Effect of Income on Political Preferences of Russian Voters^{*}

Rustem NUREEV, Doctor of economics, Professor

Head of Macroeconomics Department, Financial University; Professor at National Research University – Higher School of Economics, Moscow nureev50@qmail.com

Sergey SHULGIN, Ph.D. in economics

Russian Academy for National Economy and Public Administration (RANEPA), Moscow sergey@shulgin.ru

Abstract. There was direct correlation between the voters' income and electoral support for incumbent in Russia during the 1990-s and early 2000-s. The results of election to the State Duma (the parliament) in 2011 and Russia's presidential elections in 2012 show the opposite. Using income data and electoral results in the Russian regions for each candidate (G. Zyuganov, S. Mironov, V. Zhirinovsky, M. Prokhorov, V. Putin) we defined the level of electoral support in different income groups. Results show the substantial changes in last 8 years in voting behavior. There is the effect of Putin's inversed threshold and the greatest proportion of votes negatively correlated (-1.58), with a group of people with incomes of 14,250 to 21,250 rub/month. Such inverse correlation may be due to a protest voting. Putin's electoral support has a positive correlation in low-income group. In this paper we analyze the determinants of voting behavior and show how the income distribution affects the voters' political preferences (based on the results of the presidential elections in 2012). For each candidate we defined the level of electoral support in different income groups. Also we analyzed income distribution of absent voters.

Аннотация. В статье анализируются детерминанты электорального поведения и показывается, каким образом распределение населения по доходам влияет на политические предпочтения избирателей (по итогам федеральных выборов 2012 г.) Определен пороговый уровень доходов, при достижении которого люди начинают проявлять социальную активность и заинтересованность в участии в электоральной системе (демократии). Показано влияние распределения доходов в российских регионах на политические предпочтения избирателей.

Key words: Political preferences, regional studies, electoral behavior, income distribution.

1. REVIEW

S. Kuznets was the one of the first who showed the importance of the distribution of income inequality for economic growth and social and economic progress (Kuznets, 1955; 1971; 1979). However, the focus of his research was not the problem of electoral behavior of voters. Almost ten years later, it becomes the subject of a special study (Lewis-Beck, 1988). Analyzing the Western democracies, the author suggested indirect, but reliable way to assess the economic factors on the electoral process. The book summarizes and complements the classical set of economic factors to explain the behavior of voters. M. Lewis-Beck believes that the majority of voters rarely appeal to the main macroeco-

nomic indicators in assessing the economic situation and prospects of the economy.

According to M. Lewis-Beck, changes in voters' disposable income also have minor effects on electoral behavior. This paradox can be partly explained by the weak faith of the population in the government's ability to influence the personal financial situation (by arguments like: "The economic policy of the government matters, but does not affect me"). According to sociological researches in 1980-s, influence of government policy on personal well-being was felt by only 45% of population in UK, 44% in France, 40% in Germany, 34% in Italy, 49% in Spain, and only 20% in USA. Lewis-Beck uses his survey to show that in almost all the developed capitalist countries, the economic

^{*} Влияние уровня доходов на политические предпочтения российских избирателей.

reasons are the most important in the vote. The motives of party self-identification (right/left in Europe, the Republicans/Democrats in the U.S.), appear much stronger than the motives of social or religious identity. The following factors strengthen the economic value of vote: the openness of the national economy, economic growth or its expectation, the presence of the ruling coalition or single party government. Among the developed countries studied by Lewis-Beck, the economic motives of the electoral behavior are mostly significant in the United States. In any case, the economic motive affects voting through the personal assessment of the economic development of the country's voters.

For assessment Lewis-Beck suggests three components: "Retrospective" (evaluation of the past compared to the present), "Prospective" (assessment of the future) and "Affective" (unexplained irritation, etc.). According to his study, the most important is "Prospective" evaluation of public policies, the second — "affective" component and the last — "retrospective" component of assessment.

Respondents were asked to rate the influence of the government on unemployment, inflation, personal well-being, balance of trade, economic growth, public debt and a number of other parameters. Unemployment was the most important parameter in all countries (UK, France, Germany, Italy, Spain) and inflation was on the second place. Other parameters (such as personal well-being, balance of trade, economic growth, public debt, etc.) were significantly less important than unemployment and inflation. We can see from Lewis-Beck that voters in Western democracies assess their economic situation and current trends primarily through their assessment of the future.

According to R. Kiewiet and D. Rivers (1984) voters are not inclined to attach great importance to the current macroeconomic situation. Authors believed that voters were rather farsighted than myopic, and votes do not tend to react with enthusiasm for the short-time economic improvement. Voters do not live by one day and are able to assess the dynamics of the economic situation. The authors in their studies used "Eurobarometer" data by George Gallup Institute. The authors suggested that economic motives of voting were particularly strong in the case of deterioration of the situation. Growth of economic indicators, as it turned out, did not lead to a significant increase of electoral support for incumbent. Economic growth matters only in case of a sharp change of direction in economic development (the typical example – Ronald Reagan's victory in the presidential election in 1984).

A. Sobyanin and B. Suhovolskiy (1995) studied the electoral process in Russia and demonstrated numerous examples of electoral frauds using electoral statistics. According to A. Lavrov (1997) social structure affects voters' political preferences. Lavrov argued that the higher share of urban population and share of population employed by the government (in public administration and state industry) and the share of people with tertiary education lead to the stronger electoral support for centrist and democratic candidates. And *vice versa*, support for the left politicians in 1990-s increased with a higher share of pensioners.

L. Smirnayagin (1999) studied the stability of political preferences and proposed a "degradation index", to explain the shifts in voters' political preferences. He estimated degradation index for Russia in 1990-s as 0.54. This means that 54% of the voters were ready to change their political preferences in the next election. This high percentage of voters who were ready to switch their preference means that formation of civil society in Russia is uncompleted.

V. Mau, O. Kochetkova, K. Yanovsky, S. Zhavoronkov, Yu. Lomakina (2000) studied the impact of different economics indications on electoral behavior. They argued that in late 90-s (1995–2000) the most important for electoral behavior were income and wages, tax payments, share of urban population. At that period the higher was the voters' income (wages etc.) the higher was support for ruling party. The similar findings were in later studies by O. Kochetkova (2004), according to which the support for incumbent politicians positively correlated with incomes and negatively correlated with unemployment and wage arrears.

U. Seresova (2005) agued that economic indicators were significant for the electoral process but were not the most important ones. She suggested that electoral behavior was better explained by the level of regional modernization and the role of traditional culture.

However, most of studies analyzed the situation of the electoral behavior of the 1990-s and early twentyfirst century. In this paper we deal with a new political reality. In this article we further develop the approach suggested by S. Shulgin (2005) who examined how income distribution in different countries affected democratic institutions. Author used income distribution to analyze the levels of freedom of press measured by Freedom House.

2. DATA

In this paper we use official Russia's electoral statistics for presidential election 2012. All our findings consequently contain errors associated with reliability of official electoral statistics. There is an extensive literature that indicated the frauds during Russian elections. We discussed this problem in several articles (*Economic Sub*- *jects*, 2010, etc.). The article (Enikolopov *et al.*, 2013) discusses the results of the parliamentary elections in 2011. Authors compared election results in Moscow precincts attended by independent observers, with the election results in precinct where observers were not allowed.

The second part of our data describes income levels and income distributions in Russian regions. This statistics come from Russian Statistical Agency (RusStat). RusStat estimates income distribution based on data from the Household Budget Survey (HBS). Household Budget Survey was carried out by state statistics on a regular basis in all regions of the Russian Federation. The unit of observation in this survey is the household and its members.

3. DATA ANALYSIS

Using statistics on income level and income distribution, for each region we construct income distribution function. Income distribution function for given level of income evaluates the share of people within region who have such level of income.

RusStat's statistical yearbook "Regions of Russia" (*Regiony Rossii*, 2011) in Table 5.9 gives the distribution of population by per capita income (as a share of regional population). Table 5.8 (from yearbook) gives the share of total income by 20 per cent population groups (from the poorest 20% of population to the richest 20% of population).

We use data on income distribution and per capita income level to construct cumulative function that shows how many people has income below a certain value. For example, in the Belgorod region 4.2% of people have incomes of up to 3,500 rubles, 6.3% from 3 500 to 5 000 rubles, 10.6% from 5 000 to 7 000 rubles, 16.2% from 7 000 to 10000, 21.4% from 10 000 to 15 000, 23.0% from 15 000 to 25 000, 9.5% from 25 000 to 35 000 and 8.8% of disposable income — over 35 000 rubles per month (see Table 1).

Then, in the Belgorod region cumulative function of income shows that 4.2% of people have incomes of up to 3500 rubles, 10.5% to 5000 rubles, 21.1% up to 7000 rubles, 37.3% to 10000, 58.7% to 15000, 81.7% to 25000, 91.2% to 35000, and the remaining 8.8% — of disposable income over 35000 rubles a month.

For each region we build a linear approximation of the distribution function of per capita income (see the example in Figure 1). To determine how many people in the Belgorod region have income less than 6000 rubles, we find average on intervals of distribution function 5000 (10.5%) and 7.000 (21.1%), and the resulting 15.8%.

Income distribution data exist for 82 Russia's regions (for all 83 regions in Russia, with exception of Republic of Chechnya).

We use income distribution functions for each region to construct the variable "*share of population with incomes below X*". Figure 2 shows the distribution of Russia's regions by this variable ("*share of population with incomes below X*") on 4 different X (*Fig. 2a X=5000 rubles per month, Fig. 2b X=10000 rubles per month, Fig. 2c X=20000 rubles per month, Fig. 2d X=30000 rubles per month*).

We use electoral statistics to construct electoral variable *"the share of votes for candidate N"*. We estimated *"the share of votes for candidate N"* as a share of voters participated in president election. We constructed electoral variables for all five candidates (*Zhirinovs-ky, Zyuganov, Mironov, Prokhorov, Putin*). Also we constructed electoral variable for *non-voters* — as a share of voters who were registered but did not participate.

Next, we looked for correlations between income variables "*share of population with incomes below X*" and electoral variables "*the share of votes for candi-date N*".

On Figure 3 presented scatterplots for electoral variable "share of votes for Zhirinovsky" and income variable "share of population with incomes below X" for different X (Fig. 3a X=5000 rubles per month, Fig. 3b X=10000 rubles per month, Fig. 3c X=20000 rubles per month, Fig. 3d X=30000 rubles per month). On each scatterplot on Figure 3, vertical axis represents the same electoral variable ("share of votes for Zhirinovsky") and horizontal axis — income variable "share of population with incomes below X" for different income levels (5000, 10000, 20000, 30000 rubles per month)

Figures 4, 5, 6, 7, 8 present scatterplots ("income variable" vs "electoral variable") for other candidates (Fig. 4: for Zyuganov, Fig. 5: for Mironov, Fig. 6: for Prokhorov, Fig. 7 for Putin, Fig. 8: for non-voters.)

Table 1. Distribution of population by per capita income (as a percentage of the total for the Belgorod Region, 2010).

	Per capita income, rub. per month										
	to 3500,0	from 3500,1 to 5000,0	from 5000,1 to 7000,0	from 7000,1 to 10000,0	from 10000,1 to 15000,0	from 15000,1 to 25000,0	from 25000,1 to 35000,0	more 35000,0			
Belgorod region	4,2	6,3	10,6	16,2	21,4	23,0	9,5	8,8			

Source: Regiony Rossii, 2011.



Figure 1. Example of cumulative distribution function approximation of average monthly income (for the Belgorod region, 2010).



Figure 2. Distribution of Russian regions by the share of people with incomes less then: a) 5000 rubles per month, b) 10000 rubles per month, c) 20000 rubles per month, d) 30000 rubles per month.



Figure 3. The share of votes for Zhirinovsky (vertical axis) vs. "share of people with incomes less then": a) 5000 rubles per month, b) 10000 rubles per month, c) 20000 rubles per month, d) 30000 rubles per month.

4. MODEL: ELECTORAL BEHAVIOR AND INCOME DISTRIBUTION

Previously we defined electoral variables as "the share of votes for candidate N" and income variables as "share of population with incomes below X". In our analysis we are looking for correlations between electoral variables and income variables. We analyze such correlations on all possible income levels (up to 100000 rubles per month).

To analyze correlation between electoral and income variables we used model of simple pair regression (1):

Share_of_votes =
$$a_0 + a_1 \times$$
 (1)
× Share_of_population_with_income_less_than_X + e.

The advantage of this approach is simplicity (since we use a large number of such pairs of simple regression to assess the most relevant interval). At the same time, simple regression leaves many possible interpretations in addition to correlation between the independent and the dependent variables. For example, we can expect that income depends on other variables, which also affect the electoral preferences (level of urbanization, education level, gender, age, etc.). Realizing that this approach can be criticized, we nonetheless underscore its advantage. It reveals the link between income and electoral support for the candidate. Many other important variables (education, urbanization, gender, age) are correlated with income, but we are interested in correlation between electoral behaviors of different income groups.

Figure 9 shows the distribution parameter estimation of the set of regressions where the dependent variable is the share of the vote for Zhirinovsky, and the explanatory variable is the "share of population with incomes below X". Figure 9a shows the distribution of F-statistics, and Figure 9b — the distribution of t-statistics of the coefficient of the explanatory variable.

In simple regression F-statistics coincides with the absolute value of t-statistics, we use t-statistics when the sign is important. Sign in the t-statistics is the sign of correlation between dependent and independent variables. The negative sign indicates the negative correlation between the share of votes for a candidate and a share of people with certain level of income.

In Figure 9b points 1–4 correspond to the results of the regression estimates, based on data that are dis-



Figure 4. The share of votes for Zyuganov (vertical axis) vs. "share of people with incomes less then": a) 5000 rubles per month, b) 10000 rubles per month, c) 20000 rubles per month, d) 30000 rubles per month.

played in Fig. 3a — 3d. Point 1 in Fig. 9b corresponds to the t-statistic (-4.60) for the coefficient of the explanatory variable b (-0.155) regression, based on data in Fig. 3a (for the income share of less than 5 thousand rubles). Point 2 in Fig. 9b corresponds to the t-statistic (-3.75) for the coefficient of the explanatory variable b (-0.0687) regression, constructed from data in Figure 3b (for revenue share is less than 10 thousand rubles.). Point 3 in Fig. 9b corresponds to the t-statistic (-2.818) for the coefficient of the explanatory variable b (-0.045) regression, based on data in Fig. 3c (for revenue share is less than 20 thousand rubles.). Point 4 in Fig. 9b corresponds to the t-statistic (-2.198) for the coefficient of the explanatory variable b (-0.045) regression, based on data in Fig. 3c (for revenue share is less than 30 thousand rubles.)

In addition to the four points (1–4), for which we have provided examples of the distribution of votes and the percentage of people with a certain level of income (in Fig. 3a-3d), the graph 9b contains coefficients of t-statistics for the income groups built around a set of distributed income from 0 to 100 thousand rubles. Five percent significance level t-statistics (for 82 observations)



Figure 5. The share of votes for Mironov (vertical axis) vs. "share of people with incomes less then": a) 5000 rubles per month, b) 10000 rubles per month, c) 20000 rubles per month, d) 30000 rubles per month.

corresponds to the level of 1.99 (5%), which on the Fig. 9b reaches a level of income 35 thousand rub. The coefficient of the variable "proportion of people with incomes below the X" is no longer statistically significant when x is greater than 35 thousand rubles per month, in regressions explaining the share of votes cast for Zhirinovsky.

Similarly graphs 9a, 9b present the results of regressions explaining the share of votes for Zhirinovsky's presidential election in 2012, if the schedule 9a contains the results of regression in which the share of votes for Zhirinovsky explained by the percentage of people with incomes from 0 to X, and a deferred variable on the horizontal axis, then the graph 9c shows the results that explain the voting share for Zhirinovsky in the proportion of people with income from Y to X. The curves shown in the graph 9a, a special case of the reduced dependence in graph 9c (at Y = 0).

In the graph 9c we consider all possible income groups, for example, not only income group from 0 to 5000 (point 1 on the chart 9a and Figure 3a), but also of income from 1000 to 5000, from 2000 to 5000, from 3000 to 5000, from 4000 to 5000, not only income group



Figure 6. The share of votes for Prokhorov (vertical axis) vs. "share of people with incomes less then": a) 5000 rubles per month, b) 10000 rubles per month, c) 20000 rubles per month, d) 30000 rubles per month.

0 to 20,000 (as a point on the graph 39a and Figure 3c), but also of income from 5000 to 20000, 10000 to 20000, 15000 to 20000.

Zhirinovsky remains relevant in high-income areas, which suggests that a certain number of supporters of Zhirinovsky are present among middle-income voters, and among the richest of the voters.

Fig. 10 shows examples of the distribution of population groups with income from Y to X for the Belgorod region (Fig. 10a) and in Moscow (Figure 10b). Each point on this graph represents the percentage of people (axis Z) in the region with an income in the range from Y to X. For example, a group of people with incomes between 20 and 60 thousand rubles (X = 60000, Y = 20000), in the Belgorod region corresponds to the value of Z = 24.38 (i.e. the number of 24.38% of the total population), while in Moscow Z = 34.13 (i.e. 34.13% of the total Moscow's population has income of 20 to 60 million).

Thus, the graph 9c coordinate Z (height above the plane XY) has the value of F-score statistics regression, in which the share of votes for Zhirinovsky explained by the proportion of people with income from Y to X.



Figure 7. The share of votes for Putin (vertical axis) vs. "share of people with incomes less then": a) 5000 rubles per month, b) 10000 rubles per month, c) 20000 rubles per month, d) 30000 rubles per month.

Analysis of the results shown in the graph 9c shows that there is a hump with a lower limit of 7000 rubles. Grey-black color on chart 9d shows the coefficient of the independent variable positive (b = 0.15). Simplified interpretation of this threshold can be illustrated by a hypothetical example. If the region of 1000 voters passed a group of people with incomes up to 7000 rubles a month in a group of people with incomes above 7,000 rubles, then 150 of them will vote for Zhirinovsky.

Similar to Fig. 9, we construct the graphs for the other candidates for president of Russia. Figure 11 shows the

distribution parameter estimation of the set of regressions in which the share of the vote for Zyuganov, due to "percentage of the population living below the X rubles."

The analysis of results (see Figure 11a-11d) estimates regressions on the entire set of groups and their ability to explain votes received by Zyuganov in the presidential election of 2012. Graphs 11a and 11b show that the groups with the boundaries from 0 to 28000 are insignificant (at the 5% level). The importance of communication with the vote for Zyuganov groups having certain income shows an increase in the lower limit of the group



Figure 8. The share of non-votes (vertical axis) vs. "share of people with incomes less then": a) 5000 rubles per month, b) 10000 rubles per month, c) 20000 rubles per month, d) 30000 rubles per month.

and reaches a maximum for the group with income from 9250 to 21,750, an increase in the upper limits of income, the importance of a vote for Zyuganov again disappears (height "hill" decreases with increasing upper limit). Grey-black (see Fig. 11d) shows that, for this group of the population with income from 9250 to 21,750, the coefficient of the independent variable is positive (0.35). This means an increase in the group for the 1000 population, increases the vote for Zyuganov at 350. For Zyuganov, we can also select a group of high-income (ranging from 40

thousand to 60 thousand), the size of which is negatively related to the share of Zyuganov votes (the white dots area in the graph 9d). Apparently the presence of this group explained the significance of the positive impact of falling after reaching a maximum in the range of 9250 to 21,750 rubles per month.

Fig. 12 shows parameters distribution of estimation of set of regressions in which the share of votes for Mironov is determined by "percentage of the population living below the X rubles."



Figure 9. Distribution of the parameters estimation of the set of regressions: vote for Zhirinovsky as a function of the proportion of people living below X rubles.



Figure 10. Examples of the distribution of population groups with income from Y to X.

Analysis of the influence of the size of the set of different income groups for votes received by Mironov in the presidential election shows a general pattern similar to one, which can be observed in the data for Zhirinovsky. While with the increase of the lower limit of the size of a significant association of the wealthy with the number of votes for Mironov disappears, unlike for Zhirinovsky. This suggests a narrower area in which the electorate is concentrated. The maximum is reached in the range of 13,250 to 24,250, and with the growth of the upper boundary, the relationship to the number of votes for Mironov is falling faster than for Zhirinovsky, i.e. within this population (with incomes greater than 13,000 rubles a month) voters with increasingly higher incomes are less likely to support Mironov.

Fig. 13 shows the parameters distribution of estimation of set of regressions in which the share of votes for Prokhorov is determined by "percentage of the population living below the X rubles." Analysis of the results of the evaluation of the set of regressions explaining the vote received Prokhorov shows that he has a certain threshold value (15000 rubles a month), above which the voters are beginning to support Prokhorov. However, a more important feature of the Prokhorov's electorate is that it belongs to the highest income group. Increase of the lower limit does not reduce the significance, and a group with a very high lower bound (more than 40 thousand rubles a month) also has a positive effect on the share of the vote for Prokhorov.

Fig. 14 shows the parameters distribution of estimation of set of regressions in which the share of votes for Putin is determined by "percentage of the population living below the X rubles." Analysis of the results of the evaluation of the vote for Putin showed no significant relationship for almost the entire set. The observed significant dependence is similar to patterns seen for Mironov and Zhirinovsky, but the coefficients of the explanatory variables b is minimal (b = 0.01), although statistically significant. For Putin, as well as for Zhirinovsky and Mironov, there is an income threshold (14,250) less obvious than for Zyuganov, the upper limit of the population (at 21,250). However, the white dots area on the chart 14d shows that the correlation coefficient of this group with the votes cast for Putin is negative (-1.58), the area of positive correlation vote for Putin is in the area with low incomes. Thus, there is an opposite threshold effect – after reaching the income threshold (14,000) voters reduce support for Putin.

Fig. 15 shows the parameters distribution of estimation of set of regressions in which the share of voters who do not come to the polls is determined by "percentage of the population living below the X rubles."

The analysis of the proportion of voters who did not participate in the presidential elections shows that, unlike shares cast for candidates, there are no incomes negatively affecting the proportion of people who took part in the vote. We see that the greatest proportion of the electorate who voted is not associated with a group of people with incomes of 13,100 to 22,400, with the upper boundary of the growth, this relationship becomes less significant, but another local maximum is achieved for the group from 4000 to 90000.



Figure 11. Distribution of the parameters estimation of the set of regressions: vote for Zyuganov as a function of the proportion of people living below the X rubles.



Figure 12. Distribution of the parameters estimation of the set of regressions: vote for Mironov as a function of the proportion of people living below the X rubles.











Figure 15. Distribution of the parameters estimation of the set of regressions: the proportion of voters who did not vote as a function of the proportion of people living below the X rubles.

A possible explanation for this is the presence of a closer relationship between the share of non-voters and the population with low or high incomes, while at the intermediate level this relationship is somewhat weaker.

5. PRELIMINARY RESULTS

According to the previous research (Mau, Kochetkova, Yanovsky, Zhavoronkov, Lomakina, 2000; Kochetkova, 2004; others) there was direct correlation between voters' income and electoral support for incumbent in Russia during the 1990-s and early 2000-s. The results of Russian presidential elections in 2012 show the opposite trend. For each candidate we defined the level of electoral support in different income groups.

Firstly, the effect of the income threshold of votes for certain candidates (Zhirinovsky: 7000 rubles per month, Mironov: 13,000 rubles per month): people change their behavior when it reaches the threshold. At the same time Mironov's electorate concentrated in a narrower range of income, while Zhirinovsky has a significant proportion of voters among the citizens with a high level of income.

Secondly, a special case represents the electorate of Zyuganov, whose electorate is formed by a group of people with "average" income, for which the lower and upper limits are defined (from 9250 to 21750 rubles per month). Thirdly, the high-income groups of population (with incomes of 40 thousand rubles a month) are mostly associated with the electorate of Prokhorov. This suggests that the growth of income potentially increases the electoral support of the candidates of this type.

Fourthly, there is the effect of Putin's return threshold and the greatest proportion of his votes negatively correlated (-1.58) with a group of people with incomes of 14,250 to 21,250. Inverse correlation may be due to a protest vote against the representative of the party in power. The zone of positive correlation of votes for Putin is in the low-income area. In the future, we plan to look more closely at regional differentiation factors that more accurately compare data from different regions to refine the preliminary results of our research.

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Appendix 1

Population, by per capita income in 2010

(as a percentage of the total population of the subject of Russian Federation)

	Per capita income, rub. per month								
	to 3500,0	from 3500,1 to 5000,0	from 5000,1 to 7000,0	from 7000,1 to 10000,0	from 10000,1 to 15000,0	from 15000,1 to 25000,0	from 25000,1 to 35000,0	over 35000,0	
The Russian Federation	3,9	5,6	9,4	14,7	20,2	23,5	10,8	11,9	
Central Federal District									
Belgorod region	4,2	6,3	10,6	16,2	21,4	23,0	9,5	8,8	
Bryansk region	6,2	8,9	13,8	19,1	22,0	19,4	6,4	4,2	
Vladimir region	5,5	9,1	14,8	20,6	23,1	18,7	5,3	2,9	
Voronezh region	7,4	9,3	13,6	18,2	20,9	19,0	6,6	5,0	
Ivanovo region	7,5	11,2	16,9	21,6	21,8	15,5	3,8	1,7	
Kaluga region	4,4	6,9	11,7	17,5	22,3	22,3	8,4	6,5	
Kostroma region	5,4	8,8	14,5	20,4	23,1	19,1	5,6	3,1	
Kursk region	4,4	7,2	12,2	18,2	22,7	21,9	7,8	5,6	
Lipetsk region	3,8	6,4	11,1	17,2	22,5	23,2	8,8	7,0	
Moscow region	2,0	3,6	7,0	12,3	19,4	25,9	13,3	16,5	
Orel region	7,8	9,7	14,2	18,7	20,9	18,3	6,1	4,3	
Ryazan region	4,8	7,9	13,3	19,3	23,1	20,7	6,7	4,2	
Smolensk region	4,2	7,0	12,1	18,2	22,9	22,1	7,9	5,6	
Tambov region	7,6	9,3	13,6	18,1	20,7	18,9	6,7	5,1	
Tver region	3,7	7,0	12,6	19,5	24,2	21,9	7,0	4,1	
Tula region	3,6	6,4	11,3	17,7	23,1	23,2	8,5	6,2	
Yaroslavl region	4,9	7,6	12,4	18,2	22,4	21,4	7,6	5,5	
Moscow	1,0	1,9	3,8	7,1	12,4	20,4	13,9	39,5	
North-Western Federal District									
Karelia Republic	2,4	5,2	10,3	17,5	24,2	25,0	9,1	6,3	
Komi Republic	2,4	3,9	7,1	12,1	18,6	24,8	13,1	18,0	
Arkhangelsk Region	1,9	3,9	7,9	14,2	21,7	26,7	12,1	11,6	
including the Nenets Autonomous District	0,3	0,6	1,6	3,8	8,5	18,4	15,6	51,2	
Vologda Region	4,5	7,6	12,8	19,0	23,2	21,2	7,1	4,6	
Kaliningrad Region	3,4	6,0	10,9	17,3	23,0	23,7	8,9	6,8	
Leningrad Region	4,4	7,2	12,2	18,2	22,8	21,9	7,8	5,5	
Murmansk region	1,1	2,4	5,4	10,7	18,7	27,4	15,0	19,3	
Novgorod region	5,1	7,3	11,7	17,1	21,4	21,7	8,5	7,2	
Pskov region	6,3	9,3	14,5	19,8	22,3	18,7	5,7	3,4	
St. Petersburg	2,7	4,0	7,0	11,6	17,6	23,9	13,1	20,1	
Southern Federal District									
Republic of Adygea	7,9	10,3	15,0	19,6	21,2	17,4	5,3	3,3	
Republic of Kalmykia	21,7	18,0	19,5	18,3	13,6	7,1	1,3	0,5	
Krasnodar Territory	5,0	6,9	11,0	16,1	20,8	22,1	9,2	8,9	
Astrakhan region	5,9	8,1	12,5	17,7	21,4	20,7	7,6	6,1	
Volgograd region	4,0	7,2	12,6	19,0	23,6	21,8	7,2	4,6	
Rostov region	5,8	8,1	12,7	17,9	21,6	20,6	7,5	5,8	

	Per capita income, rub. per month										
	to 3500,0	from 3500,1 to 5000,0	from 5000,1 to 7000,0	from 7000,1 to 10000,0	from 10000,1 to 15000,0	from 15000,1 to 25000,0	from 25000,1 to 35000,0	over 35000,0			
North-Caucasian Federal District											
Dagestan Republic	4,9	7,3	11,9	17,5	21,9	21,7	8,2	6,6			
Ingush Republic	11,2	13,9	18,7	21,4	19,2	12,0	2,6	1,0			
Kabardino-Balkar Republic	8,9	11,4	16,3	20,4	20,8	15,6	4,3	2,3			
Karachay-Cherkessia Republic	9,5	12,5	17,5	21,1	20,4	14,0	3,4	1,6			
Republic of North Ossetia — Alania	5,0	8,3	13,7	19,8	23,2	20,1	6,2	3,7			
Chechen Republic											
Stavropol Territory	7,0	9,5	14,3	19,1	21,5	18,6	6,0	4,0			

	Per capita income, rub. per month								
	to 3500,0	from 3500,1	from 5000,1	from 7000,1	from 10000,1	from 15000,1	from 25000,1	over 35000,0	
		to 5000,0	to 7000,0	to 10000,0	to 15000,0	to 25000,0	to 35000,0		
Volga Federal District	1	,		,		, ,	, ,		
Bashkortostan Republic	5,2	6,7	10,5	15,3	20,0	22,1	9,7	10,5	
Mari El Republic	12,6	13,4	17,2	19,7	18,7	13,1	3,5	1,8	
Mordovia Republic	9,0	11,6	16,6	20,5	20,8	15,3	4,1	2,1	
Tatarstan Republic	4,0	5,9	9,8	15,2	20,6	23,3	10,4	10,8	
Udmurt Republic	6,2	9,4	14,8	20,2	22,5	18,4	5,4	3,1	
Chuvashia Republic	8,7	11,7	16,9	21,0	20,9	15,0	3,9	1,9	
Perm Territory	4,2	5,7	9,4	14,3	19,6	23,1	10,9	12,8	
Kirov region	4,8	8,1	13,5	19,6	23,3	20,4	6,4	3,9	
Nizhny Novgorod region	3,9	6,3	10,8	16,6	22,0	23,2	9,3	7,9	
Orenburg region	6,0	8,8	13,7	19,0	22,1	19,6	6,5	4,3	
Penza region	6,6	9,4	14,5	19,6	22,0	18,5	5,8	3,6	
Samara Region	4,8	5,9	9,3	13,8	18,7	22,3	10,9	14,3	
Saratov region	7,7	10,4	15,4	20,0	21,5	17,1	5,0	2,9	
Ulyanovsk region	7,6	9,7	14,3	18,9	21,1	18,3	6,0	4,1	
Urals Federal District									
Kurgan region	7,3	9,2	13,6	18,2	20,9	19,1	6,7	5,0	
Sverdlovsk region	3,0	4,5	7,8	12,7	18,8	24,2	12,4	16,6	
Tyumen Region	1,9	3,1	5,7	10,1	16,3	24,0	14,2	24,7	
including:									
Khanty-Mansi Autonomous Area — Yugra	0,9	1,8	4,0	8,1	14,9	24,8	16,0	29,5	
Yamal-Nenets Autonomous District	0,4	0,9	2,1	5,0	10,7	21,4	16,6	42,9	
Chelyabinsk region	4,1	6,3	10,6	16,3	21,5	23,1	9,5	8,6	
Siberian Federal District									
Altai Republic	5,2	8,3	13,6	19,4	22,9	20,1	6,5	4,0	
Buryatia Republic	7,3	9,0	13,3	17,8	20,7	19,3	7,0	5,6	
Tuva Republic	11,1	13,3	17,8	20,8	19,5	13,0	3,1	1,4	
Khakassia Republic	6,4	9,3	14,4	19,6	22,1	18,8	5,8	3,6	
Altai Territory	8,3	11,5	16,9	21,2	21,3	15,2	3,8	1,8	
Trans-Baikal Territory	6,4	8,6	13,1	18,1	21,4	19,9	7,1	5,4	
Krasnoyarsk Territory	4,8	6,4	10,2	15,1	20,0	22,5	10,1	10,9	

	Per capita income, rub. per month									
	to 3500,0	from 3500,1	from 5000,1	from 7000,1	from 10000,1	from 15000,1	from 25000,1	over 35000,0		
		to 5000,0	to 7000,0	to 10000,0	to 15000,0	to 25000,0	to 35000,0			
Irkutsk Region	6,7	8,3	12,4	17,1	20,6	20,2	7,8	6,9		
Kemerovo Region	5,3	7,5	11,9	17,1	21,4	21,5	8,3	7,0		
Novosibirsk Region	5,1	7,1	11,4	16,6	21,1	21,9	8,8	8,0		
Omsk Region	5,9	7,9	12,2	17,3	21,1	20,9	8,0	6,7		
Tomsk Region	4,5	7,1	11,9	17,7	22,4	22,1	8,1	6,2		
Far Eastern Federal District										
Sakha Republic (Yakutia)	1,5	3,1	6,3	11,7	19,2	26,7	14,0	17,5		
Kamchatka	0,4	1,3	3,6	8,4	17,0	28,8	17,2	23,3		
Primorye	2,9	5,3	9,7	15,9	22,2	24,8	10,2	9,0		
Khabarovsk Territory	1,2	2,7	6,0	11,7	19,8	27,7	14,3	16,6		
Amur Region	4,0	7,2	12,7	19,1	23,7	21,7	7,1	4,5		
Magadan region	0,9	2,0	4,5	9,2	16,8	26,5	15,8	24,3		
Sakhalin Region	0,7	1,7	3,8	7,8	14,9	25,3	16,4	29,4		
Jewish Autonomous Region	3,8	6,5	11,5	17,8	23,0	22,9	8,4	6,1		
Chukotka Autonomous District	0,3	0,8	2,0	5,1	11,6	23,6	17,8	38,8		

Source: Regions of Russia. Socio-economic indicators. 2011: Stat. Sat / Rosstat. M., 2011, p. 164–165.

Appendix 2

The results of the presidential elections in 2012

	Zhirinovs	sky	Zyugano	Zyuganov		Mironov		Prokhorov		
Belgorod region	59561	6.62%	211079	23.45%	35601	3.96%	49807	5.53%	533716	59.30%
Bryansk region	42974	6.14%	146340	20.91%	23453	3.35%	32141	4.59%	448018	64.02%
Vladimir region	53615	8.40%	132400	20.75%	41895	6.57%	60315	9.45%	341301	53.49%
Voronezh region	81081	6.22%	292379	22.42%	47974	3.68%	69813	5.35%	800024	61.34%
Ivanovo region	37650	7.25%	95005	18.30%	23060	4.44%	37016	7.13%	321170	61.85%
Kaluga region	37634	7.42%	101459	20.01%	21427	4.23%	40911	8.07%	299175	59.02%
Kostroma region	28204	8.09%	90714	26.02%	16094	4.62%	26517	7.61%	183984	52.78%
Kursk region	49744	8.20%	122775	20.24%	23101	3.81%	38002	6.26%	366745	60.45%
Lipetsk region	44697	7.13%	132408	21.13%	24722	3.95%	34778	5.55%	382179	60.99%
Moscow region	236028	6.66%	686449	19.36%	149801	4.23%	396379	11.18%	2015379	56.85%
Orel region	33549	7.45%	130934	29.09%	15066	3.35%	27632	6.14%	237868	52.84%
Ryazan region	47068	7.58%	132981	21.42%	25562	4.12%	37903	6.10%	370945	59.74%
Smolensk region	38246	7.94%	111182	23.07%	20930	4.34%	32516	6.75%	273232	56.69%
Tambov region	28179	4.54%	107797	17.38%	13973	2.25%	19594	3.16%	444978	71.76%
Tver region	49384	7.40%	131591	19.71%	32835	4.92%	59302	8.88%	387308	58.02%
Tula region	50218	5.79%	147019	16.95%	29601	3.41%	43917	5.06%	587952	67.77%
Yaroslavl region	51816	7.72%	133476	19.89%	41212	6.14%	71007	10.58%	365892	54.53%

	Zhirinovs	sky	Zyugano	v	Mironov		Prokhorov		Putin	
Moscow	267418	6.30%	814573	19.18%	214703	5.05%	868736	20.45%	1994310	46.95%
The Republic of Karelia	26579	8.59%	50957	16.47%	18886	6.10%	37798	12.22%	171380	55.38%
Komi Republic	40314	7.67%	70135	13.34%	22738	4.32%	43759	8.32%	341864	65.02%
Arkhangelsk Region	51169	8.90%	91648	15.94%	33223	5.78%	60108	10.45%	333344	57.97%
Nenets Autonomous District	2114	9.04%	4040	17.27%	1239	5.30%	2349	10.04%	13346	57.05%
Vologda Region	49492	8.13%	93417	15.35%	40306	6.62%	57064	9.38%	361720	59.44%
Kaliningrad	35625	7.79%	97570	21.33%	16139	3.53%	62016	13.56%	240421	52.55%
Leningrad Region	54857	6.77%	114951	14.18%	47518	5.86%	80874	9.98%	501893	61.90%
Murmansk region	32933	8.09%	65190	16.00%	20566	5.05%	39291	9.65%	244579	60.05%
Novgorod region	22955	7.41%	54875	17.70%	22066	7.12%	27017	8.72%	179501	57.91%
Pskov region	23760	6.71%	73073	20.64%	16164	4.57%	25824	7.30%	211265	59.69%
St. Petersburg	110979	4.65%	311937	13.06%	157768	6.61%	370799	15.52%	1403753	58.77%
Republic of Adygea	11164	5.06%	45311	20.55%	6637	3.01%	13145	5.96%	141257	64.07%
Republic of Kalmykia	3374	2.54%	23295	17.51%	3562	2.68%	8029	6.04%	93500	70.30%
Krasnodar	176119	6.54%	496909	18.46%	88976	3.31%	181844	6.75%	1715349	63.72%
Astrakhan region	21918	5.07%	67662	15.64%	18595	4.30%	21873	5.06%	297448	68.76%
Volgograd region	87657	6.86%	240998	18.85%	55325	4.33%	71142	5.56%	810598	63.41%
Rostov region	132418	6.27%	423884	20.06%	76633	3.63%	134461	6.36%	1324042	62.66%
Republic of Dagestan	1523	0.11%	84669	5.94%	4163	0.29%	6427	0.45%	1322567	92.84%
Republic of Ingushetia	1944	1.17%	7422	4.45%	1761	1.06%	1934	1.16%	153274	91.91%
Kabardino-Balkaria	11888	3.08%	53261	13.81%	11753	3.05%	8937	2.32%	299529	77.64%
Karachay- Cherkessia	2851	0.98%	16937	5.81%	2162	0.74%	2629	0.90%	266410	91.36%
Republic of North Ossetia — Alania	13063	3.16%	87017	21.05%	12864	3.11%	6848	1.66%	289643	70.06%
The Chechen Republic	140	0.02%	182	0.03%	165	0.03%	129	0.02%	611578	99.76%
Stavropol Territory	83543	6.99%	215600	18.03%	37551	3.14%	75724	6.33%	770874	64.47%
Republic of Bashkortostan	83704	3.64%	326250	14.18%	57329	2.49%	83667	3.64%	1731716	75.28%
Mari El Republic	24895	6.53%	84200	22.09%	15175	3.98%	24282	6.37%	228612	59.98%
Republic of Mordovia	13635	2.34%	42060	7.23%	6448	1.11%	9353	1.61%	506415	87.06%
The Republic of Tatarstan	52994	2.23%	229711	9.66%	41878	1.76%	69708	2.93%	1967291	82.70%
Udmurt Republic	49160	6.27%	116277	14.82%	26803	3.42%	67362	8.59%	515755	65.75%
Republic of Chuvashia	39707	5.65%	144676	20.58%	31201	4.44%	38838	5.52%	438070	62.32%
Perm	53879	4.60%	184639	15.78%	51535	4.40%	127098	10.86%	736496	62.94%
Kirov region	54531	7.90%	127982	18.54%	36005	5.22%	63993	9.27%	399810	57.93%
Nizhny Novgorod region	110808	5.96%	353964	19.05%	63189	3.40%	125432	6.75%	1187194	63.90%

	Zhirinov	sky	Zyugano	v	Mironov		Prokhorov		Putin	
Orenburg region	74414	7.33%	252947	24.92%	41104	4.05%	58849	5.80%	577411	56.89%
Penza region	48915	6.39%	150786	19.70%	24213	3.16%	39908	5.21%	492031	64.27%
Samara Region	117828	7.56%	320128	20.55%	61361	3.94%	125423	8.05%	912099	58.56%
Saratov region	66985	5.06%	206818	15.63%	43267	3.27%	59006	4.46%	934685	70.64%
Ulyanovsk region	46384	6.96%	160089	24.03%	27783	4.17%	37437	5.62%	387540	58.18%
Kurgan region	41340	8.57%	83955	17.40%	19280	3.99%	27725	5.75%	305777	63.39%
Sverdlovsk region	107819	5.20%	251690	12.14%	113353	5.47%	237780	11.46%	1337781	64.50%
Tyumen Region	59083	7.07%	95398	11.41%	20455	2.45%	43047	5.15%	611281	73.10%
Khanty-Mansi Autonomous Area — Yugra	57400	8.11%	97651	13.80%	23276	3.29%	50526	7.14%	469822	66.41%
Yamal-Nenets Autonomous District	17456	5.21%	18738	5.59%	4979	1.49%	7807	2.33%	283313	84.58%
Chelyabinsk region	97869	5.66%	254542	14.72%	88177	5.10%	138907	8.03%	1124538	65.02%
Altai Republic	5704	5.60%	17229	16.92%	3406	3.34%	6265	6.15%	68110	66.87%
Republic of Buryatia	22211	5.34%	75082	18.04%	13994	3.36%	24430	5.87%	275466	66.20%
Republic of Tyva	2574	1.74%	6370	4.32%	2023	1.37%	2925	1.98%	132828	90.00%
Republic of Khakassia	20991	8.48%	50872	20.56%	8878	3.59%	19400	7.84%	144519	58.40%
Altay	97961	8.33%	261665	22.26%	45883	3.90%	83778	7.13%	674139	57.35%
Trans-Baikal Territory	49612	9.95%	71636	14.37%	15015	3.01%	29466	5.91%	327407	65.69%
Krasnoyarsk Territory	112222	8.61%	235058	18.03%	46123	3.54%	109827	8.42%	784337	60.16%
Irkutsk Region	88419	8.24%	242097	22.57%	41152	3.84%	94008	8.76%	594861	55.45%
Kemerovo Region	112067	6.82%	133705	8.14%	37450	2.28%	75519	4.60%	1267837	77.19%
Novosibirsk Region	104223	7.70%	304761	22.53%	41001	3.03%	124205	9.18%	762126	56.34%
Omsk Region	74857	7.68%	234035	24.01%	39284	4.03%	72540	7.44%	541469	55.55%
Tomsk Region	35139	7.67%	86403	18.85%	16966	3.70%	53028	11.57%	261581	57.07%
The Republic of Sakha (Yakutia)	20010	4.37%	65871	14.39%	20193	4.41%	29712	6.49%	317933	69.46%
Kamchatka	16504	10.54%	25009	15.97%	5430	3.47%	14015	8.95%	93738	59.84%
Primorye	85396	8.63%	201493	20.36%	43168	4.36%	78639	7.95%	567177	57.31%
Khabarovsk Krai	68500	10.47%	115436	17.65%	31944	4.88%	62145	9.50%	367239	56.15%
Amur Region	39717	9.94%	67433	16.87%	13594	3.40%	23070	5.77%	251182	62.84%
Magadan	6399	9.18%	13946	20.01%	2607	3.74%	6769	9.71%	39196	56.25%
Sakhalin Region	20016	8.77%	45730	20.03%	8856	3.88%	22337	9.78%	128565	56.30%
Jewish Autonomous Region	6632	8.35%	14796	18.63%	2763	3.48%	5102	6.42%	48912	61.59%
Chukotka	2106	7.18%	2651	9.04%	633	2.16%	2209	7.53%	21310	72.64%

Source: http://www.cikrf.ru/