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Economic Growth and Poverty Alleviation in Russia: Should We Take Inequality into Consideration?

Dmitry Rudenko^{a*}

* Corresponding author: Dmitry Rudenko, drudenko@inbox.ru

^a Tyumen State University, 10, Semakova street, Tyumen, 625003, Russia, Email: drudenko@inbox.ru

Abstract

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The paper describes main ideas surrounding the topic of inclusive and pro-poor growth. This study investigates the impact of economic growth on inequality and poverty in Russia over the period 2002-2012. High rates of economic growth had brought about rapid reduction of the poor people while income inequality had risen. The work examines whether Russian economic growth is pro-poor over that period. Poverty in Russia is a problem of excessively high inequality now and its scope can't be radically reduced in the short term without a rapid reduction of inequality. The current situation is paradoxical – the economic growth only reinforces inequality, is not conducive to the alleviation of poverty, and may be characterized by low quality. We conclude that it is essential to formulate pro-poor policies along with growth-enhancing policies in order to alleviate both absolute and relative poverty in Russia. Growth is good for the poor, and growth that is accompanied by progressive distributional change is even better.

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1. Introduction

According to the Concept of Russia's long-term development till 2020, the goal of achieving sustainable economic growth remains a key focus of policymakers. However, high rates of economic growth over the last decade were accompanied by strengthening of inequality. In these circumstances, the problem of poverty has acquired a new character – chronic and local. After the 2008 financial crisis economic growth does not have a positive impact on official poverty headcount in Russia, 'canning' poverty within 11%. Moreover, the relative poverty headcount is much higher and remains stable at the level of 30%.

It is obvious that a high level of economic development facilitates the struggle against poverty, providing resources for this purpose. However, it is also possible that economic growth increases



poverty. This can happen when inequality increases so much that the beneficial effects of growth is completely eliminated. Bhagwati calls this as an immiserizing growth, the growth that provokes poverty (Kakwani, & Pernia, 2000). Opponents of growth consider that there is virtually no reason to believe that economic growth helps to solve social problems. In many countries, mainly developed, the problem of poverty is a problem of distribution, rather than production. Moreover, high rates of growth can be related to environmental pollution and high stress, which would be prejudicial to physical and mental health.

So, it is necessary to determine the extent to which economic growth improves the status of the poor. Do the poor benefit to the same extent as the rest of the population? Following Dollar & Kraay (2002): “Economic growth is good for the poor”, since average incomes of the poorest quintile rise proportionally with average incomes of the rest. Changes in the income distribution (on average) are slight and moving too slowly to lead to substantial changes in the level of poverty. The evidence emphasizes the importance of economic growth for poverty reduction.

However, the beneficial effect of economic growth on the poor considerably varies not only between countries but also within. In some cases, the increase in per capita income by 1% can lead to a decrease in poverty headcount by 3-4%, while in other cases, by only a tenth of a percent or even an increase. Such a phenomenon can be observed in the Russian economy in 2005, 2008 and 2011, when economic growth exacerbated the problem of poverty (see Fig. 1).

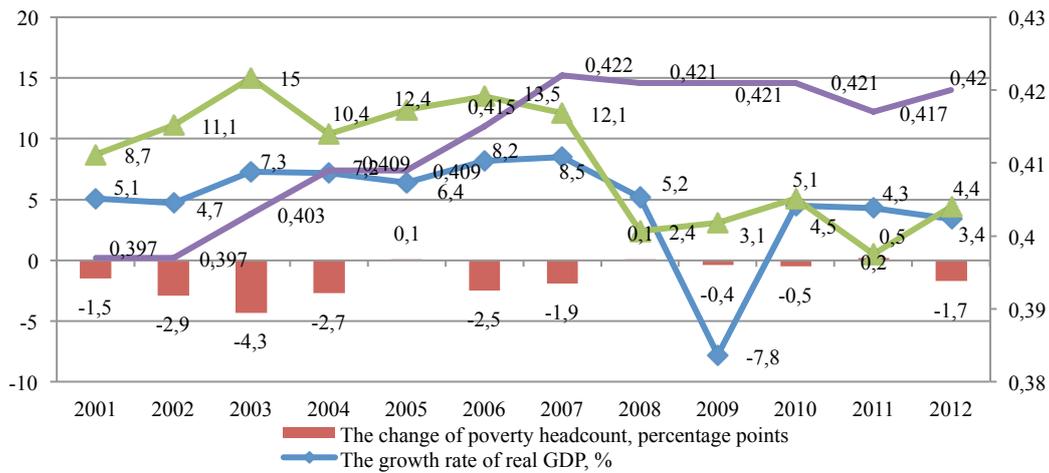


Fig. 1. The major indicators of socio-economic development in Russia, 2002-2012

Saving income inequality at a present high level under accelerated economic growth shows the uneven distribution of gains from economic growth, which could potentially lead to a weakening of the influence of economic growth on poverty reduction. This study investigates the impact of economic growth on inequality and poverty in Russia over the period 2002-2012. We examine whether Russian economic growth is pro-poor over that period.

2. Pro-Poor Growth: A Short Review

The concept of pro-poor growth has become very popular during the last decade. It reflects the idea that economic growth should affect all the segments of society and this is why the term “inclusive growth” is also often used. Pro-poor growth is defined as a growth, which leads to a significant

reduction in poverty. However, this does not give a formal definition of clear quantitative criteria for a “significant” reduction of poverty. It is recognized that the pro-poor growth should enable the poor to participate actively in economic activities and to receive some benefits from this participation. The author stands by the concept of relative pro-poor growth, which implies an increase in the proportion of the poor in the total distribution of the national income.

Although there have been only a few studies on pro-poor growth in Russia, some studies have highlighted that Russian economic growth has not been pro-poor over the last decade. Following Takeda (2010), who had examined the effect of economic growth on poverty reduction in Russia based on the elasticity of poverty to real per capita GRP, using Russian regional data for 1995-2006, growth benefited the richer regions (or people) more. As a result, from the regional point of view, she concluded that the growth after the 1998 financial crisis had not been pro-poor in Russia. Shvareva & Kononova (2007) have found that the inflation burden was higher for the poor, so the inflation in Russia stood one of the factors that increased social inequality. They also have argued that economic growth could be characterized as pro-rich growth because major gains from economic growth were distributed in favor of the wealthy.

3. Data and Methodology

In this study, we use official data by the Federal State Statistics Service of Russia for 2002-2012 on the average per capita money income and subsistence minimum, as well as data on the distribution of population by disposable income. We proceed from the premise that poverty is fully determined by three parameters – the level of per capita income (the mean income of the distribution), the poverty line and the Lorenz curve representing the structure of relative income inequalities. The poverty index, as measured by the class of FGT indices, can be written as

$$P_{\alpha} = P(L, \mu/z) \tag{1}$$

where P_{α} – the poverty index, L – a vector of parameters fully describing the Lorenz curve, μ – the mean (average) income, z – the poverty line.

The framework of analysis has its origins in the decomposition of changes in poverty into growth and redistribution components proposed by Ravallion & Datt (1991). The level of poverty may change due to a change in the mean income μ relative to the poverty line, or due to a change in relative inequalities

$$\frac{dP_{\alpha}}{P_{\alpha}} = \eta_{\alpha} \frac{d(\mu/z)}{(\mu/z)} + \varepsilon_{\alpha} \frac{dG}{G} = \frac{Gr}{P_{\alpha}} + \frac{R}{P_{\alpha}} \tag{2}$$

where η_{α} – the pure growth elasticity of poverty, ε_{α} – the inequality elasticity of poverty, Gr – the growth component of a change in the poverty measure; R – the redistribution component of a change in the poverty measure.

The growth component of a change in the poverty measure is defined as the change in poverty due to a change in the mean while the distribution of income does not change. The redistribution component is the change in poverty when the Lorenz curve changes in the absence of growth.

The pure growth elasticity of poverty η_α which is the percentage change in poverty in response to a growth rate 1 percent provided inequality of income measured by Lorenz curve does not change can be defined as

$$\eta_\alpha = \frac{Gr}{\partial(\mu/z)} \frac{(\mu/z)}{P_\alpha} \quad (3)$$

As an increase in average income reduces poverty, net growth elasticity is always negative.

The inequality elasticity of poverty ε_α which is the percentage change in poverty in response to a percent change in the Gini index provided average income does not change can be defined as

$$\varepsilon_\alpha = \frac{R}{\partial G} \frac{G}{P_\alpha} \quad (4)$$

The inequality elasticity of poverty decreases monotonically with the initial level of inequality. On the one hand, efforts of a society with a high level of initial inequality to reduce poverty may be futile. On the other hand, a further increase in inequality in such a society weakly affects the poor. In general, the lower initial level of inequality will be more productive fight against poverty.

On dividing the equation (2) by the growth rate of real mean income $d(\mu/z)/(\mu/z)$ gives the total poverty elasticity

$$\delta_\alpha = \eta_\alpha + \varepsilon_\alpha \lambda \quad (5)$$

where δ_α – the total poverty elasticity, λ – the growth elasticity of inequality, which measures the percentage change in the Gini index when there is a growth rate of 1 percent.

When λ is positive (negative), the growth process is accompanied by an increase (decrease) in inequality. The total poverty elasticity measures the impact of growth on poverty when inequality can also change with growth. It measures the percentage change in poverty when there is a growth rate of 1 percent.

Following Kakwani & Pernia (2000), the degree of pro-poor (pro-rich) growth can be measured by an index of pro-poor growth

$$\phi = \delta_\alpha / \eta_\alpha \quad (7)$$

where ϕ – the index of pro-poor growth.

If $\phi > 1$, the growth process is considered to be pro-poor. If $\phi = 1$ and $\phi = 0$, the growth process is accompanied by a zero change in inequality and poverty, respectively. When $1 < \phi < 0$, economic growth reduces poverty, but the “inequality effect” of economic growth is negative so that the poor benefit proportionately less from economic growth than the non-poor. This can be characterised as trickle-down growth. If $\phi < 0$, economic growth actually. In case of an economic recession, the pro-poor index is inverted to be $\eta_\alpha / \delta_\alpha$. A growth episode is called pro-poor only if inequality declines or remains unchanged.

Following Aivazian (1997), the distribution of Russian households by per capita income may in fact be adequately described with a mixture of log-normal laws. A similar point is made by Lopez and Serven (2006), who using a large cross country dataset spanning close to 800 country-year

observations from industrial and developing countries on income/expenditure inequality formally test the null hypothesis of lognormality for the size distribution of income/expenditure. Their results suggest a rejection of the null hypothesis for per capita expenditure, but they are unable to reject the null for per capita income (Lopez, & Serven, 2006).

The advantage of this approach is that, with the data on the distribution of income by quintile shares, the poverty line and the average income, we can easily estimate any desired poverty measures (absolute or relative): poverty headcount, poverty gap and squared poverty gap. The last two are not officially presented by the Russian Federal State Statistics Service.

First, we have estimated values of the Gini index and headcount indexes of poverty according to the log-normal model presented by Kolenikov & Shorrocks (2003).

$$H = F_{LN(v, \sigma^2)}(z) = \Phi\left(\frac{\ln z - v}{\sigma}\right) = \Phi\left(\frac{\ln(z/\mu)}{\sigma} + \frac{\sigma}{2}\right) \quad (7)$$

$$G = 2\Phi(\sigma/\sqrt{2}) - 1 \quad (8)$$

where H – the poverty headcount ratio (the proportion of population with money income below subsistence minimum level), z – the poverty line (subsistence minimum level), μ – per capita money income, v – the average of $\log \mu$ and σ – the standard deviation of $\log \mu$, G – Gini index. Table 1 gives our estimated poverty measures.

Table 1. Official and estimated poverty measures in Russia

Year	Poverty headcount index, %		Gini index	
	Rosstat	Model	Rosstat	Model
2002	24.6	24.47	0.397	0.398
2003	20.3	20.63	0.403	0.404
2004	17.6	17.83	0.409	0.410
2005	17.7	17.95	0.409	0.410
2006	15.2	15.52	0.416	0.418
2007	13.3	13.47	0.422	0.423
2008	13.4	13.67	0.421	0.423
2009	13	13.06	0.421	0.421
2010	12.5	12.62	0.421	0.421
2011	12.7	12.97	0.417	0.418
2012	11	11.21	0.420	0.420

The measures show a pronounced trend decrease in poverty over the period. Poverty indexes fell, though not all continuously. However, increases are small and probably not significant statistically at a reasonable level. The poverty headcount index is estimated to have started at 24.47% in 2002, falling by 13.3 points to 11.21% in 2012. By year-to-year periods, this was made up of a fall in the index of 3.84 points over 2002 to 2003, 2.8 points between 2003 and 2004, and it rose by 0.19 points between 2008 and 2009, 0.34 points between 2010 and 2011.

4. Data and Methodology

We apply the two-way Shapley decomposition to changes in poverty since 2002. We assess the factor contribution to poverty changes presented in table 2.

Table 2. SOS decomposition of year-on-year change in poverty headcount index

Period	Absolute factor contribution, percentage points		Relative factor contribution, %	
	Growth component	Redistribution component	Growth component	Redistribution component
2002-2012	-15.490	2.23	-63.305	9.113
2002-2003	-4.614	0.772	-18.857	3.156
2003-2004	-3.510	0.708	-17.017	3.433
2004-2005	0.127	0	0.710	0
2005-2006	-3.344	0.910	-18.629	5.07
2006-2007	-2.610	0.563	-16.821	3.627
2007-2008	0.200	0	1.481	0
2008-2009	-0.358	-0.249	-2.615	-1.822
2009-2010	-0.440	0	-3.366	0
2010-2011	0.571	-0.225	4.520	-1.786
2011-2012	-1.913	0.153	-14.751	1.178

Table 2 gives the decomposition estimates for each year. Over the full period we find that both the growth and redistribution components were strong, with exactly opposite effects. Changes in distribution tended to increase poverty, but there was sufficient growth in the average per capita income to counteract their effect. The bulk of the adverse distributional effect was before the financial crisis of 2008. After determining the factor contribution to poverty changes, we have calculated pro-poor growth indexes (Table 3).

Table 3. The pro-poor growth indexes estimation

Period	The total relative change in poverty measures, %	The total poverty elasticity	The pure growth elasticity of poverty	The inequality elasticity of poverty	The index of pro-poor growth
2002-2012	-54.19	-0.889	-1.038	1.629	0.856
2002-2003	-15.70	-1.294	-1.554	1.985	0.833
2003-2004	-13.58	-1.331	-1.667	2.346	0.798
2004-2005	0.71				
2005-2006	-13.56	-1.250	-1.717	2.635	0.728
2006-2007	-13.19	-1.403	-1.789	2.972	0.784
2007-2008	1.48				
2008-2009	-4.44	-3.383	-1.994	3.325	1.697
2009-2010	-3.37	-2.032	-2.032	0	1.000
2010-2011	2.73				
2011-2012	-13.57	-1.758	-1.910	3.342	0.920

The results in table 3 show that economic growth over 2002-2012 had a different character to overcome poverty. The largest (in absolute) value of the pure growth elasticity of poverty can be observed in 2009-2010, while the lowest – in 2002-2003. Over 2004-2005, 2007-2008 and 2010-2011 the poverty line had grown faster than per capita income, leading to a drop in the purchasing power of income and to an increase in poverty measures.

According to the index for the full period the poor did not participate fully in the growth that occurred. Growth in Russia has not been strictly pro-poor, although it has resulted in considerable poverty reduction. Poverty reduction would have been even faster if the government had avoided policies with adverse consequences on income distribution. For instance if the Lorenz curve had been at the 2002 level the poverty headcount would have been 9% of the total population.

In the aftermath of the financial crisis 2008, the high positive growth rates achieved by the Russian economy had slowed down. The annual growth rate of real disposable money income fell from 12.4% in 2002-2007 to 3% in 2008-2012. The decline in annual growth of real GDP was even more dramatic – from 7% in 2002-2007 to 1,8% in 2008-2012. The results in Table 1 show that the crisis had also reduced the inequality – the Gini index fell from 0.422 in 2007 to 0.417 in 2011. The economic growth over that period may be characterized as strictly pro-poor which resulted in a fluctuation of pro-poor growth index from 1 to 1.697 over 2007-2011. Thus, the economic crisis adversely affected the

nonpoor proportionally more than the poor. However the trend of increasing inequality in the Russian economy has been resumed in 2012. Sustained high economic growth in almost all regions has significantly reduced absolute income poverty, but in many of the high-growth regions, the growth has been associated with a rising inequality (Rudenko, Pogodaeva, & Didenko, 2015).

The development strategy, based on the growing inequality in the distribution of income between the rich and the poor, actually does not lead to an increase in economic potential. By the number of billionaires Russia is one of the leaders in the global economy. Thus, according to the annual Forbes ranking 2013, Russia was ranked third after the United States and China, but according to the GDP per capita (PPP) Russia was ranked only 77 (Rudenko, 2014).

5. Conclusion

We must say that the problem of absolute monetary poverty in Russia is almost solved. But if we look at the relative poverty the problem remains constant or even worsens – the proportion of people with money incomes below the half of average income is estimated to have started at 28.3% in 2002, rising to 31% in 2012. The state social policy of redistribution has no significant effect on the risk of poverty and the benefit system that is aimed at poverty reduction does not actually perform this function. Poverty in Russia is a problem of excessively high inequality now and its scope can't be reduced in the short term without a radical reduction of inequality. The current situation is paradoxical – the economic growth only reinforces inequality, it is not conducive to the alleviation of poverty, and may be characterized by low quality. Trying to meet the challenges of economic growth and the eradication of poverty at the same time will not be successful until we prioritize goals. We conclude that it is essential to formulate pro-poor policies along with growth-enhancing policies in order to alleviate both absolute and relative poverty in Russia and its regions.

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