

## Assessment of the Dynamics of Growth Factors and Russia

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### Abstract

*This paper studies the macroeconomic dynamics of modern Russia, the qualitative aspects of growth, as well as the positive factors of macroeconomic dynamics. The conclusion is the exhaustion of opportunities of the inertia model of growth and the need to shift to a new paradigm of economic development based on a new and radical modernization of the country's industrialization.*

**Keywords:** macroeconomic dynamics, economic growth, economic development, quality and growth factors, genuine savings.

### 1. Introduction

The results of radical economic reforms at the end of the last century were depressing for Russia. GDP fell by nearly half, industrial production by 55%, and investments decreased up to 80% [1].

However, at the turn of the new century there was an abrupt U-turn in macroeconomic dynamics: the country began economic growth. Study of quantitative and qualitative characteristics of macroeconomic dynamics, factors of its implementation is intended to facilitate the necessary adjustment of economic policy, to identify ways of modernizing the Russian economy.

### 2. Literature Review

The greatest contribution to the study of the problems of economic growth have made E. Denison, E. Domar, P. Douglass, N. Kaldor, C. Cobb, S. Smith, R. Solow, R. Harrod and others. Sustainable development issues are reflected in the writings of DL Meadows, DH Meadows, D. Nordhaus, E. Pestel, A. Peccei, J. Tinbergen, J. Forrester, K. Arrow, and other researchers.

### 3. Research Methodology

The study used scientific methods of cognition: induction and deduction, the unity of the historical and logical analysis and synthesis, and the system of economic and statistical analysis.

### 4. Results

Main results: Quantitative parameters of economic growth for 2000-2012 are shown in Table 1.

**Table 1.** Dynamics of GDP (at constant prices) [2]

	2001	2005	2006	2007	2008	2009	2010	2011	2012
Azerbaijan	109,9	126,4	134,5	125,0	110,8	109,3	105,0	100,1	102,2
Armenia	109,6	113,9	113,2	113,7	106,9	85,9	102,1	104,7	107,6
Belarus	104,7	109,4	110,0	108,6	110,2	100,2	107,6	105,5	101,5
Kazakhstan	113,5	109,7	110,7	108,9	103,3	101,2	107,3	107,5	105,0
Kyrgyzstan	105,3	99,8	103,1	108,5	108,4	102,9	98,6	106,0	99,1
Moldova	106,1	107,5	104,8	103,0	107,8	94,0	106,9	106,8	99,8

Russia	<b>105,1</b>	<b>106,4</b>	<b>108,2</b>	<b>108,5</b>	<b>105,2</b>	<b>92,2</b>	<b>104,0</b>	<b>104,3</b>	<b>103,4</b>
Tajikistan	109,6	106,7	107,0	107,8	107,9	103,9	106,5	107,4	107,5
Turkmenistan	...	113,3	...	111,0	114,7	106,1	109,2	114,7	111,1
Uzbekistan	104,5	107,0	107,5	109,5	109,0	108,1	108,5	108,3	108,2
Ukraine	109,2	102,7	107,3	107,9	102,3	85,2	104,2	105,2	100,2
All in the CIS	106,0	106,7	108,7	108,8	105,3	93,1	104,5	104,7	103,4

As can be seen from the table number 1, in Russia 2000-2008 demonstrated relatively high rates of economic growth, with the average reaching 5.9% (Gabbrakhmanov and Rozhko, 2014). However, the positive macroeconomic results had been observed in other CIS countries. Comparative analysis of growth in the Russian Federation was not as impressive: they were below the level of most of the countries (except Ukraine and Kyrgyzstan) and less than the average for the CIS. But even the stated rate of growth should be treated with a certain degree of skepticism, as the inflation rate in the country, according to M. Delyagin, was "shamelessly understated", which yielded an artificial increase in economic growth. It should also be noted that the goal set by President Vladimir Putin of doubling GDP by 2010 has not been fulfilled.

**Table 2.** GDP cumulatively (in constant prices) [3]

<b>2000=100</b>	2001	2005	2006	2007	2008	2009	2010	2011	2012
Azerbaijan	110	188	253	317	351	383	403	403	412
Armenia	110	178	202	229	245	210	215	225	...
Belarus	105	143	158	171	189	189	203	215	218
Kazakhstan	114	164	181	197	204	206	221	238	250
Kyrgyzstan	105	120	124	135	146	150	148	158	157
Moldova	106	141	148	152	164	154	165	176	...
<b>Russia</b>	<b>105</b>	<b>135</b>	<b>146</b>	<b>158</b>	<b>166</b>	<b>153</b>	<b>159</b>	<b>167</b>	<b>173</b>
Tajikistan	110	159	170	183	197	205	218	235	252
Uzbekistan	104	130	139	153	166	180	195	211	229
Ukraine	109	145	156	168	172	146	152	160	161
All in the CIS	106	138	150	163	172	160	167	176	182

Table number 2 indicates that GDP in 2010 increased only 159% over the level of 2000. If the base of 2003 is taken, when the initiative was announced, the increase was only 144%. At the same time, this goal was reached by Armenia, Belarus, Kazakhstan, Tajikistan and Uzbekistan. Azerbaijan exceeded 400%.

After a brief recession in 2009, economic growth in Russia again resumed, but its rate was significantly lower than in the preceding period: 4.0%, 4.3%, and 3.4% respectively for 2010, 2011 and 2012. By the end of 2013, economic growth was 1.3%, which clearly indicates its attenuation. Given a real, and not understated deflator, the country is likely already in recession.

Amid the global economic crisis, in which Russia was captured in 2008-2009, our country was among the most vulnerable and showed the worst results. By mid-2009 decline in GDP in our country has reached 10.9%, which was two times higher than in the EU and 2.5 times higher than in the United States [4]. Of particular concern was the following trend: the more complex products and higher value-added the industry, the worse the results. For example, iron ore production decreased by 18.3%, steel production - by 26.5%, seamless tubes - by 43.8%, and vehicles - by 62.6%. Wood production decreased by 6.2%, timber - by 19.6%, and furniture - by 40% [5].

For only one year, the share of manufacturing in GDP fell from 18.3% to 15.1%, while the final consumption expenditure increased from 64.2% to 78% of GDP and gross capital formation, on the contrary, decreased from 25.5% to 14.9%, reflecting the continued degradation of industry [6].

Despite the importance of the quantitative aspect of macroeconomic dynamics, qualitative characteristic growth seems more significant, and can be considered on the following criteria: by structural changes in the degree of efficiency, social orientation, and in their implementation and other factors.

As we know the traditional macroeconomic indicators (GDP, GNP), have a number of drawbacks and limitations, therefore can not be a reliable indicator of economic development. They appear only the most common measure of wealth estimated.

The indicator of adjusted net (true) savings, developed by the World Bank, can be used as such [7]. The main content of this indicator is based on the calculation of economic assets which are generated by the country, adjusted for

depletion of mineral, environmental, energy, and damage to the natural environment, and an amount of assets or net savings which can be used for future generations.

Correction of gross domestic savings occurs in two stages. At the first stage the value of net domestic savings (NDS) is calculated as the difference between gross domestic savings (GDS) and the value of the depreciation of productive assets (CFC). In the second stage, net domestic savings is increased by the amount of expenditure on education (EDE), and reduced by the amount of natural resource depletion (DPNR) and damage from environmental pollution (DME):

$$GS = (GDS - CFC) + EDE - DPNR - DMGE.$$

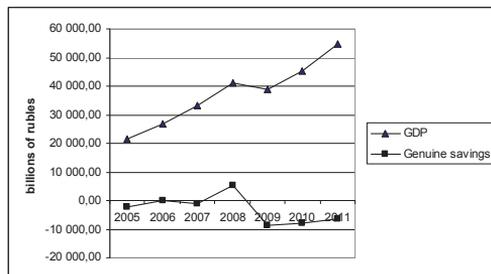
The above formula yields net savings used to calculate the data by country, and all data used in it are taken as a percentage of GDP. We propose to optimize this formula and calculate the index value (absolute) terms:

$$GS = GDP - (LSF + HP) - ITS - CPD - VA + RO + RH + RSPFK,$$

where GS - genuine savings; GDP - Gross Domestic Product; ACH - actual consumption of households; PG - public consumption; DFA- the depletion of fixed assets; CNR - consumption of natural resources; EHSA- emissions of harmful substances into the atmosphere; SE - spending on education; EH - expenditure on health; SPEPC- social policy expenditures and physical culture. To solve this problem, as with the initial data, we use the materials of the Federal State Statistics Service. The results of our calculations of the true savings of the Russian Federation is presented in Table 3 and Figure 1.

**Table 3.** Results of calculation of genuine savings of the Russian Federation

	2005	2006	2007	2008	2009	2010	2011
<b>GDP</b>	21 509,76	26 917,20	33 247,51	41 276,84	38 807,22	45 172,74	54 585,23
<b>ACH&amp; PG</b>	12 391,10	15 160,80	18 742,40	23 446,00	29 351,00	32 070,00	37 254,00
<b>DFA</b>	4 209,80	4 209,80	5 276,20	6 332,60	7 618,00	8 196,00	9 123,30
<b>Oil</b>	5 847,95	5 870,07	8 811,55	4 132,01	9 158,37	10 847,76	12 081,10
<b>Gas</b>	1 513,12	1 907,16	1 999,98	2 799,77	2 476	2 907,83	3 602,27
<b>Coal</b>	334,58	471,2	474,77	558,64	487,62	670,41	746,38
<b>EHSA</b>	17,33	16,8	15,84	15	18,2	17,4	16,93
<b>EH</b>	85,6	141,9	192,9	330,8	431,4	426,9	466,4
<b>SE</b>	163	227,1	319,3	384,4	448,10	456,8	531,2
<b>SPEPC</b>	248,6	369	512,2	715,2	879,5	883,7	997,6
<b>GS (billions of rubles)</b>	<b>-2 306,92</b>	<b>19,37</b>	<b>-1 048,83</b>	<b>5 423,22</b>	<b>-8 543,44</b>	<b>-7 769,26</b>	<b>-6 243,55</b>

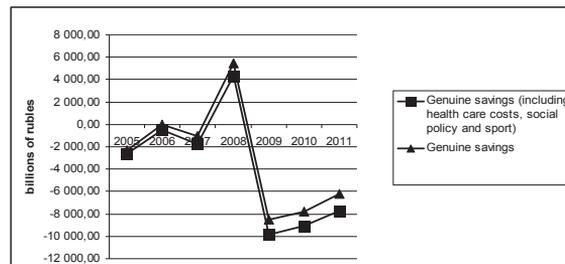


**Figure 1.** Graphical display of genuine savings calculations of the Russian Federation

As can be seen from Table 1, there was a positive GDP growth rate in the Russian Federation in 2005 - 2011 simultaneously accompanied by negative genuine saving rates. This testifies to the poor quality of economic growth, which results in depletion of natural capital and environmental degradation. Corresponding correction leads to a significant reduction in traditional economic development indicators (GDP and GNP), pushing them into negative territory. It should be noted that our calculations are generally in line with the results of studies conducted by the World Bank [8]. They show that all the countries in the analysis showed positive values, and only Russia was in the negative zone, which certainly significantly devalues the official estimates of the positive growth of the country in the 2000s.

Having a significant impact on the country's real savings, as international experience shows, are the costs of providing education, health, social policy, and physical culture. However, according to our calculations, this impact was

insignificant, which means, on the one hand, the high value of the factors of natural resource depletion, depreciation of fixed assets, emissions of harmful substances into the atmosphere in the structure of the test indicator, and on the other, - a low level of social financing. The results of our comparisons are reflected in Figure 2



**Figure 2.** Impact of health care costs, social policy and physical culture to change the dynamics of genuine savings Russia

It should also be noted that the positive macroeconomic dynamics of the country during this period were provided by only a few industries, primarily natural raw materials and low value-added sectors. This is clearly reflected in the structure of domestic exports. The share of oil and gas in 1999 it was 35%, and machinery and equipment 10.5%, but in 2012 the proportion of oil and gas reached 72.7%, and the article "machinery and equipment" was reduced to 3.6% [9, 10].

Exports of high-tech products had been halved by 2008, amounting to only 0.25% of its total volume. For comparison, such products in China accounted for 16.3% of exports, with 13.5% in the United States, and in Germany, 7.6% [11].

Even with the shadow economy, the index of industrial production in Russia in 2011 was equal to only 79% of the 1990 level [12]. And this is achieved despite repeatedly rising prices for commodities, metals, and fertilizers. Experts doubt whether this is the correct comparison of the current level of industry with the pre-reform figures, since during this time, world oil prices have increased by 11 times.

Russia occupies 12 - 15% of the acreage of the world, but its share in the production of grain is only 3%. According to estimates, about half of the food market is imported, and in major metropolitan areas this share is even higher [13].

There remains an extremely low efficiency of economic growth. The energy intensity of domestic production, according to Dmitry Medvedev, is 10-12 times higher than in Japan and the United States. The metal content of domestic GDP in 2.5-3 times higher than in industrialized countries, and labor productivity in the industry on average is lower by 6 times [14].

All this has a direct impact on the competitiveness of the Russian economy, which was given only 67th place in the Hall of Fame in 2012. For business conditions, we took 120th out of 183, with the most problematic areas being the registration of enterprises (111th), dealing with construction permits (178th place), getting electricity (183th place), lending (98th place), the protection of investors (111th), taxation (105th), and international trade (160th) [15].

There remains an unsatisfactory degree of economic development in the country. Japan, which is equal to the area of the Archangelsk region, produces a GDP almost 3 times more than the whole of Russia. According to our estimates for Q1, GDP per square kilometer totaled \$86 million, but in Korea it was \$10 billion, in Switzerland \$13 billion, and in Japan \$ 14.5 billion. We're behind our Far Eastern neighbors in terms of economic development of the territory by up to 168 times. Density of paved roads is 29 km. per 1000 square km. of territory, in comparison to 600 in the U.S., 1500 in the UK and France, and 3000 in Japan. There are 6 times more roads in the United States, and 8 times more railways and airports. Across the country, 15 million people live with a complete absence of roads. As acknowledged by the Ministry of Transport 60% federal and 75% of regional roads do not meet current regulatory and technical requirements [16].

However, in terms of human development, Russia continued to significantly lag behind the developed countries. In the ranking of the United Nations we were given only 66th place, although in reality we are significantly lower, as life expectancy occupies the 126 - 161th places, and 140th in the world in health [17].

A key aspect of the study of qualitative characteristics of economic growth are the factors of its implementation. In our opinion, the positive macroeconomic dynamics provides the following reasons. First of all, economic growth was driven by a five-times devaluation of the national currency, which led to a significant reduction in demand for imported goods and thus to an increase in domestic demand. This allowed Russian companies oriented to the domestic market to

utilize funds of unused production capacity and to start production. Renewed growth required additional labor; unemployment decreased, and respectively increased household incomes and business entities, a state that, in turn, became an additional source of aggregate demand, supporting economic growth. Devaluation has also contributed to increasing the competitiveness of Russian goods in foreign markets, providing significant revenue growth for exporters, thus dramatically increasing the state budget and state extra-budgetary funds, and increasing the investment activity of enterprises and the state. Secondly, the positive macroeconomic dynamics were caused by a favorable foreign economic situation caused by abnormally high prices for Russia's main exports, overwhelmingly represented, as is well known, by natural commodities. This allowed a regular inflation of the economy with liquidity due to the growth of foreign exchange reserves, and the creation of a Reserve Fund and National Welfare Fund to repay a significant portion of the public debt of the country. A favorable external environment influence was evident in the fact that the world economy is growing in significant quantities, and actively involved in offering loans to Russian banks and companies. This will significantly increase the volume of mortgage and consumer lending, which in turn, will positively affect aggregate demand and, therefore, determined and positive economic growth. Credits received by Russian companies have enhanced investment activity.

Nobody knows that the dependence of macroeconomic dynamics of the Russian Federation on the world situation and in particular the growth of oil prices very deep. It should be noted that the dynamics of GDP virtually repeats the trajectory of oil prices. This is characterized by the growth in the years 2002 -2008, when oil prices rose steadily, but the collapse in commodity prices in 2009 begat a fall in social production, and the recovery in oil prices also led to a new round of growth of GDP.

However, these factors of economic growth would not have been implemented if there were no market institutions - private property, entrepreneurship, competition, a modern banking system, trade, financial markets, etc. Yes, they are poorly developed today and not effective enough, but they have earned, and allowed us to realize, the opportunities that have opened up due to favorable external conditions. It is not superfluous to recall that market institutions were created mainly in the 90s, the so-called "dashing" years.

## 5. Conclusion

Russian economic growth was quite high, but lower than in most of the CIS countries. The quality of economic growth, however, was low and characterized by structural imbalances, the degradation of the manufacturing industry, the lack of social orientation and negative impact on the environment. Economic growth was driven primarily by market conditions and the devaluation of the ruble. Overall, the economic growth in Russia can be defined as growth without development. We have demonstrated the inertial model, which almost exhausted itself and led the country to a standstill. We need a new paradigm of economic development, based on a new and radical modernization of the country's industrialization.

## References

- Bagautdinova N.G., Gafurov I.R., Novenkova A.Z. The transformation of region's economic area governed by the development of industrial region // *World Applied Sciences Journal*, 25(7), 2013, 1113-1117
- Bagautdinova, N., Gafurov, I., Kalenskaya, N., Novenkova, A. The regional development strategy based on territorial marketing (The Case of Russia) // *World Applied Sciences Journal*, 18(Issue SPL.ISSUE. 18), 2012, 179-184
- Gilmartin, M., Learmouth, D., Swales, J.K., McGregor, P., Turner, K. Regional policy spillovers: The national impact of demand-side policy in an interregional model of the UK economy // *Environment and Planning A45* (4) , 2013. pp. 814-834
- Huning, S., Naumann, M., Bens, O., Hüttl, R.F. Transformations of modern infrastructure planning in rural regions: The case of water infrastructures in Brandenburg, Germany // *European Planning Studies*19 (8) , 2011. pp. 1499-1516
- Inozemtsev She drowned. -URL: <http://zvezda.ru/economics/2009/10/08/crisis.htm>, free.
- Interstate Statistical Committee of the Commonwealth of Independent States. URL: [http://www.cisstat.com/rus/macro/mac2\\_an.htm](http://www.cisstat.com/rus/macro/mac2_an.htm), free.
- Melnik A.N., Mustafina O.N. The Organization of Russian Power Market in Modern Conditions // *Middle-East Journal of Scientific Research* 13. - 2013. - P. 91-94.
- Gabdrakhmanov N.K. and Rozhko M.V. Positioning of Volga Federal District Regions by Demographic Situation Index // *World Applied Sciences Journal*, Volume 30 Number 6, 2014. - pp.792-795
- Nurtdinov RM, Nurtdinov A.R. Formation of innovative growth factor as an imperative of the modern economy // *Herald Kazan Technological University*. - 2013. - № 13, 237-244
- Report on Human Development in the Russian Federation 2009 / Edited by S. Bobyleva. - M.: Aircraft, 2010. – P 163
- Russian reforms in facts and figures. -URL: <http://refru.ru/product3.pdf>, free.
- Safiullin L.N., Ismagilova G.N., Safiullin N.Z., Bagautdinova N.G. The development of welfare theory in conditions of changes in the

quality of goods and services (2012) World Applied Sciences Journal 18, pp. 144-149.

Study of the World Bank: Doing Business 2012. - URL: <http://gtmarket.ru/news/state/2011/10/21/3682>, free

The International Monetary Fund, World Economic Outlook Database // Access mode: <http://www.imf.org/external/pubs/ft/weo/2011/01/weodata/>

Wyrwich, M. Regional Entrepreneurial Heritage in a Socialist and a Postsocialist Economy // Economic Geography 88 (4), 2012. pp. 423-445.