Abstract

At present the modelling of macroeconomic processes appears to hold theoretical as well as applied interest. Hence, in the present article this method is used with regard to the Russian economy, presenting its actual economic practice in the last decade of the 20th and at the beginning of the 21st century. The author describes three macroeconomic models, taking into consideration the fact that the country is being profoundly influenced by the global financial crisis. The discussed models are: transition economy model, economic growth model and crisis-management model.

1. Introduction

The current state of Russia’s economic development attracts the attention of many analysts, both at home and abroad. The country’s steady advance and progressive development since 2000 has rather inspired hope than apprehension. Some have, however, understood that macroeconomic policy aimed mainly at exporting hydrocarbon feedstock – in consideration of global high prices – could neither last long, nor continually feed economic growth. Long-term orientation towards such policies poses the danger of preserving the low-tech sectors of national industry, whose products would not be competitive in the global market. The fact that the Russian Federation has recently been influenced by the
global financial crisis and the noticeable accompanying social processes make it necessary to analyze macroeconomic models applied in the Russian economics and to compare the present state of economy with the practices and results of the crisis economics of the 1990s.

The author analyses three macroeconomic models, taking into consideration the fact that the country is being profoundly influenced by the global financial crisis. The discussed models are: transition economy model, economic growth model and crisis-management model.

2. Models of the Russian Macroeconomic Policy

With the use of retrospective macroeconomic analysis principle in regard to the development of Russia’s economics in the years 1991-2008, three models can be marked out in the macroeconomic policies. The models present concisely the totality of measures that define the country’s course of development as outlined by its elites.

Firstly, it is the transition economy model. Its application consisted in: 1) taking measures to dismantle the soviet planned-economic administrative-command system of control over all sections of public production, and 2) forming the foundations of the market – on the basis of international experience, since, unlike many of its East European neighbours, Russia had broken ties with its pre-revolutionary market economy. Main thesis for the creators of this model – from the “500-days Programme” to free-market economy ideologists – has been the motto of the classics of economic thought of the early 20th century: “The less of the state – the better!”(Konceptiya i Programma..., 1990).

Secondly, there is the economic growth model. It envisages developing the domestic economy on the basis of market institutions already established, new legal system, opportune high global demand on hydrocarbon feedstock and on agricultural products. The guidelines for the ideologists of this model have been the propositions of the necessary structural reorganization of economy, doubling economic growth and increasing the country’s competitive ability in the global market, overcoming the uncontrolled liberalization in economics and the grab-what-you-can privatization, acknowledging economic globalization as an objective process and enhancing Russia’s participation in the world’s economic ties.

Thirdly, there is the stabilizing crisis-proof development model. It stipulates the measures to minimize the scope of crisis and to mitigate its impact
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on the population and on economy. The premise for taking these actions is deploying the “economic safety cushion” formed with the use of the economic growth model measures. The stabilizing model also refers to the traditional idea, advocated by J. M. Keynes and N. D. Kondratyev, that in the times of crises the state must interfere as a regulating force.

**Macroeconomic model of the transition period** (1991-2001), encompassed the transition from the soviet administrative-command centralized control system to the market model of socioeconomic development, and was being realized in the conditions of a general crisis in the whole country. Severed industrial and commercial ties between the economies of the former Union Republics; sharp decrease in production in all sectors of economy; accepting foreign debt by the RF as the USSR’s legal successor; inflation degenerating into hyperinflation; budget deficit, depreciation of the currency and a dramatic emergence of unemployment – all these factors had lead the country’s economy to the verge of disaster. A general crisis became apparent in all the vital activities of the society: industry, banking, commerce and in the social sphere. The following indicators testify to this: labour efficiency went down by 30%, GDP per capita (in terms of parity of purchase power, PPP) fell behind the US by 5 times, behind Japan and Germany – 4 times; the flight of capital intensified, inflation soared, pauperization of the populace escalated. Such conditions necessitated taking extraordinary macroeconomic measures in order to lead the state out of crisis.

Making the transition to the market-oriented economy was accompanied by the formation of the new normative, legislative base. The “Property Rights in the RF” law was passed, followed by an act on privatization of state-owned and municipal enterprises, a bill on encouraging entrepreneurship and antimonopoly law. In the mid-1990s the civil code, the tax code, and the land law were passed. As a result, legal basis was established for the denationalization of economy, and for the growth of private property, for the transference of the state-owned and municipal property into the hands of new managing subjects. Until the late 1990s around 90,000 enterprises had been privatized, which made up to 60% of all the economic units on entity accounting. At the beginning of the 21st century about 10% of the enterprises in Russia belonged to the government or municipalities, over 70% were privately owned and 3.5% were Russian joint ventures (Rossiyskiy statisticheskiy... 2007). Implementation of the above measures also helped to organize new forms of enterprises (joint-stock company, company limited, close corporation, limited liability partnership, etc.), supported the functioning of small and medium-sized businesses and facilitated agrarian reform.
The above was supplemented with the formation of new banking and tax systems and with liberalization of the foreign-economic activity. The described steps of the transitory period resulted in laying the foundations for free enterprise and for the new relations in foreign trade policy. The total economic monopoly of the state was overcome. Instead, a heterogeneous economy has been formed with its new forms of management, and the economy of deficit gave way to the economy of growth (Stolbov 2005).

The macroeconomic model of accelerated economic growth and modernization was proposed by the political elites in 2001. It was put forward on the strength of the following facts: market institutions had already consolidated in the socioeconomic life of the country; a breakthrough was manifest in the dynamics of the GDP growth (in 2000 – 6.4%, 2001 – 10%, 2002 – 5%, 2003 – 4.7%, 2004 – 7.3%, 2005 – 6.8%, 2006 – 6%, in 2007 – 8%; average annual increase in GDP in Russia for the period 2001 – 2007 amounted to 6%, while in the global economy it was 2.5%, and in the US – 3.1%); foreign trade turnover had risen, and the state’s budget had moved from the condition of deficit to the one of surplus. In all fairness, it should be noted that these economic successes were mainly due to deploying the country’s potential of resources (Russia’s resources potential per inhabitant exceeds the same indicator for US by 2-2.5 times, for Germany – 6 times, for Japan – 10-20 times).

As regards the components of the growth model, they were as follows:

1. Modernizing the manufacture in the leading sectors of economy by means of all kinds of investments (national and foreign, government and private, gross, direct, portfolio investments, production investments). The necessity of modernization resulted from the fact that production facilities had gone beyond the verge of moral depreciation by 60% (in some branches more: in oil processing – by 75%, in gas processing – by 80%), while the physical depreciation had been exceeded by 1/3. The wear-life of basic production assets had reached 21 years, as opposed to 7 to 8 years in the developed countries. Introduction of new facilities had shrunk threefold, and in the power industry even fivefold.

2. So that the modernization of production programme could be realized, a special Investment Fund was established, into which 3 trillion roubles (1.14 billion USD) were transferred from the national budget and another 70 billion roubles were allotted from the Stabilization Fund. Also the policy of encouraging foreign investment complied with the objectives of modernization. The volume of investment increased between 2000 and 2007 from 11 to 21 billion USD, including FDI – from 4.43 bn to 27.8 bn USD;
portfolio investments –145 million USD to 4.2 bn USD; other investments from 6.4 bn to 89 bn USD\textsuperscript{60}.

3. Implementing new technology policies, in accord with which industrial parks (the town of Dubna, Zelenograd, Tomsk, St. Petersburg) and industrial zones (Yelabuga and Lipetsk Oblast) were allotted, and federal task programmes “National technological base for 2007 – 2011” and “Electronic computer base development 2007 – 2011” were issued. Financial and organizational support for these policies came from establishing the Development Bank (with authorized capital stock of 2.5 bn USD), Venture Company and Nanotechnology Corporation.

4. Accepting the programme for improving living standards and social sphere for the populace by means of creating a surplus in the national budget, which would result in income rise.

5. A programme for improving credit, financial and tax routines was endorsed.

6. Increasing foreign trade turnover (in 2007 export and import amounted to over 500 bn USD). An export potential has formed in Russia by way of selling software products (sales volume of 1.56 bn USD, that is world’s fourth biggest), energy resources (petroleum and gas) and primary agriculture products (9.1 bn USD). Russia keeps the leading position in the nickel, titanium, palladium, cement, glass, asbestos and mineral fertilizers export. The trend continues as regards a relatively high proportion of export depending on the products of heavy engineering industry, energetic engineering industry and electrical products (cables, wires, electrodes, generators, transformers, light bulbs, microwave equipment). Foreign buyers still show interest in the Russian space technology (space communications systems, Galileo-GLONASS navigation).

7. Increase of the GDP and national income, including the GDP per capita. Since the beginning of 2000 a breakthrough has been observable in the economic dynamics, marked by GDP increase from 1.16 to 2.08 trillion USD (in terms of PPP in 2005). Only in 2006, however, the level of GDP approached that of 1990: GDP per capita rose accordingly from 7973 to 11900 USD (by PPP in 2005). Among the major countries Russia ranks the eighth, and its share in the world’s GDP is 3.09\% (Miroyaya ekonomika ...No 12, 2008, pp. 35).

8. A package plan was outlined with the view to competitive recovery of several branches of economy. The issue of competitiveness is an important

\textsuperscript{60} www.gks.ru; www.akdi.ru [Federalnaya sluzhba gosudarstvennoy statistiki; Agentstvo konsultacyi i delovoy informacyi].
point in the structural reorganization of Russia’s economy, since at present in the global competitiveness ranking Russia rates 58th among 121 countries (Miroyaya ekonomika ...No 12, 2008, p. 35) Such a low position is determined by a number of coefficients, including: quality of the macroeconomic policy (11th place), openness of the economy (30th place), effectiveness of the labour market and innovations (35th place), effectiveness of the financial markets (91 place), effectiveness of the public administration (93rd place). The reasons of the fairly low competitiveness level can be traced to the 1990s’ neglect of scientific and technological advance: the federal expenditure on NIOKR (Research and Development) in the last 17 years has slightly risen, amounting to 12 bn USD (1.2% of GDP and 0.6% of global R&D input), which is 7.5 times less than in Germany, 22 times less than in Japan, and 45 times less than in the US. Expenditure on innovations is also insufficient: 5-10%, compared to 34.6% in the US, 42.3% in Japan, or 50.0% in the EU (Miroyaya ekonomika ...No 7, 2008, p. 14).

All the above figures point to the competitive weaknesses of the Russian economy. This is also manifest in other symptoms: outdated technologies remaining implemented in most branches of the national economy, exceeding material intensity and costliness of manufacture, great depreciation of the fixed assets, and very limited possibilities of internal accumulation, which makes modernization of economy strongly dependent on international capital inflow. Other negative factors pertaining for the competitive weakness of the economy include rampant bureaucracy, a surge of criminal activities in the economic sphere, gross inequality in the economic and social development between Russia’s regions, etc. Thus, as regards information technologies and communications, in the international ratings Russia takes as low a position as the 52nd. The country’s export consists predominantly of: petroleum, oil products and natural gas – 60.6%, metals and metalware - 13.9%; more than 60% of exports are low-tech products.

All the instruments for diversifying the economy are exclusively at the disposal of the government. Improving the situation of the Russian science is an absolute necessity, since it would be impossible to build a postindustrial economy without it.

Given the economic crisis, political instability and pervasive social problems in the country, the opportunities to solve the low-competitiveness problem are rather limited at present. Nevertheless, these opportunities should be fully exploited, as they will be conducive to real or potential competitiveness of Russia’s economy in the global market.

Raising the question of competitive ability is also connected with the objective analysis of the potential advantages in the economy, which matters for
the construction of the macroeconomic policy. Among **Russia’s potential competitive advantages** the following can be enumerated: 1) having at one’s disposal such natural resources (mineral, land, water and forest resources) that are in some respects of global importance, combined with abundant human resources of high education level and good professional training; 2) considerable scale of accumulated basic production assets of national economy; 3) the existence of unique advanced technologies based on the achievements of Russian science – in some branches of industry (mainly in the military-industrial establishment). In the structure of Russian industry and services there are several sectors that, given their unique high-tech, could easily act as an **export battering ram**, boosting further export. Such a role could be played, first of all, by the space, laser and nuclear industries, shipbuilding, space technologies, software engineering services and conducting geological surveys. To the greatest extent the unique technologies are employed in the defence industry output. It can be seen in the results of Russia’s participation in various international armament exhibitions in the last years, confirming the high international competitiveness of Russian weapons.

In the macroeconomic policy of **modernization and enhancing competitive ability**, the RF Government relies on several steps:

- **The federal law “On Special Economic Zones”** was passed. Under this law, residents of SEZ are exempt from land-tax, real estate tax and VAT, as well as from import duty on equipment.

- **Four technology-innovation zones** (in Dubna, Zelenograd, Tomsk, St. Petersburg) and **two industrial zones** (Yelabuga and Lipetsk Oblast) are being established with the view to effect a breakthrough in modern technologies.

- The **“Start” project**, oriented towards the new innovative policy, is under realization. To this effect the large Development Bank has been founded, with authorized capital stock of 2.5 bn USD.

- Efforts are being made to strengthen the country’s position as energy supplies exporter. Thus, the building of **international pipelines** is being pushed: the “Blue Flow” (“Goluboy potok”, Tuapse – Samsun), “Southern Flow” (“Yuzhnyi potok”, Russia – Bulgaria), “Northern Flow” (“Severnyi potok”, Russia – Germany, along the bed of the Baltic Sea), as well as a pipeline through Siberia to China, etc.

- Russian investments are directed into the potentially competitive sectors: 55.7% into extractive industries, 3% into transportation equipment manufacture, 2% into electronic and optical equipment. Foreign investments are directed into: extractive industries – 58.4%, transportation equipment
manufacture – 2.3%, production of machines and industrial equipment – 1.2%, electronic and optical equipment – 0.8%.

To bring Russia up to the developed postindustrial countries standard as regards competitiveness, it is necessary to increase the share that high-tech sectors have in GDP, from the current 10.5% to 17-20%, while reducing the oil and gas share from 22% to 11.8%. This could be achieved if the share of innovation implementing companies grows fourfold – up to 40-50% of the total number of Russian companies, and if the export of machine building output rises by 4.6 – 5.6 times. The foundations of nanoindustry have been laid. Currently, more than 150 scientific centres are conducting the prediscovery and research in this field, and around 70 organizations carry out production using nanotechnology elements. In order to bust the breakthrough in the nanoindustry, budget allotments of c. 200 bn roubles are intended until 2015.

Modernization and growth acceleration in the Russian economy slowed down in mid-2008 because the world was facing a financial crisis, which at the beginning of the year 2009 became global. Such circumstances made it necessary to work out a package for modelling the economy’s development that would allow for the processes typical of the economic crises (decrease in GDP production, economic growth slowdown, unemployment rise, shrinking of the revenue in the state budget, fall in exchange for the national currency, inflation rate increase), as well as for extraordinary measures on the part of the state aimed at leading the country out of depression.

The model of economic development in the conditions of a global financial crisis consists of a set of macroeconomic measures which reflect the world community’s experience in combating the crisis phenomena. Yet it also takes into account the specific character of a given country, of its opportunities to alleviate the crisis processes.

Russia could not have averted the global depression because its economy had been bound with financial institutions in the US and in other countries. The losses in the RF’s financial sector amounted to 1 trillion USD according to Russian assessments, while IMF experts assess it to be 2 trillion USD. National GDP decrease expressed in roubles is projected at 2% rate, calculated in dollars, debts included – 20% (Ekonomika i zhizn, No 4, 2009, p.2, 4) State budget deficit for 2009 may amount to 8-10% GDP.

Changes took place in the labour markets of many countries, consisting especially in the surge of unemployment, which reached the number of 198 millions of people (Ekonomika i zhizn, No 6, 2009, p.2). In Russia the unemployment rate rose from 5.9% at the beginning of 2008 to 7.7% early in 2009. Officially registered unemployed numbered 1.8 million, (the expected rate could reach 2.2 millions of unemployed). According to the Russian Federal
Service of State Statistics (Rosstat) data, the total number of jobless citizens amounts to 6.1 million. According to the regional placement services, in 2008 around 12.5 millions of Russians sought help from the public employment offices. Women of all ages constituted 65% of the unemployed, persons of both sexes aged 45-54 – 44%, those aged 30-40 – 30% (Ekonomika i zhizn, No 3, 2009, p.18).

In the conditions of the global financial depression, a crisis-management model for developing the economy was worked out in Russia. Its manifestation is the government’s Programme for minimizing the scope of crisis and mitigating its impact on economy and on the whole population. An important part of the programme is constituted by measures connected with the government’s interference into the economic processes. To effect the interference 10 trillion roubles were reserved from the national budget, Central Bank and reserve funds.

Among the macroeconomic measures taken stand out those which are connected with supporting national financial system, especially supporting the leading banks (similar actions are carried out in many countries). On the strength of the RF Government’s decision, over 1 trillion roubles was assigned for these purposes, especially to supplement the banks’ capitals: for Sberbank – 500 bn, for VTB Bank (Bank vneshney torgovli) – 200 bn, for Rosselkhozbank (‘Russian Agricultural Bank’) – 25 bn, and for other banks – 225 bn roubles. Other 430 bn roubles are to be placed in deposits in commercial banks or in the securities of state corporations, while 3 trillion roubles are earmarked for granting unsecured loans.

Measures aimed at supporting national economy branches include:

- A list was drawn up of 295 enterprises (including holding companies) of socioeconomic importance, being big employers. The businesses will be supported by means of government contractual work, subsidizing credit interest rates, state guarantees and restructuring outstanding taxes. To stimulate production and to forestall bankruptcy of the enterprises, steps were taken to loosen the “credit curb” by means of lowering lending rates and by providing the banks with 4.5 trillion roubles for issuing credits to the leading businesses.

- For crediting Russian debtors, Vnesheconombank (VEB, ‘External Economy Bank’) was provided with 50 bn USD meant to refinance the foreign loans secured against assets located in the territory of Russia. The aim is to protect Russian businesses against hostile takeovers.

- For oil extraction: tax holiday has been announced for new field developments in the shelf seas and in certain districts in Siberia. Exemption limit was raised to 15 USD per barrel when calculating the tax rate.
• For **motor industry**: subsidies for interest rates have been offered to citizens buying cars worth 350,000 roubles on credit. The freight tariffs are to be nullified for rail and road transits from the European territory of Russia into Siberia and the Far East. Financing public purchase of motor vehicles, fleet replacement for municipalities and enhancing leasing through 43 bn roubles’ credit is also planned.

• For **agricultural sector** actions include: the recovery of expenses on fuels, lubricants, fodders and fertilizers to the sum of 28 bn roubles; crediting agrarian-industry complex up to 860 bn roubles; supplementing the Rosselkhozbank’s capital by 75 bn roubles and Rosagroleasing (The State Agro-Industrial Leasing Co.) by 25 bn roubles; lifting prepayment on leasing for 12 months; introducing new import quota on raw meat; augmenting government purchases of crops.

• For **air transport** the following measures are outlined: crediting individual airlines up to 30 bn roubles and compensating the cost of passenger traffic from the Far East and North of Russia in the amount of 1.7 bn roubles.

• For **retail trade network** it is planned to mitigate VAT with the view to containing the rise in provisions prices.

• For the sake of **small and medium-sized enterprises development**: measures are taken to increase the line of credit to 30 bn roubles and to support the creation of new efficient small enterprises with 10.5 bn roubles. Preference is given to small businesses when buying out a government or municipal rental property. SMEs also benefit from lowered fees for connecting to lower-power electricity networks.

• To **support the enterprises in the productive industries**: reducing tax burden is provided (VAT payment scheme has been changed from quarterly to monthly one and income tax is now based on actual profit, not on the profit of payment); optimizing VAT advance payment charging; easing the rules of outstanding taxes repayment. Amortization allowance was raised from 10% to 30%, while income tax rate was lowered from 24% to 20% (in the constituent territories of the RF tax rate may be defined within the range of 5-15%).
To protect the regions from crisis phenomena around 300 bn roubles have been allotted.

The crisis-management programme reflects the country’s specificity in that the support for the populace is socially-oriented, 460 bn roubles being earmarked for these purposes. In the first place, such orientation is realized through arrangements for the labour market:

- In 2009 the law was passed, which includes amendments to the 1991 “On National Employment” act. It regulates the protecting measures over citizens in case of losing a job.
- The volume of financial support for labour-market situation was determined at 44 bn roubles.
- Russian Jobs Bank was formed, collecting 750,000 vacancies.
- Actions were fixed for retraining in advance 114,000 people who are at risk of losing their jobs.
- Financing was allotted for the 27,000 citizens ready to move to other regions of the country in order to obtain jobs.
- Efforts to create new jobs for 40,000 Russians are being financed.
- The amounts of unemployment benefits were fixed (the maximum amount being 4900 roubles), as well as two modes of drawing the benefit: either depending on unemployment duration (for the first 3 months – 75% of the average monthly salary, next 4 months – 60%, last 5 months – 45% of the same), or receiving for 12 months the same benefit settled as the minimum amount of the allowance calculated against the regional coefficient, defined in the specific region). The benefit would also be paid, in full, to the citizens who have resigned, not lost, their positions.
- Up to 50 bn roubles have been earmarked to organize public works (Ekonomika i zhizn, No 3, 2009, p. 18).

To protect the citizens’ deposits, the rate of covering in the case of bank’s bankruptcy was defined (as 700,000 roubles).

In the conditions of crisis every state faces the dilemma of deciding on budget deficit. The 1929-1933 depression was the first to pose the problem for F.D. Roosevelt’s administration. Then, the deficit proposal, put forward by J. M. Keynes, initially got cold reception, but the harsh reality of life was to prove Keynes right (Keynes 2007). In those years in the US it was a forced decision: it was necessary in view of the package plan adopted, and to relieve the social tensions (marches of farmers and hungry people on Washington). Nowadays, budget deficit will be acknowledged in many countries. It is, however, important to fix its rate, lest the financial condition should cause
a burst of inflation. In the Russian economy the state budget deficit for 2009 is projected at the rate of 7.4 GDP (3 trillion roubles), which is equal to a half of its revenue.

Since mid-2008 the citizens, afraid of losing their deposits, have withdrawn from their accounts over 300 bn roubles and begun to actively buy hard currency. The latter resulted in the fall in rouble exchange rate. To relieve the tension and to support the exchange rate a dollar intervention was carried out. On the foreign exchange market several million dollars were sold by the Central Bank. The double-currency exchange rate was ordered – against both dollar and euro within each specific exchange rate. Currently the situation on the exchange market is stable.

Finally, among the measures taken by the government two more should be stressed: tight control over inflation (preventing the issue of banknotes) and employing Reserve Funds (the means of which are partly invested in foreign bonds, 30% are in national banks, 15% in international financial organizations, 30% in deposits).

3. Conclusion

In the paper three models of the Russian macroeconomic policy have been presented. They refer to different periods of economic development in Russia. They underlie different approaches in macroeconomic policy due to main economic purposes taken in these periods. Whereas the transition economy model indicated to the transition from the central plan to the market and the economy growth model focused on the factors aimed at accelerating of economic growth, the crisis management model concentrated on the active role of the state in the economy. Generally speaking, one can say that the changes of macroeconomic policy models in Russia were in line with the changes in macroeconomic conditions and the basic macroeconomic goals of the government.

References

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Streszczenie

MODELE POLITYKI MAKROEKONOMICZNEJ W ROSJI NA PRZEŁOMIE XXI WIEKU

Modelowanie procesów makroekonomicznych przyciąga ostatnio uwagę teoretyków i praktyków gospodarczych. Podejście modelowania zostało zastosowane w niniejszym artykule w odniesieniu do gospodarki rosyjskiej przełomu XX i XXI wieku.

Autor analizuje w artykule trzy modele makroekonomiczne polityki gospodarczej: model gospodarki transformującej się, model wzrostu gospodarczego i model zarządzania kryzysem.