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Entry to and Exit from Poverty in Russia: Evidence from Longitudinal Data

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Abstract

Long-term sustainability requires social stability and hence could be undermined by high poverty levels. Still more than twenty five million Russians have incomes that are lower than subsistence level. Effective policies to fight poverty are to be based on clear understanding of its determinants and are to distinguish between measures to prevent from slipping into poverty, and measures to get out of poverty for those who are poor. The study is the first attempt to investigate how entry to poverty and exit from poverty in Russia are shaped, and what are the determinants of the processes.

We study entry and exit to poverty using survival analysis and utilizing the Russian Longitudinal Monitoring Survey (RLMS) panel for 1994-2004. The study allows obtaining some important insights. In particular, it shows that the two processes have both symmetries and important asymmetries, with an example of one of the most interesting results being the asymmetry in the influence of economic periods. It turns out that economic growth lowers chances to slip into poverty but also reduces hazards from poverty. This implies that households in poverty in the era of economic upturn are those with serious problems and are to be paid special attention to.

JEL Classification: I32, I38, C41, P36

Key words: Poverty, Duration Analysis, Entry to Poverty, Exit from Poverty, Transition, RLMS

1. Introduction

Long-term sustainability requires social stability and hence could be undermined by high poverty levels. Poverty in Russia declined during the last five years from 29% of population in 2000 to 17% in 2004 (Rosstat (2005), p.32). Still more than twenty five million people have incomes that are lower than subsistence level (Ibid). Effective policies to fight poverty are to be based on clear understanding of its determinants.

There is significant body of literature studying poverty in Russia. Table 1 summarizes the key results of the selected studies on poverty in Russia in the 90s. Several points can be made on what is known on poverty in Russia. First, poverty rates are of significant magnitude and vary with the measure used. However, the poverty gap is not deep. Second, when examining poverty dynamics, the majority of the poor are found to be transitory poor, with the large inflows and outflows to and from poverty. The latter is consistent with the observation that poverty gap is small for the majority of families. A large share of families living near the poverty line, together with the reported lack of opportunities to smooth consumption, makes Russian households vulnerable to shocks. Third, based on observable characteristics, no significant distinction arises between factors which determine transitory poverty and chronic poverty. Put it differently, all the studies agree that the factors determining chronic and transient poverty are the same, and/or the magnitude of their influence is very similar. Fourth, the identified vulnerable categories are the following: large families; single parents with children and, more broadly, families with children; rural households; families with unemployed family heads or ones with wage arrears (in the 90s). Pensioners are found to be relatively well buffered from poverty. Better education, especially university degrees are also an effective buffer against poverty, especially in urban settlements.

The literature, however, analyzes primarily stocks of poverty, and, with only some indirect insights about flows in and out of poverty in terms of studying probability to leave poverty stock. What is lacking in the literature is an understanding of how entry to poverty and exit from poverty are shaped, and what are the determinants of the processes. In particular, are the two processes symmetric or there are important asymmetries? What are the time-related properties of the flows? Additionally, a longer time horizon allows studying possible changes brought to life by the economic growth that followed the economic decline. We study entry and exit to poverty using survival analysis pioneered by Bane and Ellwood (1986). The approach permits overcoming the estimation bias coming from the problem of non-normality of the distribution for time to an event and of right-censoring. The study utilizes the Russian Longitudinal Monitoring Survey (RLMS) panel for 1994-2004. Here comes another comparative advantage of the approach since it allows using an unbalanced panel over the period of eleven years. Given the serious attrition problem (Mills (2007)), this implies that our results are based on the information over the total sample rather than over less than half of the observations.

The paper is organized as follows. Methodology and data are discussed in Section2, Section 3 summarizes main results, and Section 4 concludes.

2. Methodology and data

2.1 Methodology

The core methodology of our study is survival (duration) analysis which was pioneered to study poverty by Bane and Elwood (1986).

The approach allows exploiting the features of longitudinal data and permits overcoming the estimation bias coming from the problem of non-normality of the distribution for time to an event and of right-censoring. The survey of the approach could be found in Kiefer (1988). Additionally, the methodology allows using unbalanced panel which is beneficial when there is serious attrition problem. The latter is a serious issue in the panel we use for the study.

The central idea of the approach is to estimate the hazard ratios, defined as the probability that the spell ends at time *t* conditional that the spell last till period t. In poverty analysis a spell is the poverty spell when exit from poverty is considered and the non-poverty spell when entry to poverty is studied.

We use proportional hazard model which allows analyzing the influence of various economic factors on the duration of the spell:

$$\lambda(t, x, \beta, \lambda_0) = \phi(x, \beta)\lambda_0(t),$$

where λ_0 - base hazard function, corresponding to $\phi(\cdot) = 1$, $\phi(x, \beta) = \exp(x'\beta)$, x - vector of explanatory variables, β - estimated coefficients. A flexible Cox proportional hazard model in which the base hazard function is left not specified is used.

The vector of explanatory variables x includes several groups of factors: demographic characteristics of a household; labor market attachment of adult family members; eligibility for public transfers; characteristics of human capital of a household; settlement type and economic region; time period.

2.2 Data and Construction of Variables

Data from Russian Longitudinal Monitoring Survey (RLMS), Rounds 5-13 (1994-2004) are used. RLMS is a nationally representative longitudinal survey of households' members on a large number of issues. It is available at http://www.cpc.unc.edu/project/rlms. The number of households surveyed fluctuate around 4,000. The statistics for both the initial panel and the panels utilized for poverty and non-poverty analysis are presented in Table 2, by year.

Overall, the initial unbalanced panel comprises of 8,323 households. There are some cases of a household split-up when a part of a household becomes a separate household in the next round[1]. In the case of a split-up we treat the master household as being in the panel from the beginning, and the young household as entering the sample at the date of the separation[2].

Given the nature of our analysis, it is important not to have gaps in data across periods. Households with missing rounds or missing poverty status are dropped from the panel. This reduces the overall size of the panel to 6,214 households.

To accommodate multiple failures to the analysis, we duplicate households that have two, three and so on failure events – those that slip into and out of poverty several times over the observed period. As a result, the number of households in the panel inflated to 7,143 households with each having only a single failure record – either exiting poverty when considering hazard from poverty, or exiting non-poverty (entering poverty) when considering hazard from non-poverty.

The duration analysis is sensitive to gaps in the date of record. There are two gaps in RLMS data: there was a two-year gap from 1996 to 1998 (from round 7 to round 8), and another two-year gap from 1998 to 2000 (from round 8 to round 9). We treat the periods as if

[1] It is worth mentioning that not all new households that spinned off are followed up.

[2] In other words, both households are kept in the panel, with the link of the young household to the master one being kept only in terms of the relevant dummy variable and not in terms of household identification numbers.

there were no gaps and thus as if there was only one year between rounds 7 and 8, and between rounds 8 and 9. This implies that some spells in the analysis are shorter than they are: it could be that some households being poor in 1996 were also poor in 1997, and, by having no information on year 1997, we reduce their poverty spell from 3 to 2 (case 1 in Table 3), or from 2 to 1 (case 3 in Table 3). Poverty spell is also underestimated in case 5. Symmetrically, non-poverty spells are underestimated in cases 4, 6 and 8. At the same time, when the unobserved year was the one of a one-year switch from poverty to non-poverty or from non-poverty to poverty, we overestimate poverty and non-poverty spells, as is clear in cases 2 and 7. There is little one could do to improve the situation, however.

Total household income is taken as the welfare measure. Absolute poverty concept is employed in the analysis with regional poverty lines developed by Popkin et.al.(1996) being applied. The poverty lines are based on local diets that meet subsistence needs, take into account regional prices and equivalence scales for family size.

Descriptive statistics for the explanatory variables are presented in Table 5, with the second and the third columns reflecting the means and standard deviations calculated on the sub samples of that in poverty and in non-poverty respectively.

The first subgroup of variables reflects demographic composition of households in the sample. The mean family size is 2.75 for the total sample and 3.06 for those in poverty and 2.71 in non-poverty. About 80% of households do not have children of less than 7 years, 18% have only one child of the age group, and 2% - 2 children of the age group. The presence of small children is higher among families in poverty than in non-poverty. Almost 70% of households do not have children of 7-18 age groups, 23% have 1 child of the age group, and another 8% have two children, and only 1% has 3 children. Again, the presence of children is higher in families in poverty. Majority of households - 60% - are headed by an adult male, with the rest 14% being headed by an adult female, 12% - by retired male, and 13% - by retired females. The representation of households headed by retired people is significantly less among poor households than non-poor.

The second subgroup of variables is to reflect the labor market attachment of household members. In particular, 63% of adults in the sample are in the labor force, with 60% having a job and less than 5% unemployed according to ILO definition. Unemployed adult members are overrepresented in poor households. The average share of adults in a household working in public sector is 26%, being a bit higher among families in poverty. Additionally, we control for household involvement in subsistence farming. On average, 14% of families are involved in subsistence farming.

The role of public transfers in shaping poverty patterns in Russia is reflected by the share of pension recipients. The average ratio of those receiving pensions to adults in a household is about 40%, with the share being much less in households in non-poverty – 25%. Additionally, the role of child benefits is reflected indirectly by the share of children in households.

The next subgroup of variables is related to the characteristics of human capital in the family. In particular, we consider the share of adults in bad and very bad health, and the educational attainments of adults. The mean share of adults in bad health is 18%, being only slightly higher in poor families. The average share of adults having completed secondary school only is 11%, with 15% in poor families. The share of adults with university degree is 16% on average. At the same time this share is only 10% among families in poverty. An alternative variable to measure educational attainment of families is the maximum education degree obtained, where those families with secondary school as the maximum degree obtained are prescribed 1, families whose members achieved secondary professional degree get 2, and those with university degree get 3. The average score in the sample is 1.98.

Majority of families in the sample, 66%, live in urban areas. The geographic distribution of households in the sample across geographic regions of Russia is presented in Table 5.

The eleven yeas under study comprise of two distinct periods in terms of macroeconomic development of the country. The period of economic decline is represented in our data by observations in 1994-1998, while the period of economic upturn encompasses the years 2000-

2004. It is interesting to test whether there are differences in exit from and entry to poverty across the two periods.

Table 7 provides the sample averages for each of the nine years under consideration. It turns out that the main parameters are rather stable across year with the exception of the variables that change naturally as the panel ages.

The data are translated into survival format using STATA statistical software with a year as a time unit. The entry time is defined as the time of first exposure to risk of poverty when analyzing exit from poverty, and to risk of non-poverty when analyzing entry to poverty (non-poverty hazard). Technically, the entry time is defined as the first year the household is non-poor and the first year the household is poor respectively.

Table 6 reports the number of households in each of the sub samples and the number of records: 3,445 households and 6,360 records when analyzing exit from poverty, and 6,819 households and 20,698 records when studying entry to poverty. There are 2,336 cases of completed poverty spells and 2,134 cases of completed spells of non-poverty.

Table 4 presents frequencies for incidence of poverty (total number of rounds in poverty) and duration of poverty (maximum duration of poverty spells), and frequencies for incidence of non-poverty and duration of non-poverty. It comes from the table that 54.5% of households in the panel never experienced poverty when in the sample[3]. Symmetrically, 526 households, or 8% of the sample, were poor in each round when in the survey. Another 27% of households were poor for only one year[4], 9% for two years, 4% for three years, 2% for four years, and around 1% for five and six years.

Kaplan-Meier estimate is a convenient way of presenting the dependent variable of our study - survival and hazard functions of staying in poverty and in non-poverty. Diagram 1 presents the Kaplan-Meier estimate of survival function of staying in poverty, with the first part of Table 8 showing the corresponding hazard function. It comes that about 40% of families in the sample get out of poverty after one year, and another 20% after two years, and yet another 14% after three years. After five years in poverty the probability of getting out of poverty is already more than 90%.

Diagram 5 presents the estimate of survival function of staying in non-poverty, i.e. of not entering poverty. The second part of Table 8 shows the corresponding hazard function. It turns out that hazard to enter poverty is much flatter than hazard to escape poverty. In particular, the probability to enter poverty after a year in non-poverty is 14%, after two years - 26%, after three years - 34%[5]. Even after nine years in non-poverty the probability of entering poverty is 43% confirming that more than half of the families in the sample never enter poverty.

In addition to the survival estimates for the total samples, the Kaplan-Meier survival functions by settlement type and by periods of decline and growth are estimated. The results are summarized in Table 9 and Diagrams 2-4 and 6-8. They suggest that there are significant differences across households living in rural and urban areas both in entry to poverty and in exit from poverty: those living in urban areas have significantly lower hazards of entering poverty and higher hazards of leaving poverty. The difference is even higher between metropolitan areas and non-metropolitan. In particular, there is no case of a family from a metropolitan area which survives in poverty for more than five periods. The decline and growth periods seem to shape the exit and entry rates. The survival functions are significantly different across the two periods, with the entry to poverty rate becoming lower during economic upturn and exit rate from poverty also lower. It is interesting to test whether the pattern survives when controlling for other important covariates.

[3] Some of households are observed for all the 9 rounds, some for 1 or 2 years only.
[4] Again, some of households are in the panel for all the 9 rounds, while others are for 1 or 2 years only.
[5] Note that those are conditional probabilities of exit after t periods conditionally on staying until period t.

3. Results

3.1 Exit from poverty

To test for the determinants of hazard rate from poverty, we estimate Cox proportional hazard model. Several specifications are tried (Tables 10 and 11). To take into account the fact that some households have multiple episodes of poverty and non-poverty, i.e. multiple failures in technical terms, the estimates are done with clustering on the initial identification numbers of households. Additionally, stratifications on settlement type and on economic periods are tried in some specifications. This allows the baseline hazards to vary across the two groups though the estimated coefficients are not allowed to vary. Specifications (5)-(7) use maximum educational attainment in the household instead of the variables measuring share of adults with a particular education degree, as in specifications (1)-(4). Additionally, we test whether changes in family composition and labor market attachment affect exit rates. In particular, we include changes in family size, in share of adults in labor force, in share of adults having job, in share of adults unemployed, in share of adults in bad health, in share of adults working in public sector and in share of pension receivers as covariates (Table 11).

The results suggest that the larger the family the quicker it leaves poverty. This result holds for all the specifications with the coefficient being about 0.07. There is no effect of a change in family size. Presence of children lowers chances to escape poverty, with older children deteriorating the chances even stronger than younger (-0.11 versus -0.08).

Households headed by retired people – either male or female – have relatively larger exit rates from poverty as compared to households headed by adult males. The result is in line with the well-documented effect of pension transfers as a safety device against getting into poverty. In some specifications the effect is strengthen by the positive influence of the share of pension receivers on the hazard rate. Interestingly, the coefficient is much higher for retired females as compared to retied males. A plausible explanation behind could be the benefits a household with children gets from grandmother's childcare services in terms of labor market attachment and economizing on kindergarten. At the same time, adult female-headed households have no benefits or losses as compared to male-headed households.

Labor market attachment of adult family members turns to be only slightly significant. In particular, share of adults in labor force and share of adults with job is not significant, as well as the change in the shares. At the same time, the higher is the share of unemployed adults in the household the lower is the hazard rate. The share of family members working in the public sector is insignificant, while a change in the share is significant and negative implying that when the share of working for the public sector increases the chances of escaping from poverty decrease.

Involvement of a household in subsistence farming decreases hazard rate of getting out of poverty. This seems to point to the fact that very poor families choose to run subsistence farming, and it only helps meeting basic needs but is not sufficient to overcome poverty.

Bad health of some household members is only weakly significant, and only in some specifications, while the educational attainment of family members is highly significant in all specifications. In particular, a higher share of adults with university degree increases exit rates from poverty, and the corresponding coefficient is relatively high (0.26). Moreover, a higher share of adults with secondary school only diminishes the hazard rate, and the coefficient is also relatively high (-0.17).

Urban families keep having higher rates of escaping poverty even after controlling for other covariates. Living in Moscow or St.Petersburg does not add to the effect. The economic regions turn to be statistically indistinguishable from each other.

The influence of economic periods is still observed after controlling for other covariates. Economic growth turns to make the hazard from poverty lower implying that the families which slipped into poverty during the period of economic upturn or survived in poverty till the period of economic growth have lower chances to leave poverty. This seems intuitively plausible.

3.2 Entry to poverty

The estimates of Cox proportional model of hazard of slipping into poverty is presented in Tables 12 and 13. The list of explanatory variables is the same as in the exit from poverty analysis, while the results point to some interesting asymmetries in the two processes.

Family size is now not significant, and even slightly negative in some specifications implying that there is no regularity here. The presence of children increases chances of slipping into poverty, with the size of the influence being approximately the same for both younger and older children.

Households headed by retired males and females are again in a better position as compared to the households headed by adult male or female: conditional probability of slipping into poverty is lower for those families. Interestingly, the effect is now larger for (retired) male-headed households, while it was the other way round when studying exit from poverty. Adult female-headed households again have neither benefits nor losses as compared to adult male-headed.

Labor market attachment of adult family members turns to be not significant. The exception is the attachment to the public sector: the higher is the share of adults working in public sector the higher is the chance of entering poverty. This point to the well-known problem of low wages in the public sector.

Public transfers in the form of pensions paid are beneficial for escaping slipping into poverty. In particular, the higher is the share of pension recipients in a household the higher is lower are the chances of getting into poverty. The result survives all the specifications.

Human capital characteristics of adult household members are highly significant, both health and education related. In particular, a high share of adults with bad health increases chances of entering poverty, with the coefficient being pretty high (0.3). The role of university degree as a buffer against poverty is confirmed: the higher is the share of adults with university degree the lower are chances of slipping into poverty, with the coefficient being as high as -0.55. Interestingly, the share of adults with secondary school only becomes insignificant. The same asymmetry holds for the family involvement into subsistence farming: it does not determine chances of slipping into poverty while it was highly significant in determining exit from poverty.

Families living in urban areas have lower chances of slipping into poverty. Living in metropolitan areas of Moscow and St.Petersburg diminishes the probability even further while the effect was insignificant in the previous section.

The period of economic growth helps to escape getting into poverty: the hazard of non-poverty spell is much lower in the period 2000-2004 as compared with the earlier period. This is in comfort with the economic intuition of increased economic opportunities provided by economic growth.

All the change variables are statistically insignificant in determining hazard rate from non-poverty. The economic regions turn to be statistically indistinguishable from each other except for the aforementioned effect of metropolitan areas.

4. Conclusions

The study of entry to and exit from poverty allows obtaining some important insights in the processes that generate entry to and exit from poverty. In particular, it shows that the two processes have both symmetries and important asymmetries.

The presence of children increases chances to get into poverty and decreases chances to leave it. The influence of younger and older children is approximately equal when entry to poverty is considered and is larger from the presence of older children when exit from poverty is studied. Households headed by retired males and females tend to be in a stronger position than headed by an adult man in both cases, while the magnitude of the influence is asymmetric: more pronounced for females when exit from poverty is considered, and less

pronounced as compared to retired males when entry to poverty is discussed. Adult female-headed households are indistinguishable from adult male-headed households again in both cases. High share of adults with university degree is an effective buffer against poverty: it reduces entry to poverty and increases exit from it. Families that live in urban areas have lower chances to get into poverty and higher chances to get out of it.

At the same time, larger families are doing better when getting out of poverty, while family size does not matter when entry to poverty is considered. Labor market attachment of adults is only slightly significant and asymmetric across states: higher share of unemployed in the family reduces hazard from poverty but does not affect the rate of entry to poverty. A higher share of adults employed in the public sector increases entry to poverty but is insignificant for poverty exit rate. Involvement in subsistence farming is a sign of lower exit rate and has no influence on entry rate. A higher share of holders of secondary school degree only prevents families from getting out of poverty but does not affect entry to poverty. Bad health of family members work in the opposite direction: it increases chances to enter poverty but does not affect chances to escape it. Living in a metropolitan area does not add to the effect of urban versus rural settlement type when considering exit from poverty but decreases chances to enter poverty.

One of the most interesting results is the asymmetry in the influence of economic periods: economic growth lowers chances to slip into poverty but also reduces hazards from poverty. This implies that households in poverty in the era of economic upturn are those with serious problems and are to be paid special attention to.

There are some indications[6] of positive duration dependence of hazards from poverty: the longer the family is in poverty, the higher is the chance to leave it. Hazard into poverty is closer to being independent of spell duration: the relevant coefficient is only slightly higher than 1 implying that the chance to get into poverty increases only slightly the longer the family is non-poor.

The results are important for a better design of policies to fight poverty. They suggest that it is important to distinguish between measures to prevent from slipping into poverty, and measures to get out of poverty for those who are poor.

[6] Here we refer to the non-reported estimates of parametric proportional hazard model assuming Weibull distribution.

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Appendix

Table 1. Selected studies of poverty and welfare in Russia

Study	*Data*	*Poverty/ income measure*	*Groups identified*	*Design/ methodology*
Commander, Tolstopiatenko and Yemtsov (1999)	RLMS, two balanced panel samples: 1992-1993 (5,600) and 1994-1997 (2,900).	Income (incl. in-kind) and expenditure; regionally and time deflated. Absolute regional poverty line. Equivalence scale applied.	Chronically poor, never poor, dropped into transient poverty	Poverty and inequality is studied. Income mobility is studied. Transition (between income quintiles) matrices are estimated. Probit is used to identify stable losers and winners.
Lokshin and Popkin (1999)	RLMS, two panel samples: 1992-1993 and 1994-1996	Total monthly disposable h\h income. Absolute poverty line based on national food basket is used	Persistently poor; persistently rich; never poor; transitory poor (once poor; twice poor; three rounds poor)	Poverty and income dynamics Random effect probit model and pooled probit.
Lokshin and Ravallion (2000)	RLMS, 1996 and 1998, balanced panel (2,875 households)	Objective (consumption expenditures and incomes) and subjective indicators of h/h and individual welfare. Absolute poverty line (household and region-specific based on region-specific prices and age-gender specific food baskets).	Persistently poor; persistently non-poor; h\hs that fell into poverty; h\hs that escaped poverty	Welfare impact of 1998 crisis is studied; winners and losers are identified; public safety net performance is assessed. Joint distributions of incomes and expenditures as proportion of poverty line are studied. Simulations of distributions are done.
Luttmer (2000)	For Russia: RLMS, 1994-1998, balanced panel (2,256 h\hs)	Consumption expenditure and income, equivalence scale adjusted. Time-average income or consumption for families is used. Relative poverty measure.	Persistent shocks and transitory shocks are distinguished between. Always poor; sometimes poor and never poor are defined.	Inequality and poverty dynamics is studied. Income and expenditure dynamics model is estimated using the method of moments. Instrumented variables approach is applied to estimate the variance of measurement error.
Stillman (2001)	RLMS, 1994-1998, unbalanced panel (2,335), rural households excluded	Two measures of consumption (total food expenditure and total non-durable expenditure) and income measure are used. PSU and time deflated	Not applicable	Estimation of the average effect of an exogenous transitory change in h/h income on h/h expenditure is attempted. Fixed effects model of h\h consumption is estimated
Mu (2003)	RLMS, 1994-2000, balanced panel (1,412 households)	Consumption expenditure and net (of endogenous components) income	Not applicable	Consumption smoothing is tested. Estimate consumption equation (in differences) for stratified by assets groups, with and without attrition corrections, by OLS and IV
Spryskov (2003)	RLMS, 1994-2000, balanced panel (2145 households)	Relative poverty line (half the median) based on household permanent7 expenditure measure. Equivalence scale is applied.	Non-poor, temporarily poor8, households with volatile expenditures near the poverty line, and persistently poor9 are identified.	Transition probabilities Determinants of being in one of the four groups (ordered logit). Reasons for poverty entry and exit (logit and multinomial logit models)

[7] Averaged across the five years under consideration.
[8] With household permanent expenditure being higher than the permanent poverty line and one-two episodes of poverty in particular years.
[9] With household permanent expenditure being lower than the permanent poverty line and poor in the majority of years.

Skoufias (2003)	RLMS, 1994-2000, Unbalanced panel with restrictions (14,097 observations)	Food consumption, non-food expenditures (excl. durables and luxury goods), gross income (cash + value in-kind)	Non applicable	Consumption smoothing is studied (OLS in differences and IV regressions) as well as the extent and nature of coping with shocks strategies of h\hs (probit models).
Gerry and Li (2004)	RLMS, 1996-2000, unbalanced panel (9,429 adults)	Consumption as a proxy for welfare (the sum of expenditures on food and non-food items, excl. durables and luxury goods)	Not applicable	Vulnerability (as uninsured exposure to risk) to financial crisis of 1998 (consumption smoothing) is studied. Coping strategies are considered. Quintile regression techniques is used.
Lokshin and Ravallion (2004)	For Russia: RLMS, 1994-1998, balanced panel (1,970 households)	Household income (cash and in-kind) is calculated	Not applicable	Household income dynamics is studied; existence of poverty traps is tested. Simultaneous income equations are estimated (SPFIML and GMM)
Lokshin and Yemtsov (2004)	RLMS, 1996 and 1998, balanced panel (2,875 households)	Total h\h expenditure as an objective measure; subjective evaluation of a number of coping strategies Absolute poverty line	Not applicable	Choice of poverty coping strategies is estimated using simultaneous estimation of three equations with binary dependent variables (ML estimations)
Lukyanova (2004)	RLMS, 1994-2001 unbalanced panel of individuals	Contracted wage indicator is used; relative poverty (with respect to wage) concept is applied.	Not applicable	Earnings inequality is studied. Earnings' mobility for the working poor is investigated using probit corrected and not corrected for selection bias.
Poverty assessment report (WB, 2004)	NOBUS, 2003; ОБДХ (Goskomstat) 2002	Consumption (excl. durables); household-specific (equivalence-scale-based) and regionally adjusted absolute poverty lines	Poor and almost poor	Basic poverty indicators were estimated. Poverty profiles, including the risk of becoming poor, were identified.
Mills (2007)	RLMS, 1994-2003 balanced panel of households	Total monthly disposable h\h income. Absolute poverty line based on national food basket is used	Chronic and transient poor	Determinants of severity of poverty is studied. Tobit procedure corrected for sample attrition bias is used

Table 2. Panel statistics

Year	# of hh	*1994*	*1995*	*1996*	*1998*	*2000*	*2001*	*2002*	*2003*	*2004*
						Initial panel				
Frequency										
initial id	8323	3,973	3,781	3,750	3,831	4,006	4,528	4,668	4,718	4,715
Percent		10.46	9.96	9.88	10.09	10.55	11.93	12.29	12.43	12.42
						Poverty panel				
Frequency										
initial id	6214									
new id	7143	2,810	2,808	2,763	2,835	2,995	3,296	3,441	3,569	3,551
Percent		10.01	10	9.84	10.1	10.67	11.74	12.26	12.72	12.65
						Non-poverty panel				
Frequency										
initial id	6214									
new id	7143	2,810	3,188	3,063	3,044	3,017	3,285	3,424	3,548	3,494
Percent		9.73	11.04	10.61	10.54	10.45	11.38	11.86	12.29	12.1

Table 3. Gaps in data record: an example

	1996	*1997 (unobserved)*	*1998*
1	poor	poor	poor
2	poor	non-poor	poor
3	poor	poor	non-poor
4	poor	non-poor	non-poor
5	non-poor	poor	poor
6	non-poor	non-poor	poor
7	non-poor	poor	non-poor
8	non-poor	non-poor	non-poor

Table 4. Poverty and non-poverty incidence and duration

	Total number of rounds in poverty										
	0	1	2	3	4	5	6	7	8	9	Total
Number of hh	3,388	1,451	596	332	182	118	72	45	25	5	6,214
%	54.52	23.35	9.59	5.34	2.93	1.9	1.16	0.72	0.4	0.08	100
	Maximum duration of poverty spells										
	0	1	2	3	4	5	6	7	8	9	Total
Number of hh	3,388	1,706	585	245	130	72	45	21	17	5	6,214
%	54.52	27.45	9.41	3.94	2.09	1.16	0.72	0.34	0.27	0.08	100
	Total number of rounds in non-poverty										
	0	1	2	3	4	5	6	7	8	9	Total
Number of hh	526	1,761	827	610	563	400	334	345	436	412	6,214
%	8.46	28.34	13.31	9.82	9.06	6.44	5.37	5.55	7.02	6.63	100
	Maximum duration of non-poverty spells										
	0	1	2	3	4	5	6	7	8	9	Total
Number of hh	526	1,942	938	715	628	503	303	141	106	412	6,214
%	8.46	31.25	15.09	11.51	10.11	8.09	4.88	2.27	1.71	6.63	100

Table 5. Panel sample descriptive statistics

Variable	Mean	Std. Dev.	When in poverty Mean	When in poverty Std. Dev.	When in non-poverty Mean	When in non-poverty Std. Dev.
family size, number of people	2.755	1.427	3.061	1.539	2.712	1.391
change in family size	0.015	0.271	0.031	0.310	0.009	0.258
# of kids <7 yrs in hh	0.214	0.486	0.303	0.597	0.190	0.453
# of kids 7-18 yrs in hh	0.466	0.746	0.668	0.879	0.430	0.712
HH headed by adult male	0.609	0.488	0.722	0.448	0.573	0.495
HH headed by adult female	0.135	0.342	0.165	0.371	0.122	0.328
HH headed by retired male	0.121	0.327	0.039	0.194	0.155	0.362
HH headed by retired female	0.134	0.340	0.072	0.258	0.150	0.357
HH headed by a young person	0.001	0.031	0.002	0.045	0.001	0.026
share of adults in LF	0.627	0.423	0.679	0.394	0.606	0.430
change in share in LF	-0.009	0.246	-0.022	0.283	-0.007	0.236
share of adults with job	0.579	0.419	0.586	0.399	0.572	0.424
change in share with job	-0.007	0.254	-0.032	0.298	-0.001	0.240
share of adults unemployed BLS	0.046	0.160	0.091	0.225	0.033	0.130
change in share of BLS unemployed	-0.001	0.172	0.011	0.236	-0.005	0.148
share of adults in bad health	0.183	0.309	0.167	0.292	0.190	0.310
change in share in bad health	0.003	0.243	0.000	0.239	0.004	0.245
share of adults-pensioners	0.399	0.439	0.248	0.369	0.455	0.447
change in share of pensioners	0.009	0.172	-0.007	0.189	0.015	0.167
share of adults in public sector	0.264	0.354	0.289	0.364	0.265	0.353
change in share in public sector	-0.010	0.253	-0.020	0.297	-0.007	0.247
share of adults with university degree	0.166	0.316	0.099	0.251	0.177	0.322
share of adults with secondary school only	0.110	0.244	0.151	0.280	0.100	0.232
maximum level of education	1.978	0.863	1.901	0.760	1.987	0.888
family involved in subsistence farming	0.142	0.349	0.111	0.314	0.166	0.372
Economic region 1 (Moscow&St.Petersburg)	0.073	0.259	0.037	0.189	0.102	0.303
Economic region 2 (Northern and North Western)	0.046	0.210	0.054	0.226	0.057	0.232
Economic region 3 (Central and Central Black-Earth)	0.158	0.364	0.167	0.373	0.199	0.399
Economic region 4 (Volga-Vyatski and Volga Basin)	0.167	0.373	0.224	0.417	0.199	0.399
Economic region 5 (North Caucasian)	0.095	0.293	0.153	0.360	0.106	0.307
Economic region 6 (Ural)	0.126	0.331	0.150	0.357	0.154	0.361
Economic region 7 (Western Siberian)	0.081	0.273	0.105	0.307	0.097	0.296
Economic region 8 (Eastern Siberian and Far Eastern)	0.074	0.261	0.108	0.311	0.085	0.279
settlement type: 1 urban, 0 rural	0.657	0.475	0.545	0.498	0.687	0.464

Table 6 Mean number of records, time at risk and failures per subject in survival data

Category	Out of poverty total	Out of poverty mean per subject	Out of non-poverty total	Out of non-poverty mean per subject
no. of subjects	3445		6819	
no. of records	6360	1.846	20698	3.035
time at risk	6360	1.846	20698	3.035
failures	2336	0.678	2134	0.313

Table 7 Panel sample descriptive statistics by year

	1994		1995		1996		1998		2000		2001		2002		2003		2004	
Variable	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
family size, number of people	2.786	1.409	2.796	1.445	2.775	1.433	2.801	1.461	2.769	1.425	2.722	1.413	2.727	1.438	2.707	1.402	2.737	1.423
change in family size	0.000	0.000	0.011	0.235	0.021	0.310	0.028	0.369	0.009	0.287	0.012	0.253	0.020	0.282	0.016	0.270	0.015	0.276
# of kids <7 yrs in hh	0.262	0.551	0.247	0.535	0.235	0.523	0.211	0.498	0.200	0.462	0.192	0.455	0.197	0.458	0.193	0.440	0.204	0.461
# of kids 7-18 yrs in hh	0.469	0.766	0.490	0.795	0.497	0.795	0.514	0.795	0.492	0.756	0.457	0.727	0.446	0.709	0.432	0.698	0.423	0.697
HH headed by adult male	0.615	0.487	0.614	0.487	0.610	0.488	0.607	0.488	0.599	0.490	0.595	0.491	0.601	0.490	0.612	0.487	0.625	0.484
HH headed by adult female	0.114	0.318	0.115	0.319	0.123	0.329	0.125	0.331	0.138	0.345	0.145	0.352	0.148	0.355	0.150	0.358	0.144	0.351
HH headed by retired male	0.130	0.336	0.126	0.332	0.122	0.327	0.133	0.340	0.133	0.339	0.128	0.334	0.119	0.324	0.108	0.310	0.102	0.302
HH headed by retired female	0.139	0.346	0.144	0.351	0.144	0.351	0.133	0.340	0.130	0.337	0.131	0.337	0.130	0.337	0.128	0.335	0.128	0.335
HH headed by a young person	0.001	0.033	0.000	0.019	0.000	0.019	0.001	0.033	0.001	0.026	0.002	0.039	0.001	0.034	0.001	0.037	0.001	0.029
share of adults in LF	0.625	0.422	0.627	0.425	0.616	0.421	0.609	0.424	0.624	0.425	0.620	0.423	0.628	0.424	0.638	0.420	0.646	0.423
change in share in LF	0.000	0.000	-0.006	0.245	-0.015	0.251	-0.028	0.273	-0.011	0.284	-0.011	0.264	-0.010	0.254	0.001	0.253	-0.002	0.248
share of adults with job	0.574	0.419	0.580	0.419	0.559	0.416	0.549	0.417	0.576	0.423	0.578	0.419	0.587	0.420	0.598	0.417	0.601	0.417
change in share with job	0.000	0.000	-0.004	0.251	-0.023	0.248	-0.027	0.279	0.001	0.292	-0.004	0.273	-0.007	0.270	0.002	0.262	-0.005	0.261
share of adults unemployed BLS	0.048	0.165	0.045	0.160	0.055	0.172	0.058	0.175	0.047	0.162	0.042	0.148	0.040	0.147	0.040	0.154	0.045	0.157
change in share of BLS unemployed	0.000	0.000	-0.001	0.181	0.008	0.185	-0.001	0.192	-0.010	0.188	-0.007	0.175	-0.003	0.178	-0.001	0.166	0.003	0.185
share of adults with bad health	0.207	0.317	0.204	0.318	0.208	0.323	0.188	0.309	0.183	0.308	0.178	0.307	0.165	0.299	0.169	0.305	0.162	0.299
change in share in bad health	0.000	0.000	0.000	0.275	0.005	0.265	0.000	0.266	0.007	0.256	-0.001	0.249	-0.001	0.247	0.012	0.254	0.001	0.246
share of adults-pensioners	0.407	0.439	0.411	0.442	0.413	0.442	0.419	0.446	0.413	0.448	0.397	0.438	0.388	0.434	0.381	0.430	0.372	0.432
change in share of pensioners	0.000	0.000	0.010	0.169	0.008	0.183	0.027	0.215	0.023	0.208	-0.004	0.183	0.009	0.163	0.009	0.161	0.004	0.166
share of adults in public sector	0.301	0.368	0.289	0.367	0.284	0.363	0.260	0.351	0.258	0.352	0.260	0.353	0.266	0.358	0.242	0.340	0.235	0.336
change in share with school only	0.000	0.000	-0.013	0.307	-0.009	0.300	-0.030	0.297	-0.011	0.282	-0.002	0.246	0.000	0.246	-0.018	0.236	-0.008	0.232
share of adults with university degree	0.159	0.308	0.150	0.300	0.153	0.305	0.150	0.300	0.157	0.306	0.172	0.321	0.173	0.323	0.185	0.335	0.183	0.329
share of adults with secondary	0.129	0.261	0.125	0.264	0.106	0.242	0.097	0.226	0.104	0.233	0.114	0.249	0.110	0.245	0.107	0.243	0.101	0.235
maximum level of education	1.955	0.876	1.869	0.929	1.900	0.912	1.933	0.889	1.973	0.856	2.008	0.843	2.018	0.828	2.037	0.832	2.059	0.812
family involved in subsistence	0.125	0.331	0.118	0.322	0.140	0.347	0.141	0.348	0.155	0.362	0.161	0.367	0.146	0.353	0.154	0.361	0.133	0.340
Moscow&St.Petersburg	0.086	0.281	0.073	0.259	0.066	0.247	0.051	0.221	0.037	0.189	0.118	0.323	0.127	0.332	0.112	0.316	0.106	0.308
settlement type: 1 urban, 0 rural	0.679	0.467	0.663	0.473	0.654	0.476	0.641	0.480	0.635	0.481	0.659	0.474	0.659	0.474	0.663	0.473	0.658	0.474

Table 8 Hazard function from poverty and non-poverty, total samples

	Exit from poverty				*Exit from non-poverty*			
Analytical Time	Beg. Total	Fail	Failure Function	Std. Error	Beg. Total	Fail	Failure Function	Std. Error
1	3434	1361	0.396	0.008	6797	975	0.143	0.004
2	1454	512	0.609	0.009	4311	601	0.263	0.006
3	739	240	0.736	0.009	3008	328	0.343	0.007
4	385	108	0.810	0.009	2167	133	0.384	0.007
5	183	55	0.867	0.009	1598	55	0.405	0.007
6	94	34	0.915	0.009	1127	27	0.419	0.008
7	44	15	0.944	0.008	760	9	0.426	0.008
8	22	11	0.972	0.007	518	6	0.433	0.008
9	5	0	0.972	0.007	412	0	0.433	0.008

Table 9. Survival functions from poverty and non-poverty, by period and by settlement type

	Survival function of stay in poverty			
Analytical Time	Period		Settlement type	
	Decline	Growth	Rural	Urban
1	0.581	0.640	0.638	0.581
2	0.358	0.435	0.434	0.359
3	0.259	0.282	0.293	0.243
4	0.181	0.204	0.214	0.171
5	.	0.143	0.160	0.108
6	.	0.091	0.104	0.068
7	.	0.060	0.074	0.041
8	.	0.030	0.043	0.016
9	.	0.030	0.043	0.016
	Log-rank tests for equality of survivor functions			
	0.001		0.000	
Pr>chi2	(H_0 rejected)		(H_0 rejected)	
	Survival function of stay in non-poverty			
Analytical Time	Period		Settlement type	
	Decline	Growth	Rural	Urban
1	0.813	0.924	0.789	0.885
2	0.636	0.867	0.631	0.785
3	0.511	0.819	0.551	0.706
4	0.465	0.781	0.497	0.675
5	.	0.754	0.470	0.658
6	.	0.736	0.453	0.646
7	.	0.727	0.442	0.642
8	.	0.719	0.430	0.639
9	.	0.719	0.430	0.639
	Log-rank tests for equality of survivor functions			
	0.000		0.000	
Pr>chi2	(H_0 rejected)		(H_0 rejected)	

Diagram 1. Survival function of staying in poverty, number of censored observations

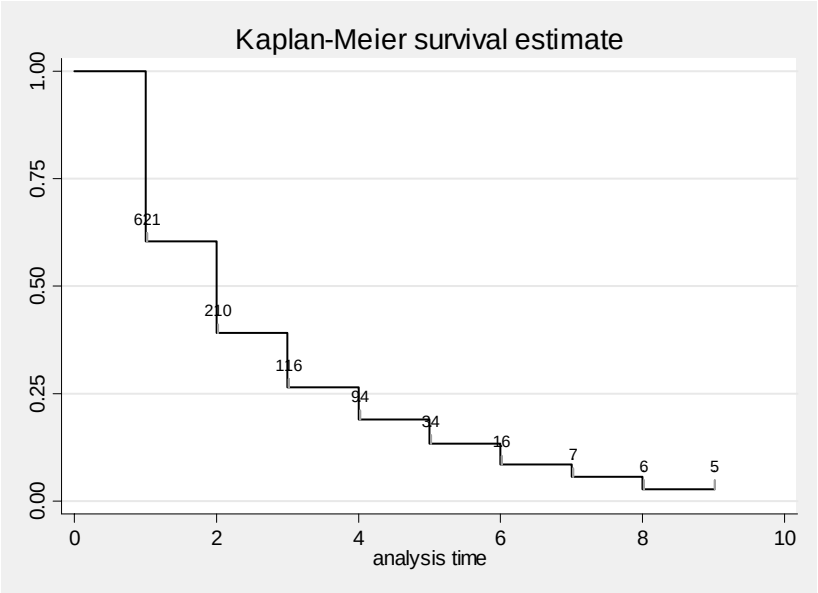

Diagram 2. Survival function of staying in poverty, by settlement type

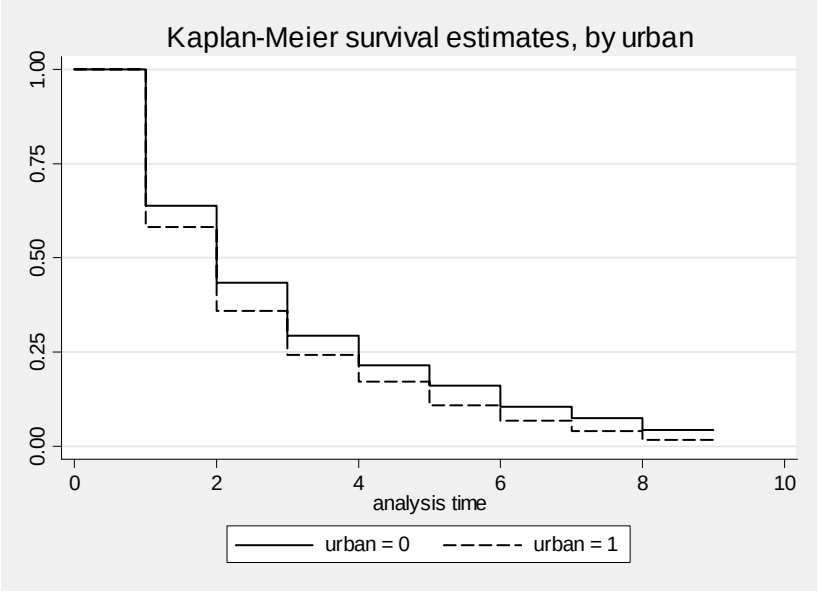

Diagram 3. Survival function of staying in poverty, by area

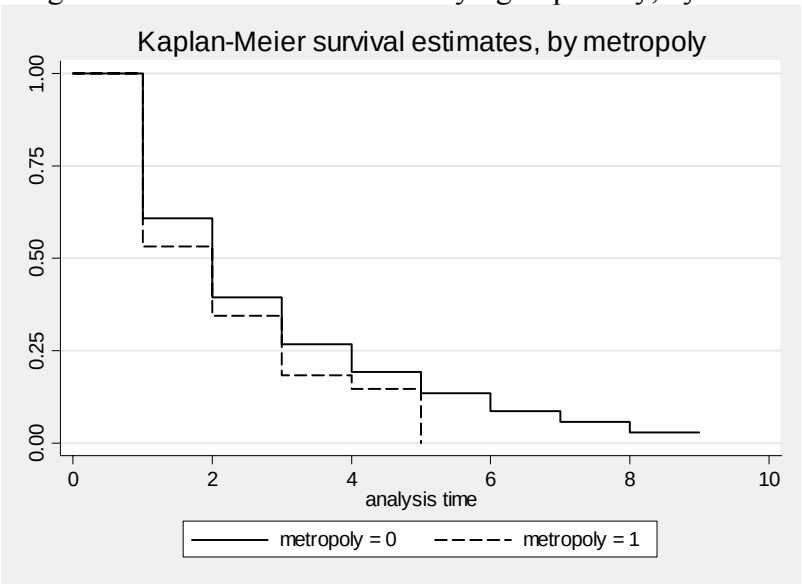

Diagram 4. Survival function of staying in poverty, by period

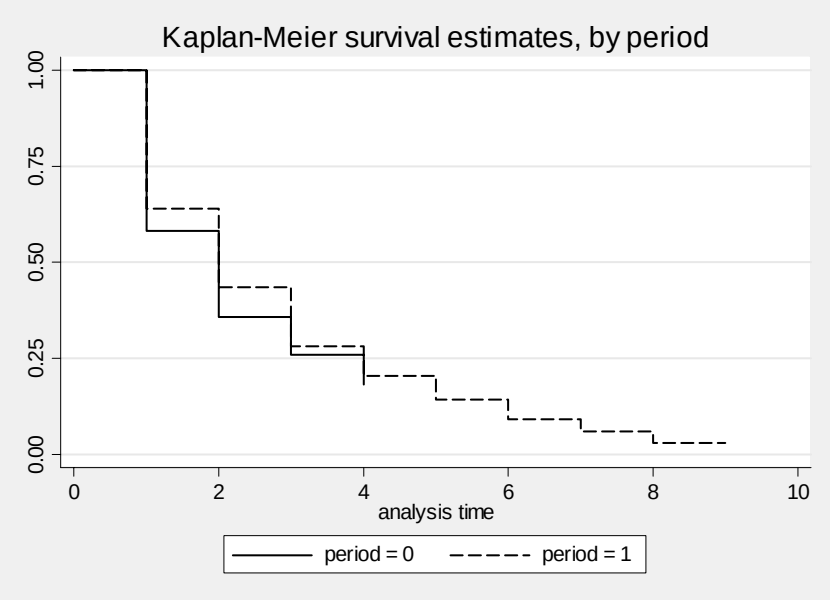

Diagram 5.Survival function of staying out-of-poverty, number of censored observations

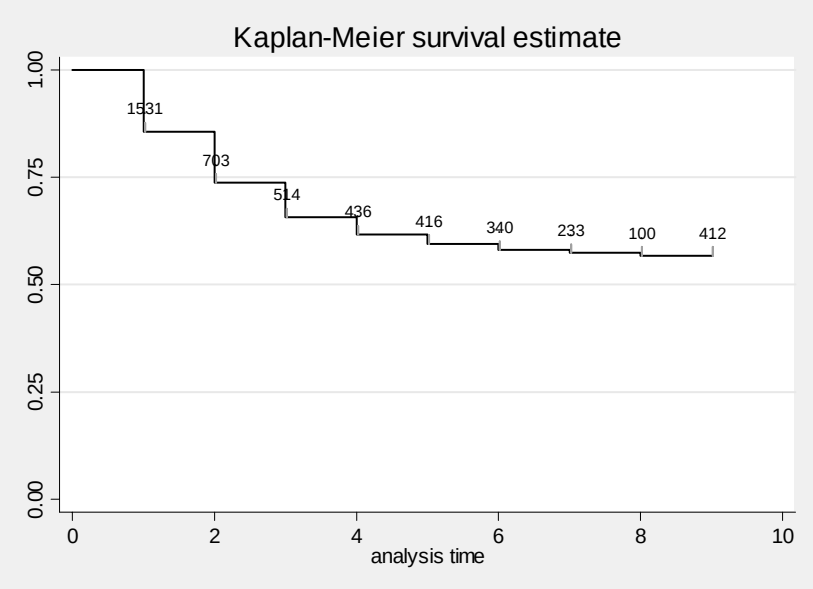

Diagram 6. Survival function of staying out-of-poverty, by settlement type

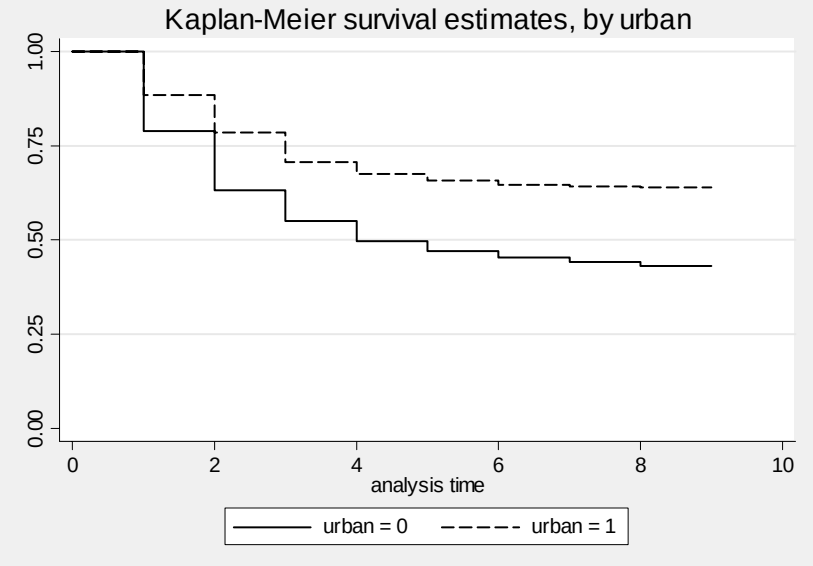

Diagram 7. Survival function of staying out-of-poverty, by area

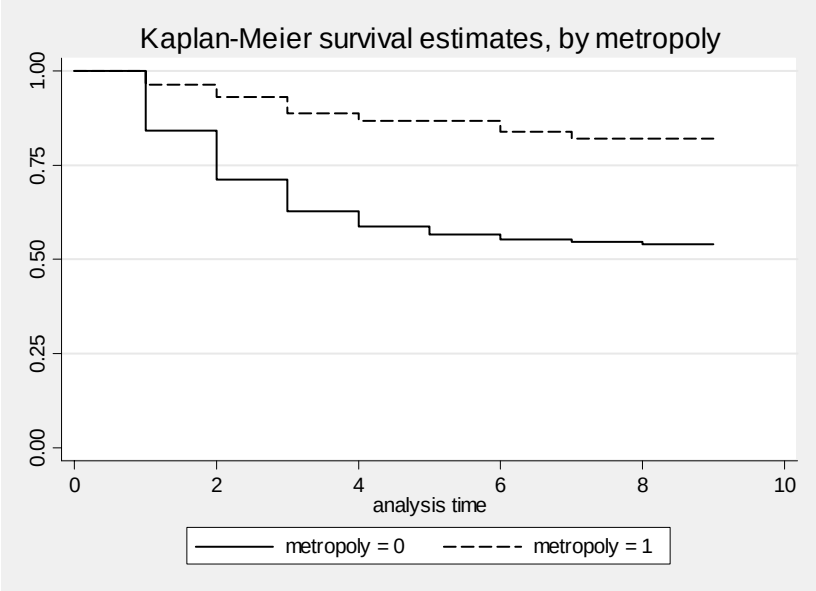

Diagram 8. Survival function of staying out-of-poverty, by period

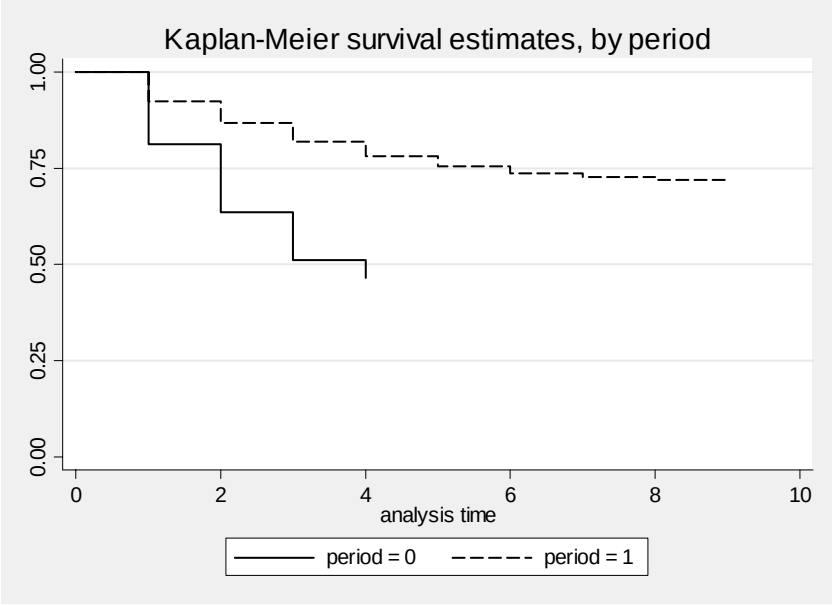

Table 10. Estimation of Cox proportional hazard model, exit from poverty

	cluster ID (1) *Hazard rate*	cluster ID (2) *Hazard rate*	cluster ID, strata on urban (3) *Hazard rate*	cluster ID, strata on period (4) *Hazard rate*	cluster ID (5) *Hazard rate*	cluster ID, strata on urban (6) *Hazard rate*	cluster ID, strata on period (7) *Hazard rate*
family size, number of people in family	0.079	0.079	0.078	0.079	0.066	0.065	0.067
	[0.020]***	[0.020]***	[0.020]***	[0.020]***	[0.020]***	[0.020]***	[0.020]***
# of kids <7 yrs in hh:demcat=1	-0.08	-0.086	-0.085	-0.087	-0.077	-0.075	-0.077
	[0.039]**	[0.039]**	[0.039]**	[0.039]**	[0.039]**	[0.039]*	[0.039]**
# of kids 7-18 yrs in hh demcat=2	-0.11	-0.114	-0.114	-0.115	-0.104	-0.104	-0.105
	[0.029]***	[0.029]***	[0.029]***	[0.029]***	[0.029]***	[0.029]***	[0.029]***
HH headed by adult female	-0.034	-0.028	-0.027	-0.028	-0.018	-0.017	-0.019
	[0.051]	[0.051]	[0.051]	[0.051]	[0.051]	[0.051]	[0.051]
HH headed by retired male	0.186	0.184	0.186	0.179	0.222	0.224	0.217
	[0.088]**	[0.087]**	[0.087]**	[0.087]**	[0.088]**	[0.088]**	[0.088]**
HH headed by retired female	0.281	0.277	0.275	0.274	0.336	0.334	0.332
	[0.084]***	[0.084]***	[0.084]***	[0.084]***	[0.085]***	[0.085]***	[0.085]***
share of adults in LF	0.547	0.501	0.514	0.518	0.497	0.511	0.515
	[0.355]	[0.359]	[0.361]	[0.373]	[0.364]	[0.368]	[0.379]
share of adults with job	-0.513	-0.46	-0.474	-0.479	-0.456	-0.472	-0.476
	[0.351]	[0.355]	[0.357]	[0.369]	[0.361]	[0.364]	[0.375]
share of adults unemployed BLS	-0.671	-0.636	-0.65	-0.654	-0.63	-0.646	-0.65
	[0.360]*	[0.363]*	[0.366]*	[0.378]*	[0.369]*	[0.373]*	[0.384]*
share of adults with bad health	-0.089	-0.102	-0.103	-0.102	-0.097	-0.097	-0.096
	[0.060]	[0.060]*	[0.060]*	[0.060]*	[0.060]	[0.060]	[0.060]
share of adults-pensioners	0.109	0.101	0.102	0.097	0.101	0.102	0.097
	[0.066]	[0.067]	[0.067]	[0.067]	[0.067]	[0.067]	[0.067]
share of adults in public sector	-0.003	-0.018	-0.015	-0.017	0	0.003	0.002
	[0.056]	[0.056]	[0.056]	[0.056]	[0.056]	[0.056]	[0.056]
share of adults with university degree	0.257	0.261	0.26	0.258			
	[0.057]***	[0.057]***	[0.057]***	[0.057]***			
share of adults with secondary school only	-0.168	-0.17	-0.168	-0.171			
	[0.065]**	[0.066]***	[0.066]**	[0.066]***			
family involved in subsistence farming	-0.115	-0.104	-0.104	-0.105	-0.106	-0.107	-0.107
	[0.058]**	[0.057]*	[0.057]*	[0.058]*	[0.057]*	[0.057]*	[0.058]*
1- urban 0- rural or pgt	0.106	0.099		0.098	0.106		0.106
	[0.034]***	[0.034]***		[0.034]***	[0.035]***		[0.035]***
Moscow&St.Petersburg	0.095	0.114	0.114	0.122	0.14	0.139	0.147
	[0.075]	[0.076]	[0.076]	[0.077]	[0.075]*	[0.075]*	[0.075]*
decline =0 growth=1		-0.107	-0.106		-0.107	-0.107	
		[0.038]***	[0.038]***		[0.038]***	[0.038]***	
maximum level of education in family					0.074	0.074	0.072
					[0.024]***	[0.024]***	[0.024]***
Observations	6347	6347	6347	6347	6347	6347	6347
Log Pseudo-Likelihood	-17494	-17491	-15928	-16050	-17497	-15934	-16055
Rank test of proportional hazard assumption, prob>chi^2	0.998	0.998	0.998	0.998	0.997	0.997	0.998

Robust standard errors in brackets

* significant at 10%; ** significant at 5%; *** significant at 1%

Table 11. Estimation of Cox proportional hazard model, exit from poverty, incl.changes

	cluster ID (1) *Hazard rate*	cluster ID (2) *Hazard rate*	cluster ID, strata on urban (3) *Hazard rate*	cluster ID, strata on period (4) *Hazard rate*	cluster ID (5) *Hazard rate*	cluster ID, strata on urban (6) *Hazard rate*	cluster ID, strata on period (7) *Hazard rate*
family size, number of people in family	0.078	0.078	0.077	0.079	0.066	0.065	0.067
	[0.020]***	[0.020]***	[0.020]***	[0.020]***	[0.021]***	[0.021]***	[0.021]***
change in family size	-0.035	-0.037	-0.035	-0.038	-0.038	-0.036	-0.039
	[0.054]	[0.054]	[0.054]	[0.054]	[0.054]	[0.054]	[0.054]
# of kids <7 yrs in hh:demcat=1	-0.074	-0.081	-0.079	-0.081	-0.071	-0.07	-0.072
	[0.039]*	[0.039]**	[0.039]**	[0.039]**	[0.039]*	[0.039]*	[0.039]*
# of kids 7-18 yrs in hh demcat=2	-0.108	-0.112	-0.111	-0.113	-0.102	-0.102	-0.103
	[0.029]***	[0.029]***	[0.029]***	[0.029]***	[0.029]***	[0.029]***	[0.029]***
HH headed by adult female	-0.044	-0.037	-0.037	-0.038	-0.028	-0.027	-0.029
	[0.051]	[0.051]	[0.051]	[0.051]	[0.051]	[0.051]	[0.051]
HH headed by retired male	0.167	0.163	0.165	0.159	0.202	0.204	0.197
	[0.088]*	[0.087]*	[0.087]*	[0.087]*	[0.089]**	[0.088]**	[0.089]**
HH headed by retired female	0.257	0.253	0.251	0.25	0.312	0.311	0.308
	[0.084]***	[0.084]***	[0.084]***	[0.084]***	[0.085]***	[0.085]***	[0.085]***
share of adults in LF	0.469	0.419	0.428	0.422	0.418	0.428	0.422
	[0.496]	[0.511]	[0.511]	[0.516]	[0.525]	[0.525]	[0.529]
change in share in LF	0.123	0.127	0.134	0.157	0.117	0.126	0.15
	[0.487]	[0.485]	[0.488]	[0.492]	[0.496]	[0.499]	[0.503]
share of adults with job	-0.42	-0.361	-0.371	-0.365	-0.36	-0.371	-0.365
	[0.491]	[0.506]	[0.506]	[0.511]	[0.520]	[0.520]	[0.525]
change in share with job	-0.142	-0.15	-0.159	-0.182	-0.144	-0.154	-0.178
	[0.484]	[0.483]	[0.485]	[0.489]	[0.494]	[0.497]	[0.501]
share of adults unemployed BLS	-0.589	-0.554	-0.563	-0.554	-0.55	-0.561	-0.552
	[0.500]	[0.515]	[0.515]	[0.520]	[0.529]	[0.529]	[0.533]
change in share of BLS unemployed	-0.117	-0.116	-0.125	-0.153	-0.11	-0.121	-0.15
	[0.493]	[0.491]	[0.494]	[0.498]	[0.502]	[0.505]	[0.509]
share of adults with bad health	-0.069	-0.085	-0.085	-0.083	-0.082	-0.082	-0.08
	[0.067]	[0.067]	[0.067]	[0.067]	[0.067]	[0.067]	[0.067]
change in share in bad health	-0.051	-0.046	-0.047	-0.049	-0.041	-0.043	-0.045
	[0.077]	[0.076]	[0.076]	[0.076]	[0.076]	[0.076]	[0.076]
share of adults-pensioners	0.157	0.152	0.152	0.147	0.152	0.152	0.148
	[0.072]**	[0.072]**	[0.073]**	[0.072]**	[0.072]**	[0.072]**	[0.072]**
change in share of pensioners	-0.202	-0.209	-0.084	-0.085	-0.095	-0.206	-0.096
	[0.092]**	[0.091]**	[0.067]	[0.067]	[0.067]	[0.067]	[0.067]
share of adults in public sector	0.032	0.013	0.016	0.014	0.035	0.038	0.037
	[0.062]	[0.062]	[0.062]	[0.062]	[0.062]	[0.062]	[0.062]
change in share in public sector	-0.092	-0.084	-0.205	-0.205	-0.21	-0.095	-0.207
	[0.067]	[0.067]	[0.091]**	[0.091]**	[0.091]**	[0.091]**	[0.091]**
share of adults with university degree	0.255	0.26	0.259	0.257			
	[0.057]***	[0.057]***	[0.057]***	[0.058]***			
share of adults with secondary school only	-0.163	-0.166	-0.164	-0.167			
	[0.065]**	[0.066]**	[0.066]**	[0.066]**			
family involved in subsistence farming	-0.113	-0.103	-0.103	-0.103	-0.105	-0.105	-0.106
	[0.058]*	[0.057]*	[0.057]*	[0.058]*	[0.057]*	[0.057]*	[0.058]*
1- urban 0- rural or pgt	0.108	0.102		0.101	0.11		0.109
	[0.034]***	[0.034]***		[0.034]***	[0.035]***		[0.035]***
Moscow&St.Petersburg	0.093	0.112	0.112	0.12	0.138	0.137	0.145
	[0.076]	[0.077]	[0.077]	[0.077]	[0.075]*	[0.075]*	[0.075]*
decline =0 growth=1		-0.107	-0.106		-0.107	-0.106	
		[0.038]***	[0.038]***		[0.038]***	[0.038]***	
maximum level of education in family					0.072	0.073	0.071
					[0.024]***	[0.024]***	[0.024]***
Observations	6347	6347	6347	6347	6347	6347	6347
Log Pseudo-Likelihood	-17492	-17489	-15926	-16047	-17495	-15931	-16053
Rank test of proportional hazard ass.	0.991	0.994	0.993	0.994	0.993	0.991	0.992

Robust standard errors in brackets
* significant at 10%; ** significant at 5%; *** significant at 1%

Table 12. Estimation of Cox proportional hazard model, exit from non-poverty

	cluster ID (1) *Hazard rate*	cluster ID (2) *Hazard rate*	cluster ID, strata on urban (3) *Hazard rate*	cluster ID, strata on period (4) *Hazard rate*	cluster ID (5) *Hazard rate*	cluster ID, strata on urban (6) *Hazard rate*	cluster ID, strata on period (7) *Hazard rate*
family size, number of people in family	-0.037	-0.047	-0.048	-0.046	-0.021	-0.022	-0.02
	[0.027]	[0.028]*	[0.028]*	[0.028]*	[0.028]	[0.028]	[0.028]
# of kids <7 yrs in hh:demcat=1	0.202	0.195	0.196	0.194	0.17	0.171	0.169
	[0.049]***	[0.048]***	[0.048]***	[0.048]***	[0.049]***	[0.049]***	[0.049]***
# of kids 7-18 yrs in hh demcat=2	0.244	0.225	0.226	0.228	0.207	0.207	0.21
	[0.036]***	[0.036]***	[0.036]***	[0.036]***	[0.036]***	[0.036]***	[0.036]***
HH headed by adult female	0.048	0.097	0.097	0.095	0.075	0.075	0.072
	[0.066]	[0.065]	[0.065]	[0.065]	[0.065]	[0.065]	[0.065]
HH headed by retired male	-0.529	-0.618	-0.622	-0.622	-0.676	-0.68	-0.679
	[0.107]***	[0.108]***	[0.108]***	[0.108]***	[0.108]***	[0.108]***	[0.108]***
HH headed by retired female	-0.213	-0.241	-0.243	-0.243	-0.35	-0.352	-0.35
	[0.107]**	[0.107]**	[0.107]**	[0.107]**	[0.109]***	[0.109]***	[0.109]***
share of adults in LF	0.513	0.083	0.073	0.103	0.037	0.029	0.059
	[0.495]	[0.500]	[0.501]	[0.502]	[0.506]	[0.507]	[0.507]
share of adults with job	-0.639	-0.19	-0.178	-0.219	-0.127	-0.116	-0.157
	[0.491]	[0.496]	[0.497]	[0.498]	[0.502]	[0.503]	[0.503]
share of adults unemployed BLS	-0.449	-0.05	-0.04	-0.076	0.006	0.014	-0.021
	[0.507]	[0.511]	[0.512]	[0.513]	[0.517]	[0.518]	[0.518]
share of adults with bad health	0.387	0.304	0.303	0.308	0.295	0.294	0.299
	[0.076]***	[0.075]***	[0.075]***	[0.075]***	[0.075]***	[0.075]***	[0.076]***
share of adults-pensioners	-0.13	-0.23	-0.226	-0.229	-0.223	-0.219	-0.222
	[0.081]	[0.081]***	[0.081]***	[0.081]***	[0.080]***	[0.080]***	[0.080]***
share of adults in public sector	0.241	0.136	0.135	0.139	0.113	0.112	0.115
	[0.063]***	[0.062]**	[0.062]**	[0.062]**	[0.062]*	[0.062]*	[0.062]*
share of adults with university degree	-0.545	-0.545	-0.543	-0.544			
	[0.077]***	[0.078]***	[0.078]***	[0.079]***			
share of adults with secondary school only	0.107	0.112	0.112	0.115			
	[0.074]	[0.073]	[0.073]	[0.073]			
family involved in subsistence farming	-0.049	-0.055	-0.057	-0.053	-0.046	-0.047	-0.044
	[0.057]	[0.056]	[0.056]	[0.056]	[0.056]	[0.056]	[0.056]
1- urban 0- rural or pgt	-0.378	-0.399		-0.4	-0.407		-0.409
	[0.042]***	[0.042]***		[0.042]***	[0.042]***		[0.042]***
Moscow&St.Petersburg	-1.059	-0.877	-0.883	-0.886	-0.896	-0.902	-0.905
	[0.124]***	[0.123]***	[0.122]***	[0.123]***	[0.123]***	[0.122]***	[0.123]***
decline =0 growth=1		-1.043	-1.041		-1.036	-1.034	
		[0.050]***	[0.050]***		[0.050]***	[0.050]***	
maximum level of education in family					-0.154	-0.153	-0.152
					[0.025]***	[0.025]***	[0.025]***
Observations	20664	20664	20664	20664	20664	20664	20664
Log Pseudo-Likelihood	-17653	-17434	-17653	-15981	-16313	-17447	-15993
Rank test of proportional hazard assumption, prob>chi^2	0.404	0.126	0.404	0.134	0.403	0.227	0.245

Robust standard errors in brackets
* significant at 10%; ** significant at 5%; *** significant at 1%

Table 13. Estimation of Cox proportional hazard model, exit from non-poverty, incl. changes

	cluster ID (1) *Hazard rate*	cluster ID (2) *Hazard rate*	cluster ID, strata on urban (3) *Hazard rate*	cluster ID, strata on period (4) *Hazard rate*	cluster ID (5) *Hazard rate*	cluster ID, strata on urban (6) *Hazard rate*	cluster ID, strata on period (7) *Hazard rate*
family size, number of people in family	-0.031	-0.041	-0.042	-0.04	-0.015	-0.016	-0.014
	[0.028]	[0.028]	[0.028]	[0.028]	[0.028]	[0.028]	[0.028]
change in family size	-0.112	-0.088	-0.083	-0.087	-0.093	-0.087	-0.092
	[0.100]	[0.089]	[0.089]	[0.088]	[0.089]	[0.089]	[0.088]
# of kids <7 yrs in hh:demcat=1	0.199	0.189	0.19	0.188	0.164	0.165	0.164
	[0.049]***	[0.048]***	[0.049]***	[0.049]***	[0.049]***	[0.049]**	[0.049]***
# of kids 7-18 yrs in hh demcat=2	0.237	0.218	0.219	0.222	0.2	0.201	0.203
	[0.036]***	[0.036]***	[0.036]***	[0.036]***	[0.036]***	[0.036]**	[0.036]***
HH headed by adult female	0.049	0.1	0.1	0.097	0.077	0.077	0.074
	[0.066]	[0.065]	[0.065]	[0.066]	[0.065]	[0.065]	[0.066]
HH headed by retired male	-0.523	-0.61	-0.613	-0.614	-0.668	-0.671	-0.672
	[0.109]***	[0.110]***	[0.110]***	[0.110]***	[0.110]***	[0.110]**	[0.111]***
HH headed by retired female	-0.205	-0.225	-0.226	-0.227	-0.333	-0.335	-0.334
	[0.109]*	[0.109]**	[0.109]**	[0.110]**	[0.111]***	[0.111]**	[0.112]***
share of adults in LF	0.593	0.076	0.067	0.102	0.019	0.011	0.045
	[0.504]	[0.517]	[0.518]	[0.521]	[0.523]	[0.525]	[0.527]
change in share in LF	-0.277	0.002	-0.003	-0.012	0.038	0.034	0.025
	[0.623]	[0.596]	[0.594]	[0.587]	[0.619]	[0.616]	[0.609]
share of adults with job	-0.745	-0.218	-0.207	-0.252	-0.136	-0.125	-0.17
	[0.501]	[0.514]	[0.515]	[0.518]	[0.520]	[0.521]	[0.523]
change in share with job	0.315	0.07	0.07	0.082	0.013	0.011	0.024
	[0.612]	[0.584]	[0.582]	[0.574]	[0.606]	[0.604]	[0.596]
share of adults unemployed BLS	-0.499	-0.006	0.003	-0.034	0.06	0.069	0.033
	[0.520]	[0.532]	[0.534]	[0.536]	[0.538]	[0.539]	[0.541]
change in share of BLS unemployed	0.217	-0.067	-0.064	-0.059	-0.104	-0.103	-0.097
	[0.632]	[0.604]	[0.602]	[0.594]	[0.626]	[0.624]	[0.617]
share of adults with bad health	0.383	0.267	0.266	0.272	0.258	0.257	0.263
	[0.082]***	[0.081]***	[0.081]***	[0.082]***	[0.082]***	[0.082]**	[0.083]***
change in share in bad health	0.013	0.094	0.095	0.092	0.095	0.096	0.093
	[0.095]	[0.093]	[0.093]	[0.093]	[0.094]	[0.094]	[0.093]
share of adults-pensioners	-0.144	-0.255	-0.25	-0.251	-0.243	-0.238	-0.24
	[0.088]*	[0.089]***	[0.089]***	[0.090]***	[0.089]***	[0.089]**	[0.089]***
change in share of pensioners	0.07	-0.037	0.099	0.092	-0.027	0.084	0.077
	[0.127]	[0.127]	[0.083]	[0.127]	[0.084]	[0.084]	[0.084]
share of adults in public sector	0.279	0.151	0.15	0.155	0.123	0.123	0.127
	[0.067]***	[0.068]**	[0.068]**	[0.068]**	[0.067]*	[0.067]	[0.068]*
change in share in public sector	-0.119	0.101	-0.038	-0.04	0.085	-0.029	-0.03
	[0.088]	[0.083]	[0.127]	[0.083]	[0.127]	[0.127]	[0.127]
share of adults with university degree	-0.549	-0.546	-0.544	-0.546			
	[0.077]***	[0.078]***	[0.078]***	[0.079]***			
share of adults with secondary school only	0.105	0.113	0.113	0.116			
	[0.074]	[0.073]	[0.073]	[0.073]			
family involved in subsistence farming	-0.052	-0.058	-0.06	-0.057	-0.049	-0.051	-0.048
	[0.057]	[0.056]	[0.056]	[0.056]	[0.056]	[0.056]	[0.056]
1- urban 0- rural or pgt	-0.376	-0.398		-0.399	-0.408		-0.409
	[0.042]***	[0.042]***		[0.042]***	[0.042]***		[0.043]***
Moscow&St.Petersburg	-1.057	-0.874	-0.88	-0.883	-0.893	-0.899	-0.902
	[0.124]***	[0.123]***	[0.122]***	[0.123]***	[0.122]***	[0.122]**	[0.123]***
decline =0 growth=1		-1.044	-1.042		-1.038	-1.036	
		[0.050]***	[0.050]***		[0.050]***	[0.050]**	
maximum level of education in family					-0.154	-0.153	-0.152
					[0.025]***	[0.025]**	[0.025]***
Observations	20664	20664	20664	20664	20664	20664	20664
Log Pseudo-Likelihood	-17651	-17432	-15979	-16312	-17445	-15991	-16324
Rank test of proportional hazard ass.	0.202	0.113	0.120	0.295	0.198	0.213	0.420

Robust standard errors in brackets
* significant at 10%; ** significant at 5%; *** significant at 1%