that wave

5 the person was not a member of the household subjected to the study under the previous rounds (and is not in the panel sample of persons) if one of the following conditions is met:

it is a household subjected to the previous wave and this person became its member after the last study (came from the outside)

b) the household is a new household in the survey (none of the household members was a member of the household which took part in the previous rounds)

6 the person was in the group to be subjected earlier but was mistakenly not included in the survey (the person is in the panel sample of persons)

7 the person returned to the household: was a member of the household in earlier rounds but not in the last study at that household (and is in the panel sample of persons).

NOTE

Lines 36-41 are filled in exclusively in the households which took part in the previous rounds. They concern the persons who were the household members in the previous study and left the household or the persons who appeared in the household in between the previous and the present study wave:

lines 36-37 – enter the date of arrival in the household – month (Arabic numerals) and year (two last digits)

lines 38-39 – enter the date of leaving the household – month (Arabic numerals) and year (two last digits)

line 40 – enter the one-digit symbol for the reason for arrival in the household

the symbol of the reason for ARRIVAL in the household

1 marriage, cohabitation
2 divorce, separation, breakdown of an informal relationship
3 birth
4 other

8 not applicable

line 41 – enter the one-digit symbol for the reason for leaving the household
the symbol of the reason for LEAVING the household
1 marriage, cohabitation
2 divorce, separation, breakdown of an informal relationship
3 death
4 starting own household in the country
5 starting own household abroad
6 other
8 not applicable

line 42
symbol
1 interview conducted
The interview was not conducted, although the household was contacted, because
2 the person was not able to answer the questions (illness, alcohol intoxication)
3 the person did not return a filled in questionnaire
4 the person initially refused to be interviewed (it is possible he or she will consent to take part in the study in the next rounds)
5 the person definitely refused to take part in the study now or in the future
It was not possible to contact the person because:
6 the person was temporarily away from the household (e.g. a short-term business trip)
7 the person was not at home, no one in the household gave them the form to be filled in on his or her own

Section D. ECONOMIC ACTIVITY OF HOUSEHOLD MEMBERS AGED 15+
This section concerns persons who are aged 15 as of 1 March 2013, i.e. born before the end of February 1998.

line 1 – enter the person's number, the same as the one in Section C, line 1
lines 2, 3 – symbols and routing principles have been stated in the form

line 5 – enter the symbol
symbol
1. based on an employment contract for a specified period of time (apart from the contracts listed below, being non-standard forms of employment (6-11), and for a period longer than one year)
2. based on an employment contract for an unspecified period of time
3. self-employed entrepreneur hiring employers
4. self-employed
5. helping in a family business without pay
6. temporary job (based on fixed-term employment contracts, such as replacement contracts, contracts for specific work)
7. other short-term contracts (such as summer traineeships, employment contracts for a period shorter than one year)
8. trial period employment
9. paid employment on the basis of a civil law contract (contract of mandate, contract for specific work)
10. paid employment without a formal contract or with an oral agreement
11. other

line 6 – symbols and routing principles have been stated in the form; full-time job means employment on a full-time basis at one workplace

line 7 – enter the symbol of the most important reason
symbol
1. cannot find a full-time job
2. does not want to work full-time
3. is forced to as he or she has no possibility of ensuring proper care to his or her children
4. is forced to as he or she has no possibility of ensuring proper care to an ill, old or disabled person
5. has also another job
6. other reasons

line 8 – this question is asked to all respondents**;** symbols and routing principles have been stated in the form

line 9 – symbols stated in the form

line 10 – this question is asked to all respondents; routing principles have been stated in the form
symbol
1 YES and I am currently unemployed
2 YES and I am currently employed
3 NO and I am currently unemployed but I have already found a job
4 NO and I am currently unemployed
5 NO and I am currently employed

line 11 – enter the symbol of the main reason:
symbol
1 education, gaining new qualifications
2 taking care of the home
3 due to child care
4 due to taking care of disabled and older household members
5 due to the health condition
6 due to an unsuitable age
7 due to the lack of qualifications
8 is retired
9 is convinced he or she will not find a job anyway
10 does not want to lose the right to receive social benefits
11 does not want to work at all
12 other reasons

line 12 – symbols stated in the form

line 13 – 14 enter the number of years and/or months not in employment; for the persons who have never worked enter 97 and go to line 23; in the remaining cases go to line 19

line 15 – enter the one-digit symbol for the ownership structure of the institution being the main workplace
symbol
1 state-owned
2 owned by the units of the territorial self-government
3 private
4 cooperative, owned by a social or religious organisation
8 not applicable (in the case of the unemployed)

line 16 – enter the one-digit symbol for the ownership structure of the institution being the additional workplace
symbol
1 state-owned
2 owned by the units of the territorial self-government

3 private
4 cooperative, owned by a social or religious organisation
8 not applicable (in the case of the unemployed)
9 not applicable (in the case of persons who do not have an additional employment)

line 17 – symbols stated in the form ((local borders should be taken into account according to the administrative division)

line 18 – enter the three-digit symbol of the profession, in accordance with the current classification of professions used in the research of the Central Statistical Office (GUS). This classification is used also in the Labour Force Survey and in the EU SILC.

line 19 – enter the three-digit symbol of the profession, in accordance with the current classification of professions used in the research of the Central Statistical Office (GUS). This classification is used also in the Labour Force Survey and in the EU SILC.

line 20 – enter how many times this person has been registered in the Labour Office as an unemployed person

line 21 – enter the total number of months not in employment

line 22 – symbols and routing principles have been stated in the form

lines 23, 24, 25 – enter the two-digit symbol of the type of educational service
symbol
21 education in a public primary and lower secondary school
22 education in a private primary and lower secondary school
30 education in a basic vocational school, vocational traineeship
41 education in a public general secondary school
42 education in a private general secondary school
51 education in a public vocational secondary school
52 education in a private vocational secondary school
61 education in a public post-secondary school
62 education in a private post-secondary school
71 studies in a public higher education school – full-time studies
72 studies in a public higher education school – evening or extramural studies
73 studies in a private higher education school
81 postgraduate studies in a public higher education school
82 postgraduate studies in a private higher education school
83 PhD studies in a public higher education school
84 PhD studies in a private higher education school
90 training courses and trainings financed by the employer
91 training courses and trainings financed from the Labour Fund
92 training courses and trainings financed from the European Social Fund
93 training courses and trainings financed with own resources of the household
94 other forms of mastering skills (such as driving lessons, learning how to play an instrument, learning a foreign language)
95 individual course of education
96 School for the elderly know as "Uniwersytet Trzeciego Wieku"
98 I do not know

line 26 - smbols given in the form
line 27 – symbols and routing principles have been stated in the form
line 28 – enter the number of travels

line 29, 30 – enter the symbol
symbol

1 Austria	6 Greece	11 Germany	16 other EU Member States (Czech Republic, Slovakia, Hungary, Estonia, Lithuania, Latvia, Cyprus, Slovenia, Malta, Bulgaria, Romania)	17 USA
2 Belgium	7 Spain	12 Portugal		18 Canada
3 Denmark	8 Netherlands	13 Sweden		19 Australia
4 Finland	9 Ireland	14 Great Britain		20 other countries
5 France	10 Luxembourg	15 Italy		

lines 31 - 32 – enter the number of months

line 33 – enter the symbol if the person meets the following condition: he/she was abroad in the period 2011-2013 for longer than 6 months and returned to Poland last year (after 1 January 2012).

symbol

1. as had been planned before going abroad
2. had been dismissed/finished the employment
3. had completed education
4. could not find a job abroad
5. due to family reasons
6. due to the decrease in the income level abroad in comparison to the income level in the country
7. due to health reasons
8. only temporarily to deal with certain matters in the country
9. other reason

99. it is hard to say

Section I. SOCIAL HELP

Question 1 – concerns various sources of assistance, both from private persons and from institutions, such as gmina or town centres of social assistance, Poviat Centres of Family Support, Regional Centres of Social Policy, secular charitable organisations (including non-governmental organisations operating in the area of social assistance, in this charitable organisations, i.e. charitable associations, foundations, committees, societies, charitable actions, such as Polish Red Cross (PCK), Polish Committee for Social Assistance (PKPS), Foundation for Social Actions (FDS)), religious organisation (such as Caritas) and parishes, trade unions and workplaces.

Section L. EARNINGS SITUATION

question 1 and 2 – in the case of a definite refusal to answer, enter 99999. In the case of a non-definite refusal to answer or difficulties with stating the exact amount, ask to specify the range and enter the symbol in the single box in the right-hand corner. If the given range is higher than any of the following, enter the symbol of the range closest to the upper value. If the respondent specifies the exact value of income, or if he/she definitely refuses to answer, the box for the income range remains blank.

symbol of the income range

1. up to PLN 300	9. PLN 6,001- 7,000
2. PLN 301 – 600	10. PLN 7,001 – 8,000
3. PLN 601 – 1,000	11. PLN 8,001 – 9,000
4. PLN 1,001 – 2,000	12. PLN 9,001 – 10,000
5. PLN 2,001 – 3,000	13. PLN 10,001 – 15,000
6. PLN 3,001 – 4,000	14. PLN 15,001 – 20,000
7. PLN 4,001 – 5,000	15. above PLN 20,000
8. PLN 5,001 – 6,000	

Question 5 – answer 5 is checked also when the household does not have to repay the credit

PART II, individual questionnaire

The interviewer fills in only the first page (by rewriting the household number, the person's number, the fixed number for the persons from the panel sample and the name from section A and C), the rest of the questionnaire is filled in in the presence of the interviewer.

In extraordinary situations the respondent may fill in the questionnaire without the interviewer being present. In such a case an envelope should be attached to the questionnaire in order to prevent other household members from looking into the filled in questionnaire before it is collected by the interviewer.

Please explain the rules of filling in the questionnaire (page two) in a clear manner, especially the meaning of the scales with numbers and word definitions only next to the extreme values. Please draw the respondents' attention to the fact that the date of birth on page 3 may not be written with Roman numerals (e.g. 15 02 78, and not 15 II 78).

Annex 2. Principles of panel sample definition

2.1. Basic principles of defining the status of persons to be subjected to panel study

In the subsequent panel waves, the group of persons to be subjected to the study (individual interviews) consists of two subgroups: the individuals from the panel sample of persons and the individuals outside the panel sample of persons. The panel sample of persons comprises persons who are members of the households subjected to the study under the first panel wave (wave R=1). In the subsequent panel waves (waves *R=3* and *R=4*), only those persons who died in between the panel waves are excluded from the panel sample of persons. Similarly, the children born to women from the panel sample of persons are added to this panel sample. All persons from the panel sample of persons above 16 years of age undergo individual interviews. In this way, the group of persons to be subjected to the panel study is updated in the subsequent panel waves, in order to account for demographic changes.

The subgroup of persons outside the panel sample of persons but also to be subjected to individual interviews in the subsequent waves of the study (according to the same rules as from the panel sample of persons) comprises all individuals who during the given wave (starting from *R=3*) of the study form a household with at least one person from the panel sample of persons (they live in the households to be subjected to the study). Thus, these persons were not members of the households from the panel sample of households subjected to the study in wave *R=2*, but became members of such households in the subsequent panel waves (starting from *R=3*). However, when such persons move to households where not one member belongs to the panel sample of persons, they are then excluded from further study.

The presented rules of determining the groups of persons to be subjected to panel study in subsequent waves require that the "status" of such groups be updated each time, as it results from its status in the previous panel waves.

2.2. Principles of identifying the households to be subjected to panel study

All households which took part in the first wave of the study (*R=1*) form the panel sample of households. Due to the dynamic changes taking place in the sample of households over time, it is necessary to establish the principles specifying which households subjected to the study in its second wave would take part in the study also in its subsequent waves. This is determined based on the results of surveys among households from the neighbouring panel waves (the earlier one, (*R-2)*, and the one after it, (*R-1)*) as well as on the changes in the structure of the households subjected to the study.

The principles of identifying the households to be subjected to the study (HSS) in wave (*R-1*) on the basis of their status in waves (*R-2)* and (*R-1)* have been presented in table 1. The households not to be subjected (HNSS) to the study in wave (*R-1*) are excluded from the panel sample of households.

Table 2.1. Principles of identifying the households from the panel sample of households in wave (R-1)

Status of the household in wave *(R-2)*	Status of the household in wave ***(R-1)***		
	Interviewed	Not interviewed due to: inability to take part in the study (e.g. old age, illness), lack of contact, initial refusal	Not interviewed due to: definite refusal, impossible to be located
Interviewed in *(R-2)*	HSS	HSS	HNSS
Not interviewed in (*R-2*)	HSS	HNSS	HNSS
A new household in (*R-1*), not subjected to an interview in (*R-2*)[114]	HSS	HSS	HNSS

The analysis presented in Table 1 demonstrates that the households which were not interviewed in two subsequent panel waves are excluded from the panel sample of households. Moreover, the households where, due to structural changes, there is not a single person from the original panel sample of persons left are also excluded from the panel sample of households. On the other hand, the households whose all members moved to collective households (this concerns mainly single-person households) are not subjected to the questionnaire survey in the given panel wave but they remain in the panel sample of households. They are subjected to the so-called "monitoring" procedure which enables their inclusion in the questionnaire survey once they become private households again. The households which temporarily move abroad are handled in a similar manner.

[114] A new household, added to the panel sample of households, that has been created by a person from the panel sample of persons or added to the panel sample as a result of the fact that at least one person from the panel sample of persons moved to the household.

The panel sample of households is increased with any new households created by the persons from the panel sample of persons and with the households to which the persons from the panel sample of persons move.

2.3. Principles of identifying the persons to be subjected to the panel study in the subsequent panel waves

All adult persons from the panel sample of households in the given study wave undergo an individual interview under this wave (*R-1*), regardless of whether they belong to the panel sample of persons or not. These are mainly the persons subjected to the study in the previous study wave *(R-2)*, including the persons who were not interviewed in the previous wave due to various reasons. Moreover, all adult persons who became members of the households from the panel sample of households after the previous study wave *(R-2)* also undergo individual interviews.

Those persons who were not interviewed in two subsequent panel waves are excluded from the panel sample of persons (they were members of the households where no interviews were conducted under those waves, that is the households to be excluded from the panel sample of households, or they refused to take part in the study for the second time). The persons from the panel sample of persons who moved to collective households or temporarily moved abroad are also not to be interviewed. However, they are not excluded from the panel sample of persons, but "monitored" so that it is possible to include them in the subsequent panel waves of the study. The information on such persons is gathered (most often from other members of their households), including the information on the reasons for their temporary absence. Finally, the persons outside the panel sample of persons who, though interviewed in wave *(R-2)* as belonging then to the households from the panel sample of households, later moved to the households where there are no persons from the panel sample of persons, are not interviewed in the given study wave *(R-1)*. Such persons are excluded from further research.

Annex 3. Comparative analysis of living conditions

3.1. A Taxonomic measure of living conditions

Algorithm of the construction of taxonomic measure of living conditions
1º Variable value standardisation:

$$z_{ij} = \frac{x_{ij} - \bar{x}_j}{S(x_j)}, \quad \bar{x}_j = \frac{\sum_{i=1}^{n} x_{ij}}{n}, \quad S(x_j) = \sqrt{\frac{\sum_{i=1}^{n} (x_{ij} - \bar{x}_j)^2}{n}}$$

where:
x – value of the *j*-th variable for the *i*-th Voivodeship,

z - value of the *j*-th standardised variable for the *i*-th Voivodeship

2º Model pattern based on an abstract voivodship P_o with the following variable values:

$$z_{oj} = \begin{cases} \max\limits_i z_{ij} & dla \quad j \in S \\ \min\limits_i z_{ij} & dla \quad j \in D \end{cases} \quad \begin{matrix} (j = 1,2,...,m), \\ (i = 1,2,...,n). \end{matrix}$$

where:
S - set of stimulants

D - set of destimulants.

3º We calculated the distance between particular Voivodeship and the model Voivodeship Po:
as an arithmetical unweighted average:

$$c_{io} = \sqrt{\sum_{j=1}^{m} (z_{ij} - z_{oj})^2}, \qquad (i = 1,2,...,n),$$

or as a arithmetical weighted average:

$$c_{io} = \sqrt{\frac{\sum_{j=1}^{m} (z_{ij} - z_{jo})^2 \cdot w_j}{\sum_{j=1}^{m} w_j}}, \qquad (i = 1,2,...,n).$$

4º We estimate the taxonomic measure of the living conditions for each Voivodeship:

$$d_i^R = \begin{cases} 1 & dla \quad d_i \geq 1 \\ d_i & dla \quad d_i < 1, \end{cases}$$

where:

$$d_i = \frac{c_{io}}{c_o},$$

therefore:

$$c_o = \bar{c}_o + 3S_o; \bar{c}_o = \frac{1}{n}\sum_{i=1}^{n} c_{io}; S_o = \sqrt{\frac{\sum_{i=1}^{n} (c_{io} - \bar{c}_o)^2}{n}}.$$

Table A.3.1. Variables characterising the various dimensions of household living conditions.

Variables	*Variable character*	*Variable variant*	*Weight of variable variant*
1. Income			
1.1 equivalent net income	*S*	-	-
2. Nutrition			
Incidence of financial difficulties in the satisfaction of requirements for the following food items			
2.1 vegetables and vegetable products	*D*	-	-
2.2 fruit and fruit products	*D*	-	-
2.3 meat and poultry	*D*	-	-
2.4 meat and poultry products	*D*	-	-
2.5 fish and fish products	*D*	-	-
2.6 butter and other edible fats	*D*	-	-
2.7 milk	*D*	-	-
2.8 milk products	*D*	-	-
2.9 sugar	*D*	-	-
2.10 sugar products	*D*	-	-
2.11 stimulants	*D*	-	-
3. Material affluence			
3.1 Household equipment and durable goods *Non-ownership due to financial concerns:*			
3.1.1 automatic washing machines	*D*	-	-
3.1.2 dishwashers	*D*	-	-
3.1.3 microwave	*D*	-	-
3.1.4 LCD or plasma TV	*D*	-	-
3.1.5 satellite or cable TV	*D*	-	-
3.1.6 iPad or other tablet	*D*	-	-
3.1.7 DVD player	*D*	-	-
3.1.8 home cinema	*D*	-	-
3.1.9 desktop computer	*D*	-	-
3.1.10 portable computer	*D*	-	-
3.1.11 personal car (personal delivery vehicle)	*D*	-	-
3.1.12 home internet access	*D*	-	-
3.1.13 landline telephone	*D*	-	-
3.1.14 motorboat, sailboat	*D*	-	-
3.1.15 allotment	*D*	-	-
3.1.16 holiday home	*D*	-	-
3.1.17 electronic reader	*D*	-	-
3.2 Household savings	*S*	*Lack of savings*	*0*
		savings in terms of income for: *1 month* *3 months* *4-6 months* *7-12 months* *over 12 months*	 *1* *2* *3* *4* *5*
3.3 Household borrowings and debts	*D*	*Lack of borrowings*	*0*
		borrowings in terms of income for: *1 month* *3 months* *4-6 months* *7-12 months* *over 12 months*	 *1* *2* *3* *4* *5*

4 Housing conditions

4.1 Equipment with media Not owned by household			
4.1.1 mains water	*D*	-	-
4.1.2 flushing toilet	*D*	-	-
4.1.3 bathroom with shower and bathtub	*D*	-	-
4.1.4 hot running water	*D*	-	-
4.1.5 mains gas	*D*	-	-
4.1.6 central heating (common or individual)	*D*	-	-
4.1.7 non-independent dwelling	*D*	-	-
4.1.8 living space per person in m^2	*S*	-	-

5. Children's education

Occurrence of financial difficulties resulting in:			
5.1 forgoing of additional educational activities	*D*	-	-
5.2 limitation or suspension of school payments	*D*	-	-
5.3 forgoing of school dinners	*D*	-	-
5.4 forgoing of private lessons	*D*	-	-
5.5 change to a cheaper school	*D*	-	-
5.6 other limitations	*D*	-	-

6. Healthcare

Lack of funds for health requirement satisfaction in the form of necessary:			
6.1 purchasing of prescriptions or medicines recommended by doctors	*D*	-	-
6.2 dental care			
6.3 dental prosthetics			
6.4 visit to the doctor			
6.5 medical tests (laboratory, x-ray, ECG)			
6.6 rehabilitation	*D*	-	-
6.7 sanatorium therapy			
6.8 hospital treatment			

8. Participation in the arts and entertainment

Necessity to forgo, for financial reasons, visits to the			
7.1 cinema	*D*	-	-
7.2 theatre, opera, operetta, philharmonic or concert	*D*	-	-
7.3 museum or exhibition	*D*	-	-
Necessity to forgo, for financial reasons, the purchase of			
7.4 books	*D*	-	-
7.5 the press	*D*	-	-

8. Rest and leisure

Necessity to forgo, for financial reasons			
8.1 summer camp or other trips for children	*D*	-	-
8.2 breaks and other trips for adults	*D*	-	-
8.3 family outings for both children and adults	*D*	-	-

3.2. Grouping of Voivodeship by similarity of living conditions

We grouped Voivodeships by similarity in terms of the internal structure of their characteristic variables. These described the level of requirement satisfaction in specific living condition dimensions obtained on the basis of a taxonomic measurement of living conditions (table 4.8.1). The grouping fulfilled two basic conditions:

- homogeneity: the Voivodeships should be similar as far as possible,
- heterogeneity: the Voivodeships in different groups should differ as far as possible.

Various multivariate comparative analysis methods may be applied for Voivodeships grouping (Panek, 2009, p. 105 and further). In this case we used the k-average method to optimise the given object grouping (here by Voivodeship).

The entry point for optimisation methods is to establish the desired number of object groups we wish to create. Then we decide on the initial content of each specific group using the following range of approaches (Grabiński et al, 1989, pp. 77-78):

- random selection,
- experts' opinion,
- use of arbitrarily selected variables,

- grouping gained with the aid of any taxonomic method taken as an initial grouping,
- ordering objects according to their distance from the centre of gravity of particular object groups.

The objects at the group centre of gravity are those defined according to the following formula:

$$1+(r-1)\left(\frac{n}{z}\right)$$

- in which r is the following group number and n the number of grouped objects.

Optimisation methods seek to improve the quality of initial object grouping by moving objects between groups in accordance with defined goodness of grouping criteria..

Each optimisation method differs in terms of defined optimisation criteria and various procedures of practice. The k-average method also has a range of variants differing above all by how qualitative grouping criteria are defined and the rules of shifting objects (here Voivodeships) between groups in the group optimisation process rules of initial object grouping and the halting of the process of improving the goodness of grouping.

The *k*-average method version applied in this study to establish goodness of grouping criterion is based on the maximisation of intergroup variability in relation to variability within groups. Initially we establish the division of voivodships by group and number of interactions by which we seek to optimise the grouping. Then we calculate the value of goodness of grouping function that makes up the relation of intergroup differentiation to the differentiation within groups. The assessment of intergroup differentiation is most often defined as the sum of distances of voivodship group gravity centres from the centre of gravity of the total of studied voivodships. However, the assessment of the differentiation within groups is therefore the sum of distances of objects from the centre of gravity of the group to which they were classified.

The next step is to calculate the gravity centres for each particular group and assign voivodships to groups on the basis of minimising their distance from the group centres. Then we verify if the goodness of grouping function value has not increased, and if such a change has not occurred we complete the procedure in the assumption that the given grouping is optimal. In the opposite case, we run a further interaction, verifying whether the shift of voivodships between groups does not return a rise in the value of goodness of grouping function. We continue this procedure until the value of goodness of grouping function does not increase or we have reached the assumed number of interactions.

Annex 4. Methodology of analysing poverty

4.1. Monetary poverty

4.1.1. Definition

4.1.1.1 Objective approach

In the objective approach, the poverty line was based on the minimum of existence value for the 4th quarter of 2013, adjusted with a relevant consumer price index, calculated by the Institute for Labour and Social Studies for a single-person household of employees. The poverty line for March 2011 constituted the value of the poverty line of February/March 2013, adjusted with a relevant consumer price index. For all other types of households, the poverty line was calculated as the product of the adjusted minimum of existence value and an appropriate equivalence scale.

The minimum of existence income is equivalent to the value of the basket of consumer goods established for a household having specific social and demographic features. The contents of such basket should provide the household with such living conditions which enable solely "survival" in good health and being able to work (Deniszczuk, Sajkiewicz, 1996). This means that the minimum value of existence is the line of extreme poverty.

5.1.1.2. Subjective approach

4.1.1.2. Subjective approach

In the subjective approach to determining the poverty line, the subjective poverty line method was used (Goethart, Halberstadt, Kapteyn and Van Praag, 1997; Panek 2011). In this method, the households themselves indicate the lowest levels of income necessary for them to make ends meet, which are treated as their specific poverty lines. The levels of income declared by specific households depend mainly on their size (the number of persons in the household) and their actual income.

This relation may be presented in the form of the following regression equation:

$$\ln y_{\min} = \alpha_0 + \alpha_1 \ln L + \alpha_2 \ln y, \qquad (1)$$

where:

L – number of persons in the household,

y – actual income of the household,

y_{min} – the lowest level of income necessary to make ends meet, indicated by the household itself.

The parameters of the above regression function, estimated with the use of the least squares method, were the basis for calculating the poverty line for subsequent years of the study. The poverty line is obtained as the value of income y^*, which – when substituted for y_{min} and y – satisfies equation (1). The values of the poverty line (y^*) dependent on the number of persons in the household were finally established on the basis of the following formula:

$$y^*(L) = \exp \frac{\alpha_0 + \alpha_1 \ln x}{1 - \alpha_2}. \qquad (2)$$

4.1.2. Equivalence scales

4.1.2.1. Objective approach

The equivalence scales adopted in the objective approach were estimated, both under the unidimensional and multidimensional approach, on the basis of the procedure using the information on the amount of expenditure of the households (Szulc, 2014). This procedure takes into account the fact that the households of a different composition spend income in different ways. For example, in the households of young persons less is spent on medical care and more on food, unlike the households of older persons. At the same time, it was assumed that the structure of consumption in the households reflects their actual needs.

A household of employees of a single person aged between 30 and 59 was established as the point of reference (that is, as a "standard" household, with the equivalence scale of 1). The value of the equivalence scale for any other household may be then interpreted as the number of "standard"

households it includes (that is, the number of "standard" persons in our case). The equivalence scales were estimated on the basis of the following formula:

$$\ln m_i = \frac{1}{2}\sum_{j=1}^{m}\sum_{s=1}^{n}\left[m_{sj}\left(w_{si}+w_{sr}\right)\right]\ln\frac{A_{ji}}{A_{jr}}, \qquad (3)$$

where:

m_i – equivalence scale for the *i-th* household,

w_{si},w_{sr} – percentage of expenditure of the *i-th* and *r-th* household for the *s*-th good or group of goods. In this case the *r* household is the standard household.

m_{sj} – elasticity of expenditure for the *s*-th good in relation to demographic characteristic *j* (*j=1,2,.,m*).

A_i, A_r – vectors of demographic characteristics of the *i-th* and *r-th* household.

In the presented study, the vectors of demographic characteristics were based on the number of adult persons in the household (above 16 years), the number of children (below 10 years and from 10 to 15 years) and the age of the head of household (16-29 years, 30-60 years and above 60).

The m_{sj} parameters are obtained through the estimation of the model of consumption demand, with the following explanatory variables: the expenditure of the household, the number of adult persons and children in the household and the prices of consumer goods. These are interpreted as the demographic elasticities of expenditure on specific goods. Thus, the equivalence scale obtained on the basis of equation (3) is a geometric mean of the elasticities of expenditure in relation to the demographic variables weighted with the shares of expenditure on specific goods in the total expenditure.

4.1.2.2. Subjective approach

In the subjective approach, the estimates for the equivalence scales were based on the poverty lines calculated for households with different numbers of persons in the household, with the use of formula (2). A single-person household was assumed as the "standard" household being the point of reference (with the equivalence scale of 1). The value of the equivalence scale for a *L*-person household is obtained by dividing the value of its poverty line by the value of the poverty line for a one-person household:

$$m_L = \frac{y^*(L)}{y^*(1)}. \qquad (4)$$

4.1.3. Measurement

In the unidimensional (monetary) approach taking into account only current household income, we can concentrate on the assessment of the actual phenomenon of poverty if we take into consideration household equivalent incomes and the poverty line.

Aggregate poverty indexes (Panek 2011) have the widest application in poverty analysis. These are statistical formula aggregating individual poverty measures (for individual households or persons) and allowing assessment on the national scale in terms of territory or typological household groups. Because there is no single, universal formula applicable here, studies should use various formula of aggregated index providing information on various aspects of poverty.

Because in the multidimensional approach to the measurement of poverty we measure its both monetary and non-monetary (material deprivation) aspects, we shall name indexes measuring monetary poverty by their function. The most popular index assessing the incidence of monetary poverty (*monetary poverty incidence*) is the *headcount monetary poverty ratio*, which is the share of units (persons or households) with income below the poverty line:

$$H^{um} = \frac{n_{um}}{n}, \qquad (5)$$

where:

n – number of individuals in the studied population,

n_{um} – number of monetary poor in the studied population

This index has the value of 0 when there are no poor households and 1 if all units studied have equivalent incomes below the poverty line.

The percentage of those in poverty tells us nothing about other aspects of poverty, as its value is quite independent of whether incomes are close to the poverty line or close to zero. In the presented

study we propose widening the analysis of monetary poverty to the three other aspects beyond its incidence.

The basic measure of monetary poverty depth is the monetary poverty gap index defined as:

$$I^{um} = \frac{1}{n_{um}} \sum_{i=1}^{n_{nm}} \left(\frac{y^* - y_i^e}{y^*} \right), \qquad (6)$$

where:

y^* - is the monetary poverty line

y_i^e - equivalent income of the *i*-th individual.

This measure is different to the monetary poverty gap as it is for the entire population of households, not only those in poverty. The sum of poverty gaps of all individuals (the income gaps of nonmonetary-poor individuals are naturally 0) is here divided by the number of all studied individuals. The income gap index measures the costs of eliminating monetary poverty (in relation to the poverty line), since it indicates the amount of equivalent income (measured as a percentage of the poverty line) which should, on average, be transferred to each of the poor for the income of all studied individuals to move above the poverty line. This index assume values in the interval [0,1] like the poverty income gap index, indicating no poor monetary households as 0 in the population and 1 when the income of all households in poverty equals zero.

Another aspect of monetary poverty is *monetary poverty intensity*, the most frequently used index of which is the *income gap index*:

$$. \ IT^{um} = \frac{1}{n} \sum_{i=1}^{n_{um}} \left(\frac{y^* - y_i^e}{y^*} \right) \qquad (7)$$

This index may be also presented as the product of the monetary poverty headcount ratio and the poverty gap as it describes both the incidence and depth of poverty:

$$IT^{um} = H^{um} \cdot I^{um} .. \qquad (8)$$

This measure is different to the poverty gap as it is for the entire population of households, not only those in poverty. The sum of poverty gaps of all units (the gaps of non-poor units are naturally 0) is here divided by the number of all studied units. The income gap index measures the costs of eliminating monetary poverty (in relation to the breadline), since it indicates the amount of equivalent income (measured as a percentage of the breadline) which should, on average, be transferred to each of the poor for the income of all studied units to move above the breadline. This index uses 0-1 values like the poverty income gap index, indicating no poor households as 0 in the population and 1 when the income of all households in poverty equals zero.

The fourth group of indexes assesses *monetary poverty severity*, assessing monetary poverty incidence, the distance between poor households' income and the poverty line (monetary poverty depth) and also income inequalities among the poor.

The basic index of monetary poverty severity most often applied in practice is the *squared income gap index*:

$$SE^{um} = \frac{1}{n} \sum_{i=1}^{n_{um}} \left(\frac{y* - y_i^e}{y^*} \right)^2 .. \qquad (9)$$

It may also be presented in a form that shows the impact of specific aspects of poverty on the analysed phenomenon:

$$SE^{um} = H \left(\frac{y* - \overline{y_i^{eum}}}{y*} \right)^2 + \frac{S^2\left(y_i^{eum}\right)}{\left(y*\right)^2} ,. \qquad (10)$$

where:

$\overline{y^{eum}}$ - average equivalent income of the monetary poor,

$S^2\left(y_i^{eum}\right)$ - variance of equivalent income in the population of the poor in monetary terms.

As opposed to the income gap index, in this index the greater the distance from the income determining the poverty line and the equivalent income of the monetary poor, the greater the weights assigned to such households . Therefore, monetary poverty severity among the monetary poor, and at the same time the value of this index, rise together with the increase in the distance between monetary

poor equivalent income and the poverty line. The weights assigned to the households are directly proportional to the size of their income gaps. For example, if the income gap of a given individual is 10%t of the poverty line, the individual receives a weight of 10% of all studied individuals weights. This index is 0 when there are no monetary poor households in the studied population. The value of the index increases together with the number of monetary poor individuals, their income gaps rise and increase of the income inequalities between them. The index has its maximum value of 1 when all studied individuals have income equal to zero.

4.2 Non-monetary poverty (material deprivation)

The first step to measuring non-monetary poverty is defining its non-monetary dimensions closely linked to the need-groups of the studied units (persons and households), followed by the selection of variables that are symptoms of non-monetary poverty in each of its dimensions. The study considered the following dimensions of deprivation and their symptoms:

1. Satisfaction of household nutritional requirements (a lack of requirement satisfaction for financial reasons).

Lack of financial means to satisfy nutritional requirement for:

1.1 Vegetables and vegetable products
1.2 Fruit and fruit products.
1.3 Meat and poultry.
1.4 Meat and poultry products.
1.5 Fish and fish products.
1.6 Butter and other edible fats.
1.7 Milk.
1.8 Milk products.
1.9 Sweets.
1.10 Confectionaries.
1.11 Stimulants including alcohol and cigarettes.

2. Household equipment and durable goods (lack of equipment or goods for financial reasons).

Lack of financial means to satisfy nutritional requirement for:

2.1. Washing machine.
2.2. Dishwasher.
2.3. Microwave oven.
2.4. LCD/plasma TV.
2.5. Pay TV (satellite or cable).
2.6. Computer (desktop or laptop).
2.7. Passenger car.
2.8. Access to home internet.
2.9. Landline.

3. Housing conditions and payment.

3.1. Too high density (less than $5m^2$ per person).
3.2. Lack of mains water.
3.3. Lack of flushing toilet.
3.4. Lack of bathroom with bath or shower.
3.5. Lack of hot running water.
3.6. Lack of mains or bottled gas.
3.7. Lack of central heating (collective or individual).
3.8. Non-payment of rent.
3.9. Non-payment of gas or electricity bills.
3.10. Non-payment of mortgage instalments.

4. Children's education (forgone for financial reasons).

4.1. Resignation from extra-curricular activities.
4.2. The limitation or suspension of school fees.
4.3. Resignation from school lunches.
4.4. Resignation from private lessons.
4.5. Changing to a cheaper school.

4.6. Other restrictions.
5. Culture (forgone for financial reasons).
5.1. Cinema.
5.2. Theatre, opera, operetta, philharmonia, concert.
5.3. Museum or exhibition.
5.4. Purchase of book.
5.5. Purchase of press.
6. Leisure (forgone for financial reasons).
6.1. Camp and other children's group trips.
6.2. Holidays, trips adults.
6.3. Family outings and trips.
7. Healthcare (forgone for financial reasons).
7.1. Prescriptions or doctor's recommended medicine.
7.2. Dental treatment.
7.3. Dental prosthetics .
7.4. Visits to the doctor.
7.5. Medical tests.
7.6. Rehabilitation.
7.7. Sanatorium therapy.

Symptoms of material deprivation included in analysis are measured on a nominal scale and are binary except for one symptom. As a result, we can only determine the presence or absence of a symptom of poverty in the studied individual (the household), that is, whether the studied individual is subject or not subject to deprivation in terms of a symptom. When a measurement of poverty symptom is possible on a stronger scale, i.e. at least ordinal, we can also measure the depth, intensity and severity of individual material deprivation by symptom.

The measure various aspects of monetary poverty presented in 5.3.1 can be used, after the appropriate modification, to analyse non-monetary poverty (material deprivation) at the level of material deprivation symptoms, dimensions of material deprivation and non-monetary poverty in all its dimensions including the intangible. The measure assessing the incident of material deprivation for individuals (persons and/or households), with the *j*-th symptom of deprivation in the *h*-th its dimension, which is equivalent to the *headcount monetary ratio*, is the headcount material deprivation ratio, that is, the percentage of individuals subject to material deprivation due to the *j*-th symptom in the *h*-th dimension: $H_{hj}^{dm} = \frac{n_{hj}^{dm}}{n}$, (11)

where:

n_{hj}^{dm} - is the number of studied units in material depravation, by the *j-th* symptom in the *h* dimension.

If the symptom of material deprivation is measured on a binary scale, the individual is materially deprived when is characterized by a symptom of poverty. When a symptom of deprivation is measured on a stronger scale (at least ordinal), a individual is in deprivation with this symptom when the value of this symptom for this individual exceeds the threshold value. The threshold for symptom 3.1 (excessive high-density housing) is set at 5 m^2 per person. In the second situation presented, we also evaluate other aspects of individual material deprivation by given symptom of deprivation.

First we order the values of a given symptom of deprivation by increasing degree of deprivation risk. The measure of material deprivation depth by the *j*-th symptom of deprivation in the *h*-th dimension of material deprivation, is the *material deprivation gap index* of individuals subject to deprivation of a given symptom:

$$I_{hj}^{dm} = \frac{1}{n_{hj}^{dm}} \sum_{i=1}^{n_{hj}^{dm}} \left(\frac{z_{hj}^{*} - z_{i,hj}}{z_{hj}^{*}} \right), \quad (12)$$

where:

z_{hj}^{*} - the poverty line value of the *j*-th deprivation symptom in the *h*-th dimension, that is the value of the *j*-th deprivation symptom in the *h*-th dimension above which a given individual is no longer in deprivation in terms of that symptom [11],

$z_{i\,hi}$ - level of the i-th individual deprivation in terms of the *j*-th deprivation symptom in the *h-th* dimension.

Measure of material deprivation intensity by the *j*-th symptom of deprivation in the *h*-th dimension using the *material deprivation gap index* in terms of a given symptom of deprivation:

$$IT_{hj}^{dm} = \frac{1}{n}\sum_{i=1}^{n_{hj}^{dm}}\left(\frac{z_{hj}^{*} - z_{i,hj}}{z_{hj}^{*}}\right). \qquad (13)$$

Measure of material deprivation severity in terms of the *j*-th symptom of material deprivation in the *h*-th dimension, we use *the square of the deprivation gap index* by given symptom:

$$SE_{hj}^{dm} = \frac{1}{n}\sum_{i=1}^{n_{hj}^{dm}}\left(\frac{z_{hj}^{*} - z_{i,hj}}{z_{hj}^{*}}\right)^{2}. \qquad (14)$$

In order to evaluate different aspects of material deprivation in each of its dimensions, we adopted the material deprivation line for each dimension of material deprivation, i.e. an upper limit of deprivation symptom numbers at which the individual is in deprivation (table 4.1).

Table 4.1. Poverty material deprivation lines for particular dimensions of material deprivation

Material deprivation dimension	Material deprivation line
1. Satisfaction of nutritional requirement	5 or more symptoms
2. Equipment with durable goods	4 or more symptoms
3. Housing conditions and housing charges	4 or more symptoms
4. Children's education	2 or more symptoms
5. Culture	2 or more symptoms
6. Leisure	1 or more symptoms
7. Healthcare	3 or more symptoms

We assume that the threat of material deprivation for a individual (person or household) increases with the number of reported symptoms of deprivation in these dimensions. Next, after arranging the number of deprivation symptoms by decreasing degree of deprivation (from the largest number of deprivation symptoms to the absence of deprivation symptoms) we define , for each dimension of deprivation, a variable by assigning successive natural numbers to these numbers of symptoms (z_h = 0,1,2, ..., k_h). The index measuring the incidence of material deprivation in the *h*-th dimension is the *headcount material deprivation ratio* in this dimension, that is, the percentage of individuals subject to material deprivation in the *h*-th dimension:

$$H_h^{dm} = \frac{n_h^{dm}}{n}, \qquad (15)$$

where:

n_h^{dm} - the number of individuals subject to material deprivation in the *h*-th dimension, i.e. the number of individuals characterized by at least that number of symptoms of deprivation at which we accept it is subject to deprivation in the *h*-th dimension.

The evaluation of material deprivation depth of materially deprived in the *h*-th dimension is the *material deprivation gap index for materially deprived individuals* in the *h* dimension is defined as follows:

$$I_h^{dm} = \frac{1}{n_h^{dm}}\sum_{i=1}^{n_h^{dm}}\left(\frac{z_{i,h} - z_h^{*}}{z_h^{*}}\right), \qquad (16)$$

where:

$z_{i,h}$ - the number of symptoms of material deprivation in the *h*-th dimension and the *i-th* materially deprived individual, -

z_h^{*} - the material deprivation line in the *h*-th dimension, that is the lower limit of numbers of deprivation symptoms at which the individual is in depravation.

The measurement of the intensity of material deprivation in the *h*-th dimension is conducted with the aid of a *material deprivation index gap* in the *h*-th dimension:

$$IT_h^{dm} = \frac{1}{n}\sum_{i=1}^{n_h^{dm}}\left(\frac{z_{i,h} - z_h^*}{z_h^*}\right) \quad . \qquad (17)$$

The severity of material deprivation in the *h*-th dimension is assessed with the aid of an index that is the *square of the material deprivation gap* in the *h*-th dimension*:*

$$SE_h^{dm} = \frac{1}{n}\sum_{i=1}^{n_h^{dm}}\left(\frac{z_{i,h} - z_h^*}{z_h^*}\right)^2 . \qquad (18)$$

A general assessment of material deprivation (a combination of all its dimensions) requires an analysis of the deprivation dimensions in which the studied individual finds itself.

In order to assess the various aspects of material deprivation in all its dimensions we build up aggregate indexes. Next, after arranging the number of deprivation dimensions by decreasing degree of deprivation (from the largest number of dimensions in which a individual can be deprived to the absence of dimensions in which a individual can be deprived) we define a variable by assigning successive natural numbers to these numbers of dimensions (z = 0,1,2, ..., h). Then we determine the material deprivation line, corresponding to the higher limit of the number of dimensions of deprivation at which the individual is not in deprivation. It was assumed that the given household is non-monetary poor (is in material deprivation) when it reports material deprivation in at least three of its dimensions.

The *headcount material deprivation ratio* that assesses the incidence of material deprivation, which is equivalent to the *headcount monetary poverty ratio* in the assessment of monetary poverty incidence, is the percentage of individuals (persons, households) in material deprivation:

$$H^{dm} = \frac{n^{dm}}{n}, \qquad (19)$$

where:

n^{dm}- the number of individuals in material deprivation in the studied population.

The measurement assessing the depth of material deprivation is the *material deprivation gap index* of individuals in deprivation defined as follows:

$$I^{dm} = \frac{1}{n^{dm}}\sum_{i=1}^{n^{dm}}\left(\frac{z_i - z^*}{z^*}\right), \qquad (20)$$

were:

z_i - the number of material deprivation dimensions in the *i*-th materially deprived individual,

z^* - the material deprivation line.

The measurement of material deprivation intensity is conducted with the aid of the *material deprivation gap index:*

$$IT^{dm} = \frac{1}{n}\sum_{i=1}^{n^{dm}}\left(\frac{z_i - z^*}{z^*}\right). \qquad (21)$$

The measurement of *material deprivation severity* will be done with the *squared material deprivation gap index*:

$$SE^{dm} = \frac{1}{n}\sum_{i=1}^{n^{dm}}\left(\frac{z_i - z^*}{z^*}\right)^2 . \qquad (22)$$

4.3. Measurement of co-incidence of monetary and non-monetary poverty

The final stage of a multidimensional analysis of poverty is the assessment of the co-incidence of monetary poverty and non-monetary poverty. The incidence of both monetary poverty and material deprivation substantially worsen the severity this phenomenon. If the household does not achieve both current income at least equal to the monetary poverty line and is subject to material deprivation, its financial resources, including not only current income, but also income from previous periods and accumulated non-cash assets is not sufficient to satisfy its basic needs at the minimal acceptable level. This poverty is *manifest poverty*.

A number of measures of manifest poverty is applied to conduct an evaluation of different aspects of cumulative monetary poverty and non-monetary poverty. A measurement of the incidence of

combined monetary and non-monetary poverty, that is *manifest poverty incidence*, is the proportion of individuals both in monetary poverty and material deprivation, that is, the *manifest poverty headcount ratio* defined as follows:

$$H^{uo} = \frac{\sum_{i=1}^{n_u} n_i \left| x_i \in X^{dm} \right.}{n}, \qquad (23)$$

where:

X^{dm} - set of materially deprived individuals,

$x_i \in X^{dm}$ -the *i-th*individual, which belongs to materially deprivated individuals set.

The measure of manifest poverty depth is the *manifest poverty gap index of manifestly poor*, i.e. the monetary poor also in deprivation:

$$I^{uo} = \frac{1}{2n^{um}} \sum_{i=1}^{n^{um}} \left(\frac{y^* - y_i^e}{y^*} \right) \left| x_i \in X^{dm} + \frac{1}{2n^{dm}} \sum_{i=1}^{n^{dm}} \left(\frac{z_i - z^*}{z^*} \right) \right| x_i \in X^{um}, \qquad (24)$$

where:

X^{um} -set of monetary poor individuals,

$x_i \in X^{um}$ - the *i*-th individual, which belongs to monetary poor individulas.

The manifest poverty intensity index is the *manifest poverty gap index*:

$$IT^{uo} = \frac{1}{2n} \sum_{i=1}^{n^{um}} \left(\frac{y^* - y_i^e}{y^*} \right) \left| x_i \in X^{dm} + \frac{1}{2n} \sum_{i=1}^{n^{dm}} \left(\frac{z_i - z^*}{z^*} \right) \right| x_i \in X^{um}. \qquad (25)$$

The measure of manifest poverty severity is the *squared manifest poverty gap index*:

$$SE^{uo} = \frac{1}{2n} \sum_{i=1}^{n^{um}} \left(\frac{y^* - y_i^e}{y^*} \right)^2 \left| x_i \in X^{dm} + \frac{1}{2n} \sum_{i=1}^{n^{dm}} \left(\frac{z_i - z^*}{z^*} \right)^2 \right| x_i \in X^{um}. \qquad (26)$$

4.4. Analysis of changes in poverty over time

When analysing the dynamic phenomena related to poverty, it is particularly important whether a specific household is suffering poverty temporarily or whether this condition is of a permanent character (Panek, 2011). This is particularly significant when formulating the tasks under social policy aimed at fighting poverty, as these should focus on counteracting permanent poverty. Identifying the character of poverty is possible solely by means of a panel approach which consists in the observation of the same households in all periods (years). Hence, in the presented study on poverty, the assessment of the changes in poverty was based on the information concerning only those households which took part in all last two study phases in 2011 and 2013.

The analyses conducted as part of the study examined the character of poverty by means of analysing the mobility of the household in terms of its position above or below the poverty line is presented in table 5.2

Table 5.2. The scheme of flows of households across the poverty line

Poverty sphere status in the period *t*-1	Poverty sphere status in the period *t*		$n_{j,t-1}$
	non-poor households (*j*=0)	poor households (*j*=1)	
non-poor households (*j*=0)	$n_{00,t-1,t}$	$n_{01,t-1,t}$	$n_{0,t-1}$
poor households (*j*=1)	$n_{10,t-1,t}$	$n_{11,t-1t}$	$n_{1,t-1}$
$n_{j,t}$	$n_{0,t}$	$n_{1,t}$	n

The assessment of households' mobility in relation to their status of being below or above the poverty line is based on the analysis of the flows of households between these statuses in two comparable

periods (years). The scheme of flows of households between the status of being below or above the poverty line under the conventional (unidimensional) approach is presented in table 1.

In the case of poverty analysis in relation to the income situation of households, the values on the diagonal of the matrix of flows $\boldsymbol{N} = \lfloor n_{jj',t-1,t} \rfloor$ indicate the number of households which did not change their status of being below or above the poverty line in the two comparable periods (i.e. in both comparable periods (years) these households were or were not below the poverty line). The number of households which "moved" above the poverty line is below the diagonal, and the number of households which "moved" below the poverty line is above the diagonal.

The indices of mobility, which are synthetic assessments of the scale of mobility of the households in relation to their being above or below the poverty line, are calculated on the basis of the matrix of flows. A classical mobility index often used in practice and calculated based on the matrices of flows is the Shorrocks index (1978), described with the following formula:

$$M^S = \frac{n - tr(\mathbf{N})}{n}, \qquad (27)$$

where:

tr(**N**) – trace of the matrix of flows[115],

whereby:

$n_{jj',t-1,t}$ – number of households which in period *t-1,t* moved from the status of being below or above the poverty line *j* to status *j'*.

Index (27) may have the value from the range of $[0,1]$. The higher the value of the index, the greater the mobility of the households.

When decomposing index (27), and expanding its analytical capacities, we obtain the following:

$$M^S = \frac{n - tr(\boldsymbol{N})}{n} = \frac{\sum_{j>j'} n_{jj'} + \sum_{j<j'} n_{jj'}}{n} = \frac{\sum_{j>j'} n_{jj'}}{n} + \frac{\sum_{j<j'} n_{jj'}}{n} = M^{S+} + M^{S-}, \qquad (28)$$

The first of the components on the right side of the equation indicates the percentage of households which moved above the poverty line in the comparable periods. The second component of the sum is the percentage of households which moved below the poverty line in the studied period. As a supplementation for mobility index (11), T. Panek (2001) proposed the index of the character of the households' mobility:

$$CM = \frac{\sum_{j>j'} n_{jj'}}{n} - \frac{\sum_{j<j'} n_{jj'}}{n} = M^{S+} - M^{S-}, \qquad (29)$$

This index may have the value from the range of [-1; 1]. Its positive values mean that the flows of households in the direction above the poverty line prevail. On the other hand, its negative values mean that the flows of households in the direction below the poverty line prevail. The higher the absolute value of the index, the greater the prevalence of one type of flows over the other.

4.5. Determinants of poverty

A widely used method of establishing the sources of poverty divides the researched population into groups according to selected social and economic features, and then assesses this phenomenon inside these groups by means of poverty indices most often by means of the percentage of the poor. High values of the poverty index in the given group of households, with a concurrent high diversity of such values between the groups under the given classification suggest that this variant of the feature characterising the selected group of households generates poverty.

However, the assessments of the impact of specific variables on generating poverty may independently be biased since the relation of such variables with other variables is not taken into account. For example, high values of poverty index in the group of rural households indicate that living in the countryside generates poverty. However, a high value of poverty index for this group of households is a combined effect not only of the place of residence, but also of other factors; e.g. a higher

[115] Values on the diagonal of the matrix, i.e. the number of households, which have not changed their poverty sphere status in the periods under comparison.

number of children in rural households in comparison to urban households, a lower level of education of the members of such households in comparison with the households from the cities. Thus, in order to specify the determinants of poverty necessary to estimate the "net" impact of specific variables on generating poverty requires the application of multidimensional methods of analysing correlations and the multiple regression in particular.

In order to specify the impact of the features underlined in the study on the degree of the risk of poverty, probit or logit models may be applied (Greene, 1997). In these models, the dependent variable is the marker variable which has the value of 1 if the household was below the poverty line and otherwise the value of 0.

The probit model may look as follows:

$$\Phi^{-1}\left[p(\boldsymbol{X})\right] = \alpha_0 + \alpha_1 X_1 + \alpha_2 X_2 + ... + \alpha_k X_k + \varepsilon, \quad (30)$$

where:

X – vector of the potential determinants of poverty (explanatory variables),

p(X) – probability of the household's falling below the poverty line, in a specified set of potential determinants of poverty (independent variables),

Φ-1(p) – inverse cumulative standard normal distribution function

ε – the rest of the model.

The explanatory variables included in the models as the potential determinants of poverty may be presented, similarly as the explanatory variable, by means of a set of binary variables. When estimating the models with the sets of binary variables, in each such set one of the marker variables (variants of the feature) is omitted in order to avoid multicollinearity. This means that the parameters next to the independent variables of the model are relative indicators of the risk of entering the poverty sphere. The higher the positive value of the parameter next to the given variable (variant of the feature), the higher the risk of falling below the poverty line among the households displaying this feature variant, in comparison with the households whose model does not contain this feature variant. On the other hand, the negative value of the parameter next to the given variable (feature variant) indicates a lower risk of falling below the poverty line (in relation to the omitted feature variant).