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Income mobility in Russia (2000–2005)

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ABSTRACT

Using the data from the Russian Longitudinal Monitoring Survey (RLMS), this paper investigates income mobility in Russia during the period of rapid economic growth (2000–2005). Employing a broad set of mobility indices, we show that there is much mobility in household incomes from one year to the next and over longer periods in Russia. Both relative and absolute mobility in Russia are significantly higher than in Western countries. We demonstrate that income growth in Russia was strongly pro-poor in 2000–2005. Incomes of the relatively poor were growing faster than incomes of the relatively rich. However, this inequality-reducing effect was almost exactly offset by changes in the relative positions of individuals and the overall reduction in cross-sectional inequality was merely modest.

1. Introduction

Income mobility is important as it determines the extent to which inequality in the short term translates into inequality over a longer time period and into life-time inequality. A higher level of cross-sectional inequality is of less concern if people can move up and down the economic ladder relatively easily. Understanding the relationship between inequality and income mobility in Russia is especially relevant and of interest. Russia is known for reaching one of the highest levels of income inequality among middle income countries in the early transition period. Starting from relatively low levels during the pre-transition era, in the late-1990s, inequality approached the levels observed in Latin American countries (Mitra and Yemtsov, 2006).

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This rapid increase of income inequality has received heightened attention among researchers (Buckley and Gurenko, 1997; Flemming and Micklewright, 1999; Commander et al., 1999; Kiruta and Sheviakov, 2001; Aivazian and Kolenikov, 2001). Over the previous decade, some scholars studying income distribution in Russia turned from static analysis to dynamic analysis, particularly regarding income mobility and poverty duration. Lokshin and Popkin (1999) show that a small percentage of Russian families are persistently poor, with a sizable share of poverty being transitory and shallow, arising from income churning. At the same time a large share of families live near the poverty line and report a lack of opportunities for smooth consumption, which makes Russian households vulnerable to exogenous shocks. However, short-lived shocks are not likely to cause permanent impoverishment and create poverty traps (Lokshin and Ravallion, 2004). Concerning the later period, Denisova (2007) reports that economic growth brought important changes to in- and out-of-poverty movements: it lowered the risks of slipping into poverty but also reduced the chances of escaping it. Summing up the results of these poverty duration studies, we conclude that there is substantial mobility at the low end of the Russian income distribution, but the percentage of chronically poor among the poor seems to have grown in the recent years.

In addition to studies focused on dynamic poverty analysis there are some papers investigating income mobility throughout the distribution. Bogomolova and Topilina (1999) study relative income mobility in 1994–1996 and report that about 40% of Russian households remained in their original income quintiles each year, while roughly 30% moved up and the same percentage moved down. Jovanovic (2001) finds that, in spite of very modest changes in measured inequality in 1994–1998, Russian households experienced considerable fluctuations in their expenditures, with the median absolute annual change in expenditures exceeding 50%. This suggests considerable income churning from one year to the next. Luttmer (2000) reports that around half of these fluctuations reflect measurement errors or transitory shocks. Gorodnichenko et al. (2008) extend their analysis to 2005 and thus cover the period of economic recovery. They find that the measured fall in inequality since 2000 is largely attributable to the moderation of transitory shocks.

Up to now, to the best of our knowledge, there have been no comprehensive studies attempting to measure the degree and pattern of mobility within the Russian income distribution. Moreover, existing studies, with the notable exception of Denisova (2007) and Gorodnichenko et al. (2008), do not include the period of economic recovery. The aim of this paper is to establish some facts about income mobility in Russia in 2000–2005 and thus to fill the current informational vacuum.

We study in detail two aspects of income mobility: relative mobility (reranking of individuals in the distribution) and absolute mobility (real income movements), with special emphasis on low-income groups. However, our approach is very different from the one taken in classical "poverty" studies. Rather than dividing the sample into two groups – poor and non-poor – and analyzing the movement between these two states, we take a broader approach in assessing the fortunes of the poor and look at the distributional effects of their income growth.

The remainder of the paper is organized as follows. Section 2 describes the data and explains the construction of welfare aggregates. Section 3 estimates the effect of mobility on inequality reduction by comparing different parts of the income distribution. Section 4 compares relative mobility of different income groups through the use of transition matrices. Section 5 assesses absolute mobility and gives estimates of relative contributions of different income groups to the overall mobility. Section 6 attempts to link changes in inequality with relative mobility and pro-poor growth. Finally, Section 7 provides some concluding remarks.

2. Data, measurement issues and descriptive statistics

The data used in this paper come from the 2000–2005 waves of the Russian Longitudinal Monitoring Survey (RLMS). The RLMS is a unique panel survey of Russian households based on the national probability sample. It has been previously used by a number of researchers to analyze income mobility, poverty dynamics and consumption smoothing in Russia (among others, Bogomolova and Topilina, 1999; Jovanovic, 2001; Gorodnichenko et al., 2008). Following a long tradition of mobility studies, we restrict the sample to the households that were interviewed and reported non-missing incomes in all six waves. This yields a sample of 2317 households.

2.1. Construction of income aggregates

The main variable of interest in our research is per adult equivalent income computed as follows:

$$Y = \frac{\text{Household income}}{(1 + \alpha * (N_{\text{Adults}} - 1) + \beta * N_{\text{Children}})^{q}} \quad (1)$$

where Y refers to per adult equivalent income. Incomes are adjusted for differences in household size and composition using equivalence scales. Parameters α and β refer to consumption weights of adult household members and children, respectively. Parameter q is the degree of economies of scale. To conduct the sensitivity checks we use three equivalence scales: (1) the OECD scale ($\alpha = 0.7$; $\beta = 0.5$; $q = 1$); (2) $\alpha = \beta = 1$; $q = 0.75$; (3) $\alpha = \beta = q = 1$. It should be emphasized that the two latter measures do not account for household structure (the third measure is in fact a mere per capita income), while the OECD scale does not take into account household economies of scale (as $q = 1$).

Information on incomes is taken mainly from the "Incomes" section of the RLMS household questionnaire with cross-checks from individual questionnaires for wages, pensions, unemployment benefits, and reported total personal incomes. All measures refer to incomes received during the most recent 30 days. Of course, an annual income definition would be superior on the grounds that a longer period measure is less likely to reflect transitory and seasonal variations. In the absence of annual income data, we are forced to assume that income status round about the time of an interview is a good proxy for annual income status. Besides, monthly data also have their particular advantages. Household composition is measured at the time of an interview. Thus, with monthly data, the numerator and denominator elements in (1) are more likely to be consistent with each other (both depend on household composition, which may change over the year).

We use several income measures. More specifically, for each individual, we first take the sum of reported wages from all jobs (including in-kind payments), pensions and unemployment benefits. After that we compare this constructed measure of personal incomes with reported total personal incomes and take the high of the two income indicators as a measure of total personal incomes (if both measures are available). Then we sum total personal incomes for all household members within each household, which produces what we call a measure of household incomes based on individual incomes. The second measure is taken from a direct question about the total monetary income of a household received during the most recent 30 days. We call it the reported household income. The third income aggregate is calculated by summing the incomes from various sources reported by households. This measure includes wages, in-kind payments, pensions, scholarships, subsidies for housing and fuel, transfers from the government, and various private donations. We also include some incomes from financial operations such as investments and interest payments received, as well as incomes from renting out assets. However, we exclude incomes from borrowing, receiving debt repayments, selling securities, foreign exchange, and other 'lumpy' incomes. As a final step, we compare all three income measures, and for each household take the highest of them as a measure of total household income, assuming that households tend to underreport their incomes. This measure is used as the basic income aggregate in this study. All other measures are employed mostly for sensitivity checks.[2]

All income measures are deflated by annual regional consumer price deflators indexed to 100 in October 2000. However, we do not correct for inflation within the RLMS rounds because inflation was relatively low in 2000–2005. Zero incomes are treated as erroneous responses. Cowell and Schluter (1998) demonstrate that the majority of mobility indicators are very sensitive to data contamination. Thus, to avoid disturbances caused by outliers, we trimmed the sample by deleting 0.25% records at the bottom and the top of the distribution for each income measure.

Like any panel survey, the RLMS suffers from sample attrition as some individuals drop out of the survey for various reasons (migration, death, unwillingness to participate in subsequent waves of the survey, etc.). Table 1 presents basic descriptive statistics of households and individuals for the balanced panel and cross-sections. The attrition rate seems very substantial. However, the panel was

[2] We performed similar analyses for various expenditure aggregates. The results are qualitatively the same and are not reported here. They can be found in Lukiyanova and Oshchepkov (2009).

Table 1
Basic descriptive statistics for the balanced panel and for cross-sections.

	2000		2001		2002		2003		2004		2005	
	U	B	U	B	U	B	U	B	U	B	U	B
Households												
Household size	2.79	2.82	2.76	2.80	2.75	2.79	2.74	2.77	2.74	2.72	2.74	2.69
Number of children	0.55	0.56	0.53	0.54	0.52	0.52	0.51	0.49	0.50	0.45	0.49	0.43
Settlement type												
Moscow and St. Petersburg	5.5	2.8	14.0	2.8	14.6	2.8	12.5	2.8	12.5	2.8	11.6	2.8
Regional capital	34.1	32.7	30.3	32.7	29.7	32.7	29.5	32.7	29.8	32.7	29.5	32.7
Other towns	28.2	28.7	25.3	28.7	25.1	28.7	26.8	28.7	26.9	28.7	27.1	28.7
Rural and semi-urban	32.3	35.9	30.4	35.9	30.6	35.9	31.1	35.9	30.8	35.9	31.8	35.9
% of jobless households	28.1	28.0	28.0	28.4	28.0	29.7	26.9	28.9	25.8	29.3	26.2	30.1
Household types												
Single elderly	13.4	13.0	13.6	13.0	13.4	13.9	13.9	14.9	13.6	15.6	13.8	16.4
Multiple elderly	9.9	11.2	9.6	11.9	9.7	11.9	8.9	11.2	8.8	11.5	7.9	10.7
Other without kids	33.8	32.5	35.0	32.5	35.9	33.0	36.9	34.3	37.6	36.0	38.8	38.4
Single parent	3.6	3.2	3.7	3.4	4.0	3.6	3.7	3.0	3.4	2.7	3.3	2.6
Other with 1 kid	26.1	26.7	25.9	26.5	25.4	25.4	25.5	24.9	25.7	23.7	25.4	22.3
Other with 2 or more kids	13.3	13.4	12.2	12.9	11.6	12.4	11.2	11.7	11.0	10.4	10.7	9.6
Average per capita incomes	1370	1222	1785	1526	1968	1690	2094	1848	2257	2007	2546	2316
N of households	3782	2317	4270	2317	4441	2317	4460	2317	4489	2317	4397	2317
Individuals												
Age, years	37.1	37.7	37.4	38.3	37.4	38.7	37.3	39.1	37.3	39.8	37.3	40.3
Gender: % of males	45.0	44.5	44.7	44.4	44.7	44.2	44.6	43.7	44.6	43.6	44.6	43.8
Education												
Primary	8.3	8.9	7.2	8.4	6.4	7.7	6.3	7.8	6.0	7.8	5.6	7.4
Incomplete secondary	23.7	24.6	22.7	24.2	22.9	24.5	23.0	23.9	22.7	23.6	22.0	22.5
Complete secondary	33.5	33.4	34.9	34.0	35.0	34.3	35.1	34.3	34.6	34.2	35.5	35.2
College	19.5	19.6	19.2	19.5	19.3	19.4	19.1	19.8	19.9	19.5	19.5	19.5
University	15.0	13.6	16.1	14.1	16.4	14.1	16.6	14.2	16.9	15.0	17.5	15.5
N of individuals	10,537	6544	11,794	6494	12,210	6469	12,211	6408	12,303	6296	12,039	6236

Note: U, cross-sections; B, balanced panels. All samples are restricted to households with non-missing incomes.

significantly replenished in 2001 to restore the sample for Moscow and St. Petersburg, and for technical reasons the RLMS team had to replace one of the primary sample units. Thus, the actual drop-out rate is not that high. A comparison of household characteristics for the balanced panel and separate cross-sections shows that our balanced panel heavily under-represents households from Moscow and St. Petersburg. Households in the balanced panel are larger in size in 2000 but become smaller by the end of the period. The average number of children per household is declining faster for the balanced panel than for cross-sections. Both regularities suggest that the attrition may be non-random. However, ageing can be another explanation for this discrepancy – newly formed households consisting of young people with kids cannot enter the balanced panel. Where incomes are concerned, households in the balanced panel tend to report lower incomes, but we do not find any significant deviation in the evolution of incomes between the two samples. In all years of the period all income measures for the balanced panel were at the level of about 90% of the corresponding measures in cross-sections. Therefore, attrition may in fact not be a big problem, and since it is hard to estimate the consequences of sample attrition, we do not attempt to account for it.

2.2. Basic descriptive statistics on incomes and cross-sectional inequality

Before turning to the analysis of income dynamics, we provide some basic descriptive statistics for incomes (Table 2). Our calculations demonstrate a spectacular rise in real incomes. From 2000 to 2005, real incomes increased on average by 85–90%. All income aggregates demonstrate similar trends, with incomes rising in all years of the period. Income growth was especially rapid in 2001, when real incomes increased on average by 25% compared to the previous year. Over the period, income growth was larger at the low end of the distribution (see Fig. 1).

Table 2 compares the means of various income aggregates for three different equivalence scales. Per adult equivalent incomes were calculated on the basis of total household incomes. By construction, the latter measure is on average larger than any other income aggregate. Thus, justifiable comparisons in the table can be made either among mean per capita incomes based on different income aggregates or among measures of equivalent incomes. Reported household incomes generally should be larger than measures based on summation of different types of income. That is because reported household incomes may include some incomes which were excluded from the summation procedure, such as incomes from selling home-produced goods, incomes from financial operations, etc. However, probably due to recall errors or mismeasurement, this is not true for 2002–2003 (but the difference is small). In all years, household incomes based on individual incomes are on average lower than income measures calculated from the household questionnaire. This is an expected result because some incomes such as housing subsidies cannot be attributed to a single household member and are only found in the household questionnaire.

Comparing equivalence scales we see that the scale which only accounts for economies of scale ($\alpha = \beta = 1$; $q = 0.75$) produces the largest mean. However, the mean equivalent incomes based on the OECD-type equivalence scale are only slightly lower. A mere division of total incomes by household size gives the lowest mean. Dynamics of all three measures of equivalent income are very similar because household structures have not changed much over the six-year period.

Table 2
Income aggregates in the balanced panel.

	2000	2001	2002	2003	2004	2005
Mean per capita income for various income aggregates						
Household incomes based on individual incomes	1032	1269	1424	1564	1716	1975
Reported household incomes	1106	1364	1523	1691	1839	2127
Household incomes based on the sum of components of household incomes	1077	1363	1567	1701	1830	2107
Total household incomes (per adult equivalent income with $q = 1$)	1222	1526	1690	1848	2007	2316
Mean per adult equivalent income ($q = 0.75$)	1532	1918	2110	2306	2496	2869
Mean per adult equivalent income (OECD scale)	1518	1899	2087	2277	2460	2825

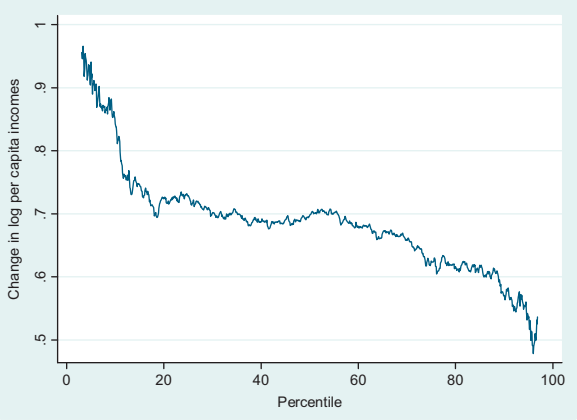


Fig. 1. Changes in log per capita incomes: 2000–2005.

Table 3 presents inequality measures based on different income aggregates. All income inequality measures point to a trend of declining dispersion of monetary incomes over the period. Both Gini and GE(2) were about 7–10% lower in 2005 than in 2000. The GE(0) coefficient dropped by 16% over the period. Among income aggregates, inequality is generally larger for reported incomes, especially at the top of the distribution, probably reflecting measurement errors. Inequality also appears to be large when measured on the basis of household incomes summed from individual questionnaires. The high dispersion of this income aggregate may be due to the fact that some household members skipped filling out individual questionnaires. Thus, this indicator may not be a reliable measure of household

Table 3
Inequality measures for incomes, individuals.

	2000	2001	2002	2003	2004	2005
Mean log deviation – GE(0)						
Mean per capita income						
Household incomes based on individual incomes	0.313	0.321	0.284	0.282	0.258	0.255
Reported household incomes	0.311	0.316	0.285	0.276	0.249	0.260
Household incomes based on the sum of components of household incomes	0.297	0.309	0.289	0.261	0.232	0.248
Total household incomes	0.281	0.297	0.266	0.256	0.232	0.235
Mean per adult equivalent income (q=0.75)	0.274	0.292	0.257	0.249	0.229	0.230
Mean per adult equivalent income (OECD scale)	0.273	0.290	0.257	0.249	0.226	0.230
Gini coefficient						
Mean per capita income						
Household incomes based on individual incomes	0.409	0.407	0.387	0.388	0.375	0.368
Reported household incomes	0.410	0.408	0.392	0.389	0.374	0.374
Household incomes based on the sum of components of household incomes	0.395	0.400	0.386	0.374	0.360	0.366
Total household incomes	0.394	0.404	0.382	0.378	0.366	0.365
Mean per adult equivalent income (q=0.75)	0.392	0.404	0.379	0.376	0.365	0.363
Mean per adult equivalent income (OECD scale)	0.391	0.403	0.378	0.375	0.363	0.363
Half of CV^2 – GE(2)						
Mean per capita income						
Household incomes based on individual incomes	0.416	0.447	0.370	0.351	0.318	0.347
Reported household incomes	0.437	0.449	0.399	0.358	0.353	0.382
Household incomes based on the sum of components of household incomes	0.346	0.396	0.388	0.280	0.273	0.312
Total household incomes	0.394	0.438	0.374	0.329	0.320	0.371
Mean per adult equivalent income (q=0.75)	0.371	0.438	0.351	0.315	0.301	0.342
Mean per adult equivalent income (OECD scale)	0.374	0.439	0.356	0.317	0.300	0.344

incomes. On the other hand, an income aggregate based on the sum of components of household incomes is likely to understate the true level of inequality for the upper half of the distribution and overstate it for the bottom of the distribution if we have been too restrictive in selecting the types of income to include in this income aggregate. The total household income indicator (which was constructed as the greater of all income measures available for each household) appears to behave in a more balanced and credible manner. It shows less cross-sectional variability of incomes at both tails of the distribution while for the middle of the distribution it conforms sufficiently well to other income aggregates. Equivalence scales probably alter the ranks of large households relative to small households, or the ranks of households with large numbers of children relative to those with none, but this has only a minor effect on inequality measures.

3. Mobility and long-term inequality

High cross-sectional inequality can be partly offset by mobility. If there is a lot of churning in the distribution as households move relative to one another, incomes averaged over longer time periods will be much more equally distributed than incomes from any single year. Similarly, rising inequality can be partly offset by rising mobility. Shorrocks (1978) proposed a so-called rigidity index to measure the extent to which relative mobility reduces longer-run inequality. This index makes a connection between cross-sectional inequality and permanent inequality.

The Shorrocks rigidity index is defined as the ratio of some inequality index of the total income in two periods to the weighted average of the same inequality index in each period:

$$R = \frac{I_{x+y}}{(\mu_x I_x + \mu_y I_y)/(\mu_x + \mu_y)} \tag{2}$$

where I refers to the inequality index, $x+y$ to the sum of incomes in the two periods, μ_x and μ_y to the mean incomes in the first and the second period. The Gini coefficient is commonly used in calculating the Shorrocks index. Following Jarvis and Jenkins (1998), we also use the GE(0) and GE(2) inequality indices (from the family of general entropy indices), which are sensitive (depending on α) to changes in different parts of the distribution. In particular, Gini, GE(0) and GE(2) are sensitive to changes in the middle, and in the bottom and top ends of the distribution, respectively.

The value of the Shorrocks rigidity index cannot be greater than 1 since inequality in annual incomes is always greater than inequality in incomes summed over a longer time period. A value of 1 means no mobility at all, suggesting that even in the long run individuals do not change their relative ranks in the income distribution. Instead of the Shorrocks rigidity index, we employ a measure of $(1-R)$, which is easy to interpret. It is often referred to as the Shorrocks mobility index. In percentage terms it shows a percentage reduction in income inequality when incomes are averaged over longer periods.

Of course, these calculations provide a tentative and incomplete measure of income mobility. Because the available data cover only six years, the full equalizing effect of mobility over a life-cycle is not captured. The equalizing effect is understated, as only a modest share of life-cycle related differences in incomes "averages out" in such a short period. At the same time, the equalizing effects of mobility are overstated. When household incomes are averaged over an extended period, it is assumed that households are able to maintain a living standard based on a complete or near-complete smoothing of their consumption, no matter how volatile their income paths may be. Because the assumption is that a stable income path provides the same level of well-being as a widely and unpredictably fluctuating path with the same average income, it is clear that the Shorrocks mobility index gives an upper-bound estimate of how mobility reduces inequality. It is not possible to assess the quantitative importance of these factors and we cannot know to what extent they offset each other.

The estimates of the Shorrocks mobility index for one-year sub-periods are shown in Table 4. In the last column, mobility is measured over a longer time period, but even for longer periods we match samples for the initial and the final years and ignore what has happened between the two time points. In fact, income inequality falls if we sum incomes for the two time periods. Even if we take two

Table 4
Mobility measures for income aggregates, matched samples of individuals within the balanced panel of households.

	One-year periods					5 years
	2000–2001	2001–2002	2002–2003	2003–2004	2004–2005	2000–2005[a]
Mean log deviation – GE(0)						
Mean per capita income						
Household incomes based on individual incomes	0.214	0.211	0.190	0.179	0.179	0.256
Reported household incomes	0.198	0.216	0.212	0.200	0.205	0.265
Household incomes based on the sum of components of household incomes	0.204	0.198	0.193	0.174	0.165	0.242
Total household incomes	0.205	0.217	0.197	0.182	0.171	0.250
Mean per adult equivalent income (q=0.75)	0.208	0.221	0.203	0.184	0.173	0.255
Mean per adult equivalent income (OECD scale)	0.209	0.221	0.202	0.186	0.174	0.256
Gini coefficient						
Mean per capita income						
Household incomes based on individual incomes	0.089	0.090	0.081	0.071	0.069	0.113
Reported household incomes	0.088	0.098	0.092	0.082	0.081	0.118
Household incomes based on the sum of components of household incomes	0.088	0.084	0.073	0.068	0.067	0.111
Total household incomes	0.094	0.097	0.088	0.078	0.075	0.119
Mean per adult equivalent income (q=0.75)	0.094	0.099	0.091	0.080	0.077	0.121
Mean per adult equivalent income (OECD scale)	0.095	0.100	0.091	0.081	0.077	0.121
Half of CV^2 – GE(2)						
Mean per capita income						
Household incomes based on individual incomes	0.257	0.269	0.217	0.203	0.229	0.317
Reported household incomes	0.272	0.297	0.266	0.248	0.273	0.318
Household incomes based on the sum of components of household incomes	0.237	0.252	0.209	0.167	0.200	0.284
Total household incomes	0.270	0.297	0.254	0.233	0.267	0.321
Mean per adult equivalent income (q=0.75)	0.268	0.299	0.256	0.232	0.259	0.319
Mean per adult equivalent income (OECD scale)	0.268	0.299	0.257	0.234	0.261	0.322

[a] Incomes in only two years (2000 and 2005) are taken into account.

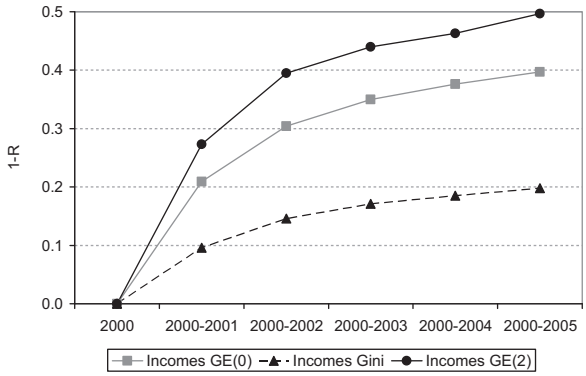


Fig. 2. Mobility of cumulated per adult equivalent incomes ($q=0.75$).

consecutive years, inequality is reduced by 8–25%. Over a longer time period the equalizing effect normally increases but the reduction associated with expanding the time horizon is much smaller than in the first year. This is the case because most transitory movements in monthly incomes fade out in the course of a single year.

Another important finding is that the choice of an inequality index matters. Mobility does not operate equally at all points of the distribution. For all years and income aggregates the Gini coefficient indicates a much weaker reduction in inequality than the two other indices. It appears, therefore, that mobility smoothes out income differences mostly in the tails of the distribution. Partly, this result is predictable, because the reference period used in the questionnaire is one month. Households in the middle of the distribution tend to have relatively stable incomes and hence more persistent income differences.

The peak of mobility was observed in 2001 and 2002, and after that mobility slowed down. For 2005 there are some signs of recovery in mobility rates. Mobility is generally higher for those aggregates which are less equally distributed, probably due to a larger contribution of transitory incomes and measurement errors. And again the results are not very sensitive to the choice of an equivalence scale.

Fig. 2 shows how mobility changes for incomes cumulated over various time horizons. To draw that picture we used a sub-sample of individuals who participated in all six waves of the survey. Mobility indices are calculated on the basis of per adult equivalent incomes with $q=0.75$. The horizontal axis $1-R=0$ represents a completely immobile structure. The mobility profiles depicted in Fig. 2 indicate that the initial rise was high, but leveled out as we added additional periods. This means that the transitory variation is extremely high, particularly at the tails of the income distribution.

The summing of incomes for the first two years – 2000 and 2001 – levels out about 30% of yearly inequality as measured by GE(2), which is more sensitive to changes at the top, and 20% of GE(0), which is more responsive to changes at the bottom. Over the six-year period, inequality declined by almost 50% as measured by GE(2), by 40% as measured by GE(0), and by 20% as measured by Gini. Most of the decline has been in the measures which react to the movements at the tails of the distribution. These findings indicate that much of the poverty in Russia is merely transitory, and much of the affluence is very unstable.

In spite of high mobility levels, there is no indication that mobility curves flatten out, which would mean that the full equalizing effect of mobility is exhausted within the first six years. For longer periods we are likely to see even larger reductions in inequality due to mobility, as relatively little of the income differences attributable to life-cycle profiles balance out in such a short (six-year) period.

A comparison of the evidence for 2000–2005 and Jovanovic's (2000) estimates for 1994–1998 shows that mobility has apparently declined (albeit by a small amount) at the bottom and at the middle of the distribution.[3] This happened mostly due to the moderation of transitory shocks since one-year mobility measures have declined most substantially.

[3] However, Jovanovic (2000) does his calculations for households (not for individuals as we do) and for expenditure aggregates. Therefore, our results are not strictly comparable.

Table 5
Transition matrix, per adult equivalent income (q=0.75), individuals: 2000–2005.

	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	Total
D1	30.3	17.2	9.4	12.3	9.0	5.3	4.9	2.9	3.7	5.1	100.0
D2	23.9	15.8	12.1	9.3	13.6	7.9	5.7	4.9	3.4	3.4	100.0
D3	12.4	19.7	15.9	15.6	9.5	7.7	5.5	3.2	6.7	3.9	100.0
D4	7.7	14.9	18.9	13.2	11.0	11.8	8.5	4.3	6.3	3.5	100.0
D5	3.1	7.0	16.0	12.9	11.1	12.7	11.9	11.3	7.6	6.4	100.0
D6	4.9	6.1	9.1	10.5	11.5	11.5	14.8	12.3	11.3	8.1	100.0
D7	6.5	4.3	6.1	7.1	12.4	11.0	13.8	17.3	10.0	11.4	100.0
D8	4.3	3.5	6.1	7.8	8.4	17.7	10.6	15.3	16.3	10.0	100.0
D9	3.2	4.2	5.0	6.9	4.0	6.9	15.8	14.5	19.0	20.6	100.0
D10	3.9	6.9	1.6	4.7	9.3	7.7	8.5	14.2	15.6	27.6	100.0
Immobility ratio-1 (%)=17.3						Moving down (%)=41.7					
Immobility ratio-2 (%)=44.9						Moving more than 2 deciles down (%)=16.5					
Moving up (%)=40.9						Average absolute jump=2.26					
Moving more than 2 deciles up (%)=18.8											

Note: Letters D and A abbreviate departure and arrival. Each cell of the transition matrix is the probability (multiplied by 100) of transferring from decile i (D_i) to decile j (A_j) in the period between 2000 and 2005. Definitions for mobility indicators in the bottom panel are given in Section 4.

Next, we assess the Russian income mobility rates in an international perspective. In Russia, mobility seems to lead to significantly higher reductions in inequality than in other countries (Gangl, 2005). Only Italy, Denmark, the Netherlands and Greece approach the low bound of our mobility estimates for Russia. The difference between Russia and other countries is hard to explain because Shorrocks mobility indices tend to be pretty similar for countries with very different levels of inequality. The answer may be related to higher inflation rates in Russia. Having studied income mobility in Argentina, Beccaria and Groisman (2008) report that the equalizing effect of mobility was significantly lower during periods of low inflation and increased with rises in inflation. Transition-specific factors could be another driving force of mobility. Khor and Pencavel (2006) study the mobility of labor incomes in urban China in the early 1990s and find that relative mobility was higher in China than in the USA or other high-income countries. The observed cross-national differences in mobility may also reflect differences in institutions and access to credit. Incomes of individuals experiencing temporary hardship would be more variable in a country with weak social safety nets and limited access to credit. Previous studies have shown that in Russia there are severe constraints on the availability of resources that could help to smooth incomes and consumption, as access to credit is limited and the public social safety net is ineffective (Lokshin and Ravallion, 2000). Certain characteristics of the survey design – namely, the monthly reference period for incomes, sample attrition and measurement errors – could also contribute to the upward bias in Russian mobility rates.

4. Transition matrices

The shortcoming of the Shorrocks indices is that they do not reveal who is moving where in the distribution. In this section, we address that issue by examining transitions between deciles of the income distribution. More specifically, we construct transition matrices (Table 5). Each cell of a transition matrix is the probability p_{ij} of transferring from decile i (D_i) to decile j (A_j)[4] within a period between the time periods t and $t+k$. The values in the cells to the right of the main diagonal indicate the percentage of individuals who are better off in the period $t+k$ than in t. We also compute and discuss various summary indicators of relative income mobility based on the transition matrices. Among these mobility measures, we distinguish the immobility ratio (called immobility ratio-1 in this paper), which is defined as an average percentage of people staying in the same decile of the distribution and an average absolute jump which measures the amplitude of the movements – i.e. the number of deciles a typical individual "jumps over" between two time periods. Since mobility has

[4] Letters D and A abbreviate departure and arrival.

proven to be very similar for various income aggregates and across equivalence scales, hereafter we confine ourselves to per adult equivalent incomes with $q=0.75$.

For the sake of brevity we only look at income mobility over the whole period of 2000–2005 (Table 5). Incomes demonstrate a high mobility in Russia, which is indicated by large numbers off the main diagonal. On average, just 17% of individuals stayed in the same decile by the end of the six-year period, while more than 80% experienced some changes in their relative positions. The probability of changing a state is lower for the extreme deciles than for the middle deciles. The higher degree of immobility observed in the bottom and top deciles relative to the middle deciles is not surprising since the bottom tenth have nowhere to go but up, and the top tenth have nowhere to go but down.

Mobility to a large extent consists of moves to adjacent deciles that represent purely exchange mobility. Thus, we recalculated the immobility ratio (see immobility ratio-2) to include the band given by the diagonal of the transition matrix and the adjacent elements: 45% of individuals remained on or close to the diagonal. However, mobility is still very high – at least 55% of individuals experienced significant, in excess of 10 percentage points, moves in their relative positions.

For incomes, the probability of staying in the very bottom of the distribution is greater than the probability of preserving a high position. About 30% of those in the lowest income decile in 2000 were also in the lowest income decile in 2005, which suggests that they may be trapped in poverty. In other words, 70% of the poorest managed to escape extreme poverty in the course of a six-year period. A quarter of them moved to the next-poorest decile, but about 30% jumped into the upper half of the distribution. If we define poverty as being in the poorest fifth, then 44% of those in the lowest income quintile were still there six years later, and 65% were either in the poorest or next-poorest quintile. Taken together, these figures suggest that around one half of low income is in some sense transient, but the other half is not.

There is a moderate asymmetry in upward and downward movements. According to our income measure, we find that 40.9% of individuals – regardless of the magnitude of the jump – are better off at the end of the period. Conversely, when downward mobility is considered, 41.7% of individuals are worse off in terms of their relative standing. These figures have to be compared with 45% under the perfect mobility assumption, leading to a conclusion of very high mobility in Russia.

Besides the frequency and the direction of movements, it is interesting to investigate the amplitude of the jumps. Over the period, the average magnitude of a jump for a typical individual is equal to 2.3, which corresponds to a move of about a quartile in the distribution. In the perfect mobility case the jump is equal to 3.3 deciles.

5. Absolute mobility

The analysis of income mobility across deciles of the income distribution performed in the previous section presented movements across income thresholds. The degree to which these thresholds are exceeded or not exceeded is neglected. Moreover, movements across income deciles describe changes in the relative positions of individuals regardless of the direction of changes in real incomes. These measures do not indicate whether the real incomes of most people are falling or rising. Therefore, in order to show a comprehensive picture of income mobility, we also measure absolute mobility, i.e. mobility in real incomes.

We employ the index proposed by Fields and Ok (1999), which is formulated as follows,

$$M = \frac{1}{n}\sum_{i=1} |\log x_i - \log y_i| \tag{3}$$

where n is the number of individuals, x refers to the base year income and y is the final year income. This index is the aggregate of the change in each individual's log-income. It can be used for international comparisons, as it can be interpreted as the mean percentage income changes between the two years.

One important feature of this mobility index is that the total mobility (M) is decomposable into two sources, one that reflects income changes due to economic growth (M_G), and the other that reflects income changes due to a "transfer" of income among individuals (M_T), holding the mean constant. In a

Table 6
Absolute mobility: Fields–Ok index, per adult income equivalents (q=0.75).

Time period	Per capita absolute change in log-incomes, M	Income changes attributed to	
		Income growth (M_G), %	Income «transfer», (M_T), %
2000–2001	0.551	41.9	58.1
2001–2002	0.525	22.9	77.1
2002–2003	0.472	25.0	75.0
2003–2004	0.433	24.6	75.4
2004–2005	0.425	31.3	68.7
2000–2005	0.844	82.7	17.3

Note: Per capita absolute change in log-incomes (M) is decomposed into income changes due to economic growth (M_G) and income changes due to a "transfer" of income among individuals (M_T). See Eq. (4).

growing economy, where $\sum_{i=1}^{n} y_i \geq \sum_{i=1}^{n} x_i$, with L (losers) individuals who lost their incomes over time ($i \in L : x > y$), Eq. (3) can be broken down into two components:

$$M = M_G + M_T = \frac{1}{n}\sum_{i=1}^{n}(\log y_i - \log x_i) + \frac{2}{n}\sum_{i \in L}(\log x_i - \log y_i) \tag{4}$$

Table 6 provides the estimates of the Fields–Ok mobility index (M) and of the dual components (M_G and M_T) for the entire period of 2000–2005 and for one-year periods. Yearly indices show that the peak of absolute mobility was observed in the first years of the period, followed by a steady decline in later years. In terms of underlying sources, a massive share of income mobility was accounted for by people moving up or down within the income distribution from one year to another (i.e. transfers of income). Income growth was generally less significant in determining one-year mobility. This component contributed to about 20–30% of total income changes, and the share of the growth component only exceeded 40% in 2000–2001. The dynamics of the growth component are closely related to average rates of income growth. The relative contribution of growth is higher in the periods of higher income growth. When observed time is extended to six years, mobility increases and so does the contribution of economic growth. This finding is consistent with most other papers using the Fields–Ok mobility index, which also report that the contribution of economic growth to income mobility is higher in the longer run. Improvements in the macroeconomic situation have brought about a rise in the incomes of most individuals.

Table 7 compares the Russian Fields–Ok mobility indices with those for other countries. Among the listed countries, only China demonstrates similar mobility rates, while other countries lag behind. The contribution of economic growth is also larger in Russia. In other countries, economic growth accounts for 0–40% of absolute mobility over five-year periods compared to 83% in Russia (for the six-year period). This may be because Russia experienced higher rates of economic growth than any of those countries. Moreover, during that period the rates of absolute mobility in Russia were converging to the lower levels observed in developed countries.

Our next question is who benefits from economic growth and to what extent. We wonder whether income growth was pro-poor or pro-rich, and which income group contributed most to income mobility. Cross-sectional evidence suggests that inequality declined to some extent over the period. Incomes at the bottom of the distribution were growing faster than at the top. In our sample, average incomes of the lowest quintile increased by a factor of 2.2 between 2000 and 2005, while those of the highest quintile increased by a factor of 1.8. These estimates suggest that income growth has favored the poor. However, these estimates are not very informative because they refer to groups of individuals rather than to individuals themselves. The composition of both extreme quintiles changed substantially over time, as was demonstrated by transition matrices in the previous section. The people in the lowest income category in 2005 are not the same individuals as in 2000. Relatively few of those who were in the highest income category in 2000 remained there by 2005.

Fields and Ok (1999) proposed a simple decomposition technique that considers the aggregate income variations as a weighted average of specific movements of different population subgroups. The decomposition builds upon the Fields–Ok mobility index defined by Eq. (3). It can be used to break

Table 7
Absolute log-income movements: international comparisons, longer periods.

Country	Period	M	M_G	M_T	Source	Note
Russia	2000–2005	0.844	82.7	17.3	Authors' calculations	Per adult equivalent incomes (q=0.75)
Canada	1996–2000	0.332	39.7	60.3	Chen (2006)	Per adult equivalent incomes (q=0.5)
	1999–2003	0.317	26.6	73.4	Chen (2006)	Per adult equivalent incomes (q=0.5)
USA	1996–2000	0.444	30.0	70.0	Chen (2006)	Per adult equivalent incomes (q=0.5)
UK	1993–1997	0.373	27.4	72.6	Ayala and Sastre (2008)	Modified OECD equivalence scale (α=0.5, β=0.3, q=1)
	1993–1997	0.392	22.5	77.5	Chen (2006)	Per adult equivalent incomes (q=0.5)
	1996–2000	0.388	26.9	73.1	Chen (2006)	Per adult equivalent incomes (q=0.5)
	1998–2002	0.416	30.0	70.0	Chen (2006)	Per adult equivalent incomes (q=0.5)
Germany	1993–1997	0.254	1.8	98.2	Chen (2006)	Per adult equivalent incomes (q=0.5)
	1993–1997	0.309	19.1	80.9	Ayala and Sastre (2008)	Modified OECD equivalence scale (α=0.5, β=0.3, q=1)
	1996–2000	0.269	23.7	76.3	Chen (2006)	Per adult equivalent incomes (q=0.5)
	1998–2002	0.270	24.9	75.1	Chen (2006)	Per adult equivalent incomes (q=0.5)
China	1993–1997	0.847			Ding and Wang (2008)	Household incomes
	1997–2000	0.757			Ding and Wang (2008)	Household incomes
France	1993–1997	0.250	33.5	66.5	Ayala and Sastre (2008)	Modified OECD equivalence scale (α=0.5, β=0.3, q=1)
Italy	1993–1997	0.360	4.6	95.4	Ayala and Sastre (2008)	Modified OECD equivalence scale (α=0.5, β=0.3, q=1)
Spain	1993–1997	0.390	1.4	98.6	Ayala and Sastre (2008)	Modified OECD equivalence scale (α=0.5, β=0.3, q=1)

Note: Per capita absolute change in log-incomes (M) is decomposed into income changes due to economic growth (M_G) and income changes due to a "transfer" of income among individuals (M_T). See Eq. (4).

down the aggregate income movement by income groups:

$$M = \sum_{j=1}^{J} \left(\frac{n^j}{n}\right) \left[\frac{1}{n^j} \sum_{i=1} |\log x_i^j - \log y_i^j|\right] \tag{5}$$

where n is the total number of individuals, x refers to the base year income and y is the final year income. J is the number of groups, n^j is the number of people in group j.

Columns (1)–(3) of Table 8 provide a summary of income dynamics for the whole sample and at different points of the distribution defined by incomes in 2000. Over the period of 2000–2005, absolute incomes rose by 84%. Mobility was higher for lower deciles. On average, those who were at the lower tail of the income distribution in 2000 experienced larger income changes by 2005 than those who started at the upper tail of the income distribution. Each decile has a certain fraction of individuals who experienced falls in real income over the period. The fraction of losers is almost negligible in the lowest decile, but it grows monotonically along the income scale and reaches 54% in the highest decile. The low fraction of losers in the bottom half of the distribution together with the

Table 8
Absolute log income movements (2000–2005) by deciles of income distribution, Fields–Ok index.

Decile position	Income changes by decile position in 2000	Relative contribution to overall mobility, %	% of losers	Income changes by decile position in 2005	Relative contribution to overall mobility, %	% of losers	Income changes by decile position in the "permanent" income distribution	Relative contribution to overall mobility, %	% of losers
(A)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	1.658	19.8	1.4	0.706	8.4	40.2	0.992	11.8	12.9
2	1.070	12.8	4.1	0.637	7.5	24.9	0.881	10.5	13.9
3	0.912	10.9	4.1	0.611	7.3	15.8	0.845	10.0	11.5
4	0.804	9.6	4.7	0.746	8.9	17.6	0.806	9.6	16.8
5	0.824	9.9	3.7	0.828	9.9	11.7	0.847	10.1	14.0
6	0.757	8.9	10.2	0.774	9.2	9.6	0.852	10.2	12.9
7	0.701	8.4	13.7	0.840	10.0	7.4	0.759	9.0	15.0
8	0.535	6.4	20.1	0.872	10.3	9.3	0.891	10.6	14.1
9	0.554	6.6	23.7	1.014	12.0	2.5	0.735	8.8	13.7
10	0.583	6.9	54.4	1.374	16.3	0.8	0.794	9.4	15.1
Entire sample	0.840		14.0	0.840		14.0	0.840		14.0

Note: Numbers of deciles for columns (1), (4) and (7) are given in column (A).

high values of the Fields–Ok mobility index suggests that income growth over the period was pro-poor.

It is important to note that the estimates shown in columns (1)–(3) of Table 8 are likely to overstate real income increases at the low end of the distribution and understate them at the upper tail of the distribution. The decile position in 2000 could be affected by measurement errors or transitory shocks that place some people above their permanent income and other people below their permanent income. Those temporarily below their steady-state income in 2000 tend to experience a larger increase in their income from 2000 to 2005, while those temporarily above their steady-state income in 2000 tend to experience a smaller increase in their income from 2000 to 2005.

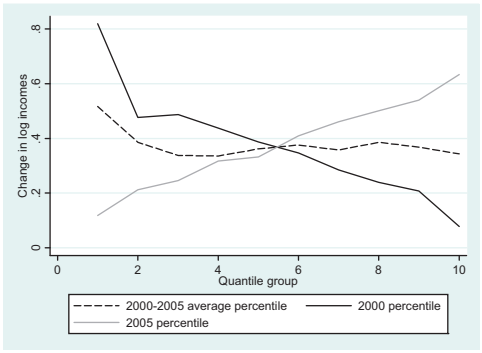
The relevance of these considerations is suggested by the relationship shown in columns (4)–(6) of Table 8, which relate income growth not to initial but to final incomes. Income gains appear to be largest for those who happened to be at the top of the income distribution in 2005. Conversely, those at the bottom of the distribution in 2005 are those who experienced the lowest real income growth or even income losses over the period. Again, this is consistent with a permanent-transitory income explanation: those temporarily below their steady-state income in 2005 tend to have a smaller increase in their income from 2000 to 2005, while those temporarily above their steady-state income in 2005 record a larger increase in their income over the period.

The conclusion is that the relationship between incomes and changes in incomes is strongly affected by measurement errors and transitory shocks to incomes. We are at risk of heavily exaggerating income growth at the bottom of the distribution. The only way to solve this puzzle is to relate changes in incomes to some measure of permanent income. For each individual we averaged equivalent incomes longitudinally over all six years to obtain a measure of permanent incomes. Next we ordered permanent incomes by deciles and computed average absolute changes in log incomes between 2000 and 2005. The results are presented in columns (7)–(9) of Table 8. These results indicate that lower decile groups' relative contributions to overall mobility were only slightly larger, whereas incidences of income loss were more equally distributed across the deciles of the distribution.

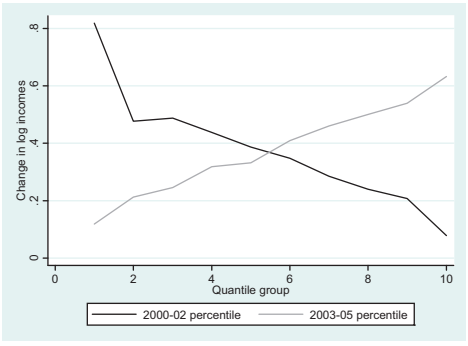
Changes in log incomes are depicted in Fig. 3A. Here we average all changes (rather than their absolute values as we did in Table 8) by income deciles. The black solid line relates changes in log-incomes to the rank of an individual in the initial (2000) income distribution. This line demonstrates substantial catching-up by the poorest individuals. Those initially in the top decile of the distribution on average experienced a loss in their incomes. This is to be compared with the income growth of 80% for the top decile as a group. The grey line relates changes in log-incomes to the rank of individuals in the final (2005) income distribution. Incomes of those who were the poorest in 2005 barely changed between 2000 and 2005, while incomes of those who were at the top of the distribution in 2005 increased substantially. The dashed line relates changes in log-incomes to the rank of an individual in the permanent income distribution. This line is almost flat, suggesting no relationship between the permanent income percentile and income growth.

However, there may be a problem with this definition of permanent incomes during the period of rapid income growth. Longitudinal averaging gives equal weight to incomes in all six years. If income growth is fast then the value of permanent incomes will be largely driven by incomes in the final years of the period. Therefore, we perform two more sensitivity checks to test our tentative conclusion about there being no relationship between a position in the income distribution and the rate of income growth.

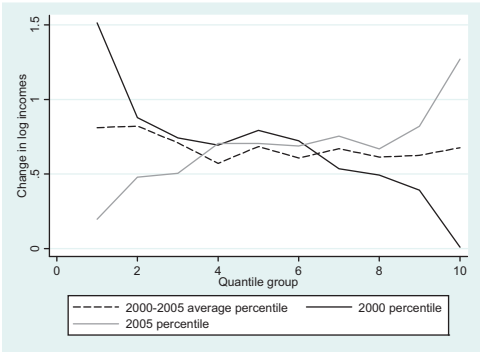
First, we look at the duration of poverty and affluence. Table 9 presents frequencies for the incidence of poverty and affluence measured in the number of years in the bottom and the top quintiles, respectively. The table shows that 53% of individuals in the panel never experienced poverty, while 51% of individuals in the panel never found themselves in the top quintile. We are interested in the individuals who were poor or rich for only one year: 16.4% of individuals were poor for only one year and 19.5% were rich for only one year. We speculate that these experiences are most likely to result from measurement errors or from some transitory fortunes or misfortunes. We excluded these individuals from the sample and redrew the graph for the remainder of the sample (Fig. 3B). The graph clearly contradicts the conclusion based on the permanent incomes analysis. If we exclude the cases where we strongly suspect measurement errors and sharp transitory income



A. All individuals



C. Incomes averaged over 3-year sub-periods



B. Excluding those who were poor or rich for a single year over the period

Fig. 3. Change in log-incomes between 2000 and 2005.

Table 9
"Duration" of poverty and affluence.

Number of years in the bottom quintile	% of individuals	Number of years in the top quintile	% of individuals
0	53.2	0	50.6
1	16.4	1	19.5
2	10.0	2	11.7
3	7.6	3	6.6
4	5.6	4	4.5
5	4.5	5	3.5
6	2.7	6	3.6
N	4873		

fluctuations, we still observe that incomes of the poor have grown faster than incomes of the rich over the period.

For another sensitivity check we averaged incomes for two 3-year sub-periods in order to minimize the influence of the transitory income variation and measurement error. Fig. 3C depicts log income changes between these sub-periods. The 3-year averages were computed using data on all individuals in the sample. Again, the picture is consistent with pro-poor growth, with especially high income growth rates for the lowest decile. So we have to conclude that, after adjustments for short-term fluctuations in the data, the Russian economic growth in the early 2000s favored low-income individuals quite strongly, and real incomes of the poor grew faster than incomes in other parts of the distribution.

6. Re-ranking and pro-poor growth

In the previous section we showed that economic growth brought dramatic improvement to the position of the poorest in the society. Why then do we see only a modest reduction in inequality in cross-sections? Jenkins and Kerm (2006) proposed a way of resolving this potential paradox. They developed an analytical framework within which changes in income inequality over time are related to the pattern of income growth across the income range and the changing individual rankings in the distribution. This methodology can be applied to any measure from the generalized Gini class of indices, including the commonly used Gini coefficient. They prove that the change in the Gini coefficient between the two time points can be broken down into two components – one summarizing changes in relative positions of individuals (re-ranking effect) and another summarizing progressivity in income growth (pro-poor growth effect). The decomposition is derived by adding the concentration coefficient ($C_1^{(0)}$) to and subtracting it from the change in the Gini index ($\Delta Gini$):

$$\Delta Gini \equiv Gini_1 - Gini_0 = \underbrace{(Gini_1 - C_1^{(0)})}_{\text{reranking}} - \underbrace{(Gini_0 - C_1^{(0)})}_{\text{pro-poor growth}} \tag{6}$$

where $C_1^{(0)}$ is the concentration coefficient for year 1 incomes, which uses year 0 income ranking. In geometrical terms it is twice the area between the concentration and the line of perfect equality. The idea of a concentration curve is similar to that of the Gini. The Gini coefficient is twice the area between the Lorenz curve and the line of perfect equality. The Lorenz curve shows for the cumulative proportion x% of ordered individuals what cumulative proportion y% of the total income they have. Both values refer to the same period. The concentration curve is derived from the Gini but differs from it as the x variable is based on year 0 income order and the y variable on year 1 incomes. The concentration curve $C_1^{(0)}$ shows the cumulative proportion of year 1 incomes where individuals are ordered according to year 0 incomes.

Table 10 presents the results of the decomposition of changes in the Gini coefficient for the entire period and sub-periods. They show that pro-poor growth can potentially lead to a tremendous cutback in equality. Had there been no re-ranking, and other things being equal, over 2000–2005 the pro-poor income growth would have reduced the Gini coefficient by about 60(!)%. But the equalizing effect of pro-poor income growth was counterbalanced by the disequalizing effect of re-ranking (we have seen substantial re-ranking in our transition matrices). The effect of the pro-poor growth was slightly higher than the effect of re-ranking, which brought about a 7% decline in the Gini coefficient.

Since yearly values of income may be contaminated by measurement errors and transitory variations, we averaged incomes and expenditures for two 3-year periods (2000–2002 and 2003–2005) and studied changes in inequality of these averages between the two sub-periods. Another advantage of this procedure is that it allows direct comparisons with the results for the USA and West Germany presented in Jenkins and Kerm (2006). They adopt a similar procedure for a 6-year moving window, averaging incomes for 3-year sub-periods. In the case of Russia, the reduction in

Table 10
Decomposition of changes in income inequality.

Initial year	Final year	Initial Gini	Final Gini	ΔGini	Reranking	Pro-poor growth
Entire period						
2000	2005	0.387	0.360	-0.027	0.207	0.234
2000–2002	2003–05	0.330	0.319	-0.011	0.101	0.112
Yearly						
2000	2001	0.387	0.397	0.010	0.173	0.164
2001	2002	0.397	0.378	-0.019	0.171	0.189
2002	2003	0.378	0.368	-0.010	0.148	0.157
2003	2004	0.368	0.362	-0.007	0.122	0.129
2004	2005	0.362	0.360	-0.002	0.124	0.126

inequality is obviously much smaller when we turn to 3-year averages. However, where decomposition is concerned, the results are qualitatively the same. The two effects are of roughly the same magnitude and the effect of pro-poor growth only marginally dominates the effect of re-ranking for incomes.

For international comparisons, Jenkins and Kerm (2006) normalize both effects by the initial values of the Gini coefficient. In our data the normalized re-ranking and pro-poor growth index are equal to 0.30–0.32. This by far exceeds the estimates for the USA and Germany reported by Jenkins and Kerm (2006). According to their estimates, in the 1980–1990s the normalized effect of pro-poor growth was equal to approximately 0.12 for the USA and 0.22 for West Germany. The normalized effect of re-ranking was in the range of 0.18–0.22 for the USA and 0.21–0.27 for West Germany. Both effects are well below our estimates. This finding is consistent with other international comparisons presented in previous sections. Russia demonstrates high levels of relative and absolute mobility.

The rest of the rows in the tables refer to yearly changes in inequality. For incomes in all years except 2000–2001, the effect of pro-poor growth exceeded the effect of re-ranking (in most cases by a very small amount), and therefore inequality was declining. The effects of pro-poor growth and re-ranking were larger at the beginning of the period and decreasing over time until 2005, when we see some reversal of the trend. The largest reduction in inequality was in 2001–2002, when growth was most favorable for the poor.

7. Conclusion

Most ordinary people, policy-makers and many social researchers in Russia believe that Russian society resembles a layer-cake: the rich stay rich, the poor stay poor. Our study shows that this is not true. The Russian society proves to be highly dynamic. In this paper we study individual income mobility in Russia during the period of rapid economic growth in 2000–2005 using the data from the Russian longitudinal monitoring survey (RLMS). Incomes are defined as adult equivalent incomes using three variants of equivalence scales in order to check the sensitivity of our results to differences in household size and composition.

Our results may be briefly summarized as follows. It appears that most of the poverty is short-term: about 70–80% of those who started in the bottom tenth of the income distribution in 2000 had left that position by 2005. Things were much the same at the top end. The rich mostly did not stay rich, although they were a slightly more stable group than the poor: about 30% of those in the top tenth of the income distribution in 2000 preserved their position until 2005. These figures suggest that inequality is not fixed and people can change their fortunes. Another important finding is that relative and absolute mobility in Russia are significantly higher than in developed countries.

Russia is notorious for reaching one of the highest levels of income inequality among middle income countries during the transition period. However, all the estimates cited in the literature on inequality are based on cross-sectional data and are essentially snapshots of income distribution during a single point in time. In the longer run, mobility can effectively work to offset a larger part of inequality. If there is a lot of churning in the distribution as households move relative to one another, incomes averaged over longer time periods may be much more equally distributed than incomes from any single year. If we sum incomes over two consecutive years, inequality goes down by 8–25%, depending on the measure of inequality used. Mobility does not operate equally at all points of the distribution: mobility mostly smoothes out income differences at the very top and the very bottom of the distribution.

During the period under study (2000–2005), the Russian economy was enjoying a period of strong growth. We find that (after correcting for short-term fluctuations in the data) Russian economic growth in the early 2000s favored low-income individuals. However, this inequality-reducing effect was almost exactly offset by changes in the relative positions of individuals. That means that individuals who were poor in the year 2000 and had moved out of poverty by 2005 were replaced at the bottom of the income distribution by individuals who were non-poor initially and who had only slightly higher relative incomes in 2005 than those whom they replaced. Therefore, the overall reduction in cross-sectional inequality was only modest.

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