POVERTY REDUCTION IN RUSSIA: DYNAMICS AND STRUCTURE

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Abstract
We investigate the dynamics and the structure of Russian poverty during the period 1994-2005 in the context of the government socio-economic policy of poverty reduction. The development of effective programs for fighting poverty requires analysis of the successes and failures of past policies. The paper sheds light on poverty alleviation programs in Russia by analysing data for the period 1994-2005, covering both the period of deep socio-economic crisis and major economic resurgence. The trends in the depth and severity of poverty and income deficit for various socio-demographic groups are presented.

JEL Classification: C19, D31, I32.

Key words: Poverty profile, income, social policy, households.

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Introduction

Alleviation of poverty is one of the primary objectives of Russian economic development. In order to evaluate the effectiveness of the poverty reduction programs it is necessary to analyze trends in poverty during a sufficient period of time. The analysis should not only capture the total number of people living in poverty but also focus on the specific socio-demographic groups which were more likely to experience poverty in different periods. Knowing the poverty dynamics of a particular socio-demographic group allows us to describe changes in the poverty profile and thus to evaluate the effectiveness of the government poverty reduction programs targeted at specific socio-demographic groups.

Since 1992, the Federal State Statistics Service of Russia (Rosstat) has published information on the share of population with a monetary income below the subsistence minimum. However this information may not be enough to assess the level of poverty because the contribution of non-monetary income sources, such as income in kind and intra family transfers, has risen sharply. The necessity of better understanding the effects of the government policy on poverty trends in Russia was one of the reasons for conducting household surveys such as the Russia Longitudinal Monitoring Survey (RLMS). The RLMS dataset covers the period from 1994 to 2005 and allows us to monitor and evaluate government social policy in the area of poverty alleviation.[1]

The objective of the paper is to explain the changes in the structure of Russian poverty in the context of the government policy of poverty alleviation. To meet the objectives of the study we have to determine the trends in the level, depth and severity of poverty for various socio-economic groups of households.

The literature dealing with the issues of poverty measurement is large and well established. Ravallion (1999) presents a comprehensive overview of the literature on the issues related to poverty measurement. The impact of aggregate welfare on poverty and inequality in Russia is investigated in Ovcharova and Tesliuc (2006). The World Bank (2005) presents in-depth analysis of Russian poverty trends including regional poverty trends. In the analysis of poverty one of the most widely used indexes are FGT indexes (Foster *et al.*, 1984). These indexes allow additive decomposition of poverty according to geographical and socio-economic impacts. Recent studies presenting decomposition of Russian poverty using FGT indexes include Gustafsson and Nivorozhkina (1996, 2004, 2005).

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1. In the context of a considered problem we understand the efficiency of state policy as productive reduction of poverty. Within such an approach this multidimensional concept can be characterised as economic or social, macroeconomic, group or individual efficiency.

Review of the macroeconomic trends in the context of social policy, 1994-2006

The start of economic reforms in Russia led to significant decline in all sectors of the economy and lasted well into the 1990s. An adverse effect of the reforms was increased uncertainty of Russian households about the future. Privatisation and insolvency of state owned companies led to a rise in unemployment and deterioration of the social security system, often provided by the employer. Wage arrears and unpaid leaves became a norm. Many individuals found their education and skills outdated and of no use in the market environment. Table 1 presents the main macro indicators for the period 1994-2006.

GDP growth remained negative throughout most of the 1990s. High levels of inflation eradicated savings and negatively affected consumption. In 1997, the Russian economy showed some signs of recovery, which was followed by the financial crisis of 1998 (Brown, 1999; Buchs, 1999), and subsequent economic upheaval. In 1999, the period of strong growth started and by 2000, the Russian economy reached a record 10% GDP growth rate.

According to the official statistics, wages tend to be the main source of income; however since the beginning of the reforms their contribution has declined by a factor of 2.5. Since the end of the 1990s real wages were increasing, with the highest growth rate in the year 2000. During the period 2001-2005 the growth rate in real wages slowed down.

According to the official statistics the Gini index increased from 0.260 in 1991 to 0.409 in 1994. In the later period the coefficient declined till 2005 but still remains high compared to other European countries.

Trends in the wellbeing of the socially deprived groups indicate that their position had deteriorated throughout most of the 1990s.

The Russian system of social insurance failed to protect low income families. A number of important social security components were regarded as inadequate. For example, child benefits amounted to 3% of the subsistence minimum in 2004.

From the beginning of the 1990s, new types of benefits had emerged: unemployment benefits, benefits for low income families, assistance to the forced migrants from the republics of the former Soviet Union. As a result, in the year 2000 the federal budget financed around 150 social programs for over 200 eligible groups.

In the middle of the 1990s 70% of the Russian population were eligible for state support. At the same time, due to the complicated procedure and low level of benefits, only 33.8% of Russian households received state subsidies. Among households with income levels below the subsistence minimum only 27.4% received state support. The 2004 attempt to switch from in-kind transfers to monetary transfers did not improve the situation (Ovcharova *et al.*, 2005).

Table 1. Macroeconomic indicators 1994-2006

Indicator	Year												
	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
GDP (as percentages of the previous year)	87,3	95,9	96,6	100,9	95,1	105,4	108,3	110,0	105,1	104,7	107,3	107,2	106,4
Consumer price index (as percentages of the previous year)	320	230	121,8	111,0	184,4	136,5	120,0	119	115	112	111,7	110,9	109,0
Unemployment, thousand individuals (at the end of year)	132	118	100	120	110	102	77,1	89,1	97,9	92,3	101,6	90,2	89,0
Annual average of employment (as % of total): Manufacturing sector	27,1	25,8	24,8	23	22,2	22,4	22,6	22,7	22,2	21,9	22,2	21,7	21,2
Agricultural sector	15,1	14,7	14	13,3	13,7	13,3	13	12,3	11,8	11	11,2	11,1	10,6
Service	42,7	43,9	44,6	47,8	48,6	48,7	48,6	49,0	50,1	50,8	54,1	54,4	55,2
Real income (1994=100)[2]	100	78,9	95,8	102,6	73,4	81,0	83,2	90,5	106,2	128,8	144,2	160,1	110,2[3]
Real wage (monthly average, 1994=100)	100	90,2	96,6	109,3	72,4	81,7	90,0	107,7	124,4	142,4	153,3	168,6	113,4[4]
Real pension (monthly average, 1994=100)	100	95,5	103,6	105,8	63,2	59,9	78,62	99,9	102,3	115,1	113,3	124,6	105,1[4]
Gini coefficient	0,409	0,381	0,387	0,401	0,399	0,400	0,399	0,396	0,397	0,402	0,407	0,409	0,416

Source: World Development Indicators (2005), Russian Statistical Yearbook (issues 1995-2006 years).

2. In relation to the year 1991 the real income in 1994 amouted to 57.9%.

3. In relation to the previous year.

One of the outcomes of economic recovery at the end of the 1990s was better funding of social programs. Nevertheless the share of social spending in the federal budget remains relatively low, reaching 8.8% of GDP in 2005. Therefore, real pensions still accounted for only 66.4% of their pre-reform levels.

Economic stabilization, starting in 2000, led to increase in real incomes. Wages and pensions grew at an accelerating rate, exceeding the rate of GDP growth. The share of households with incomes below the subsistence minimum declined (Figure 1).

Figure 1. Official estimates of the level and extent of poverty
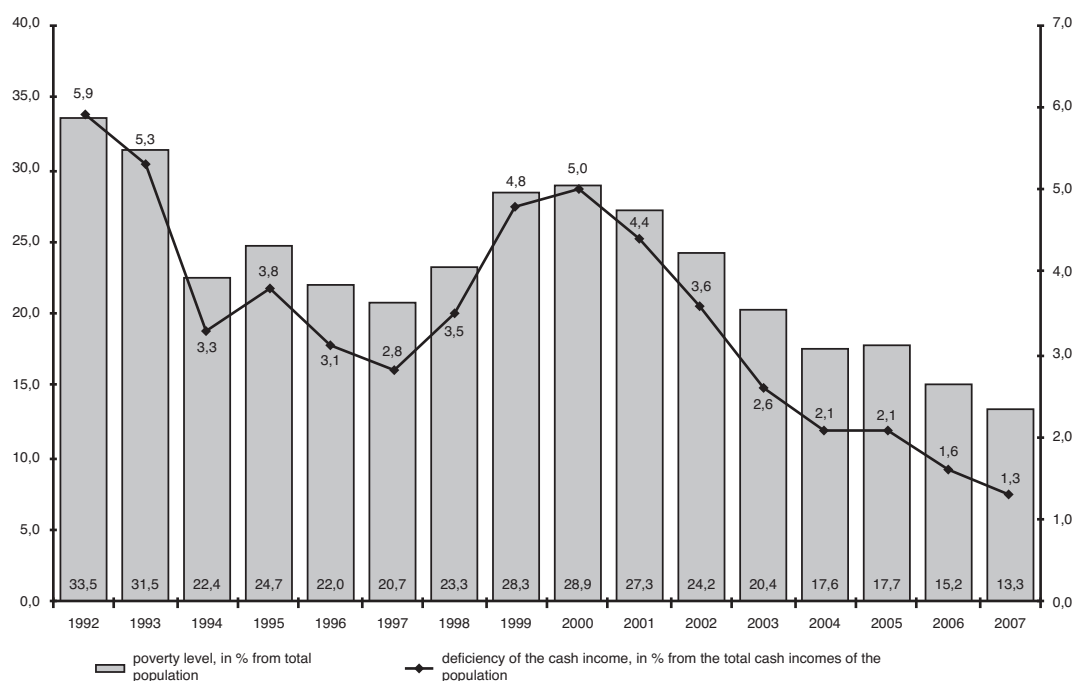
Source: Rossija v cifrah. 2009: Krat. stat. sb./ Federal'naja sluzhba gosudarstvennoj statistiki. - M., 2009. - S. 113-114.

In the period 1992-1994 the proportion of individuals living below the poverty line, defined by the state, was decreasing. This however can be partially attributed to the changes in methodology of the statistical agency rather than real improvements in wellbeing. The trend to poverty alleviation was halted abruptly by the financial crisis of 1998. The next significant decline in poverty levels started in the year 2000. However, the true decline is masked owing to adoption of a more "expensive" survival equivalent. Starting from 2001 we observe steady decline in poverty levels, which point to the positive impact of economic development on income growth. (Ovcharova, 2005, 2007). According to Ovcharova (2007) the income deficit of poor households remained relatively stable at the level of 31%.

Data and Methodology

We utilise the information provided by ten rounds of the Russia Longitudinal Monitoring Survey (RLMS) for the period 1994-2005.[4]

The object of our study is a household. In the household we identify the household head – an individual with the highest income. For each household we take into the account the following characteristics: size and structure of the household, number of children and working members and type of settlement.

We construct a measure of household disposable income as a welfare indicator. We adjust the disposable income to account for non-monetary sources of income.

We consider the household to be poor if its disposable income is less than 50% of the median disposable per capita income of the households in our sample. Such an approach is not free of methodological pitfalls, but it allows us to analyse poverty trends using a consistent definition of poverty.

A popular class of poverty indexes which possess a number of useful properties and allow additive analysis are the FGT indexes (Foster, *et al.*, 1984). In general form the index can be written as follows:

$$FGT = \frac{1}{N}\sum_{i=1}^{n}\left[\frac{Z-Y_i}{Z}\right]^{\alpha}$$

where Y_i – personal income, N – sample size, n – number of individuals below poverty line, Z – poverty line.

When $\alpha = 0$ – index represents the proportion of a population in poverty; $\alpha = 1$ – is an estimate (in % from poverty line) of the average shortfall of individual income from the poverty line; $\alpha \geq 2$ – index gives higher weight to a large shortfall of individual income.

The FGT index is a useful tool for building of a poverty profile. Let the population be divided into m mutually exclusive population subgroups forming the poverty profile. The poverty profile is simply the list of poverty measures P_j for $j=1,2,...m$. Aggregate poverty can be written as the population weighted mean of the sub-group poverty measures $P = \frac{1}{N}\sum_{j=1}^{m} n_j P_j$, where $P_j = \frac{1}{n_j}\sum_{i=1}^{n_j} p(Z_j, Y_{ij})$ is the poverty measure for j'th sub-group with population n_j, having income Y_{ij} for $i=1,2,...n_j$ and the total population is $N=\Sigma n_j$. The $p(Z_j, Y_{ij})$ is the individual poverty measure, taking value zero for non-poor $(Y_{ij}<Z_j)$ and some positive number for poor.

Subgroup decomposability also implies that an income improvement in one of the subgroups will necessarily improve aggregate poverty if the incomes in other subgroups have not changed (Foster *et al.*, 1984).
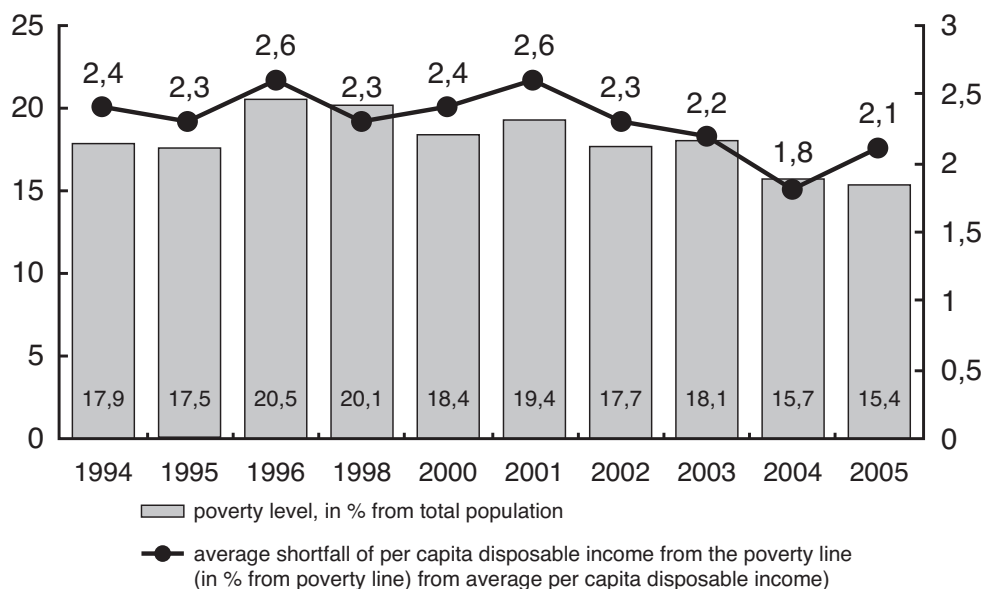
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4. http://www.cpc.unc.edu/projects/rlms

Decomposition of the dynamics and structure of Russian poverty

Our results based on the RLMS dataset are somewhat different from the results reported earlier (Figure 1). This could be explained by the fact that the poverty line used in the analysis includes less poor individuals compared to the poverty line which is based on the subsistence equivalent. Moreover, our income definition is wider compared to the official one and is consistent over time.

The relative poverty line rises at the beginning of the investigation period and reaches the peak in 1996-1998. After 1998 the poverty level starts to decline at an increasing rate. The proportion of poor individuals went up from 17.9% in 1994 to 20.1% in 1998, when it declined to 15.4% in the year 2005. Income deficit reached its peak in 1996 and 2001 and went down to 1.8% in 2004 (figure 2).

Figure 2. Estimates of the level and extent of poverty, RLMS data (the poverty line =50 % from average per capita disposable income)

poverty level, in % from total population

average shortfall of per capita disposable income from the poverty line (in % from poverty line) from average per capita disposable income)

The effectiveness of government social policy could be measured by its success in helping the groups with a high poverty risk to escape poverty, or in reducing its incidence and severity. The development of poverty trends often varies among subgroups. The impact on aggregate poverty of each subgroup depends on its size as well as the incidence and depth of poverty in each subgroup.

The poverty profile in Russia varies depending on the residence area (Appendix 1). During the period under investigation the highest levels of poverty were found in rural areas. Even accounting for income in kind the level of poverty in rural areas was three times higher than in regional centres.

The level of poverty in rural areas went up from 0.317 in 1994 to 0.362 in 2001. After the year 2001 poverty levels in rural areas started to decline, reaching the level of 0.281. The share of rural population went down in the middle of the 1990's and then bounced back to 0.265 in 2005. As a result, rural poverty had a large impact on aggregate poverty. During the period under investigation the relative contribution of rural poverty to aggregate poverty went up from 0.421 to 0.484.

The absolute contribution of urban poverty to aggregate poverty reached its peak in the year 1996 and remained persistently high until 2001 when it dropped sharply. The initial increase in the impact of urban poverty on aggregate poverty may be explained by the prevalence of wage arrears in the middle of the 1990's.

The relative contribution of cities to aggregate poverty went down from 0.258 in 1994 to 0.198 in 2005, while the contribution of towns decreased only slightly from 0.252 to 0.246.

The urban-rural poverty gap remained stable during the whole period. However diverging social-demographic trends led to the increase in the gap in the contribution to poverty between rural and urban areas. The gap was smallest in 1996 and increased dramatically afterwards.

The analysis of the FGT index for $\alpha = 1$ and $\alpha = 2$ showed that the relative contribution of income deficit in rural areas did not change much, but the values were higher compared to results found for $\alpha = 0$, while results for urban areas indicate the opposite relationship. This indicates that poverty in rural areas was deeper and more severe. Since 2004, in cities the share of the poor declined, but the depth and severity of poverty increased. This phenomenon can be explained by the growth in income of individuals who were just below the poverty line, while marginalized groups remained unaffected.

To a large extent the gap between rural and urban areas in poverty profiles may be explained by socio-demographic structure. Thus, it is warranted to present decomposition according to the socio-demographic type of the household.

The analysis of different type of households supports the conventional view that the most poor are the single parent households; the poverty level in that group increased from 22.1% in 1994 to 27.3% in 2005 (Appendix 2). The share of these households, though, is relatively small and remained stable – about 4.5% of the total number of households. The second poorest group is married couples with children, and households with several generations of relatives. The poverty in this group has been decreasing during the period of investigation, but the share of households with two children was decreasing, while the share of "multigenerational" households was increasing.

There are several explanations for the observed phenomena. Despite the growth in nominal incomes, the living standards of Russian households remain relatively low. One of the consequences of low living standard is the fact that young families

often reside with their parents due to lack of funds for purchasing or renting their own housing. In the presence of two able-bodied couples in a household, even the presence of children is unlikely to reduce the per capita incomes below the poverty level. In other cases, a retired female member of the household often takes care of children while the mother can continue to work.

Moreover, in the period from 1996 to 1998, characterized by the presence of wage arrears and high unemployment, pensioners were often the main source of income in the multigenerational households. This observation is indirectly supported by the fact that during the 1998 financial crisis, the contribution to poverty and its extent decreased in multigenerational households but increased for the couples with children.

After 1998, the contribution to poverty of the couples with children decreased while the contribution of other types of households remained relatively constant. From our perspective, these facts indicate that the diversification of resources allows multigenerational households to optimize consumption and reduce the risk and extent of poverty. Single-member households, and couples without children were less prone to poverty. The level of poverty in these households is up to four times lower than in other groups, while their share remained relatively stable.

During the period under investigation we observe a substantial increase in the number of households without children and households with one child. The share of households with two children has exhibited a significant decrease while the proportion of the households with three and more children has decreased only marginally.

The poverty index clearly indicates an increase in poverty with an increase in the number of children per household (Appendix 3). Moreover, the economic downturn is closely correlated with the increase in poverty of households with two or more children.

The level of poverty for the household with one child went up from 16.3% in 1994 to 20.7% in the year 2000. Between the year 2000 and 2005 we observe a decrease in the poverty rate to 13.8%. At the same time the share of households with one child increased from 31.3% to 34.8%. It is also interesting to note that the contribution to aggregate poverty of the households with one child was smaller than that of households with two children from 1994 to 1999. However, after 1999 the contribution to aggregate poverty of the households with one child started to increase and exceeded the contribution of the households with two children.

The share of the poor rose among households with two children during the economic crisis of 1998 and went back to the level of 24.3% in 2005. The level of poverty for households with three or more children increased from 36.2% to 48% in the period 1994-2001 and than declined to 28.5% in 2005.

In the period prior to 1998 the largest contribution to aggregate poverty was made by households with two children. However, as the number of such households declined, the contribution to aggregate poverty of households with one child and child-

less household increased. The impact of single parent household on aggregate poverty is the smallest. Their contribution declined from 7.2% in 1994 to 5.1% in 2005.

Depth and severity of poverty developed in line with the level of poverty in all groups. However, for households with two or more children the relative impact on aggregate poverty is higher when $\alpha = 1$ and $\alpha = 2$ in the FGT index, compared to the case when $\alpha = 0$.

Do we observe an effect of government social policy on the poverty levels of households with children?

When we examined Russian macroeconomic trends we pointed out relatively small level of child and maternity transfers during the period of investigation. Nevertheless, on the aggregate level, these transfers could still affect the poverty trends of households with children. According to official statistics, the real growth of child and maternity transfers amounted to 4.8% in 2000, 7.4% in 2001, 9.5% in 2002, –7.5% in 2003, and –11.2% in 2004.[5]

This trend does not correlate with the poverty levels of households with children, indicating the lack of effect of these transfers on poverty levels of targeted groups.

The primary reason for child poverty lies in the fact that after the birth of the child mothers cease work for several years.

Households with one employed member had a high risk of being poor. In 1994 their share was 0.216 and 0.224 in 2005 (Appendix 4).

The lowest incidences of poverty are among households with three members employed; it is somewhat higher in households with two working members. However both groups exhibited a declining risk of poverty after 1998. Before 2001 the risk of poverty for households consisting of non-employed members was smaller than that of households with one working member. By the end of the study period the poverty risk was the same for both groups.

The latter finding can be explained by the fact that households where all members are non-employed are usually pensioners' households, while households with one employed member predominantly consist of employed male, housewife and small children. During the 1990s, the pension benefits provided low but stable standards of living, allowing pensioners to be better off than households with one employed member. Starting from 2000 the rate of wage growth exceeded that of pensions. Households with one employed member are no longer poorer than households where all members are non-employed.

We observe the spike in poverty level, its depth and severity among households with employed members during the years 1996-1998. These were the years of high wage arrears and financial crisis.

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5. "Social'noe polozhenie i uroven' zhizni naselenija Rossiju", Rosstat, 2005.

It is also interesting to compare households where all members are non-employed to households where two members are employed. The increase in the number of households with two working members was absolutely symmetrical to the decline in the number of households where all members are non-employed. Pension arrears and declining living standards made pensioners look for a job. After 2000 we observe parallel trends in the proportions of these households and strong divergence in the year 2005.

Households with one employed member make the highest contribution to aggregate poverty. Commonly these are households consisting of relatively young individuals with children. However the depth and severity of poverty in this group is close to the other groups. Households with two employed members also make a high contribution to aggregate poverty. The impact of this group tends to diminish over time. Moreover the depth and severity of poverty tend to decrease faster among households with two employed members. The smallest contribution to aggregate poverty was made by households with more than three employed members. Finally, households where none of the members are employed tend to increase their impact on poverty. The depth and severity of poverty in this group tend to increase faster compared to the number of the poor.

Conclusion: determinants of poverty and policy proposals

We started the analysis with the year 1994. At that time the reforms initiated during the 1990s brought levels of poverty and inequality to a socially intolerable level. However, the situation remained relatively stable which indicates that Russian households adapted to the complex environment of economic reforms and learned to survive.

The review of the macroeconomic trends from 1994 to 2005 in the context of the social policy showed that the social policy was inadequate. The poverty level followed macroeconomic trends and only small fluctuations of the values of the index (especially transfer-sensitive indexes such as FGT for $\alpha = 2$) captured the impact of wage and pension indexation on the level of poverty for specific groups of households. We managed to clarify and add the following points to the analysis of Russian poverty:

The analysis of the poverty profile among residential areas confirmed that the highest level of poverty is among rural households. Rural poverty is also deeper and more severe than in the cities. Interrelation of the demographic and migration processes among different types of residential areas resulted in the fact that the lowest gap in the contribution to poverty was registered in 1998, after this period we observe a diverging trend in the poverty contribution and increasing poverty gap.

In the situation when government was incapable of developing effective mechanisms of household social protection, households developed their own mechanisms

of poverty alleviation. Among such mehamisms are a decrease in the fertility rate, which resulted in the increased number of households with one or no children and fewer households with two and more children. Another observed tendency is the increase in the number of employed members in the household.

It should be noted that the presence of three or more children in the household results in higher levels of poverty. However, the share of such households remained relatively stable and did not exhibit a large decline compared to the share of households with two children. The likely explanation of this finding is that the decision to have more than three children is dictated by non-economic factors.

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Appendix 1. Decomposition according to area of residence	**Apendix 2.** Decomposition according to household type
Index FGT (α = 0)	Index FGT (α = 0)
Proportion of individuals	Proportion of individuals
	Absolute contribution of poverty

Appendix 3. Decomposition according to the number of children	**Appendix 4.** Decomposition according to the number of working members
Index FGT (α = 0)	Index FGT (α = 0)

Index FGT (α = 0)

— No children
— One child
-- Two children
-- Three and more children

Index FGT (α = 0)

— Nobody works
— Two working
-- One working
-- Three and more working

Proportion of individuals

— No children
— One child
-- Two children
-- Three and more children

Proportion of individuals

— Nobody works
— One working
-- Two working
-- Three and more working

Absolute contribution of poverty

— No children
— One child
-- Two children
-- Three and more children

Absolute contribution of poverty

— Nobody works
— One working
-- Two working
-- Three and more working