

By Andrey Makarov, Alexander Pakhomov

The Role of the Foreign Economic Factor in the Country's Innovation Development

At the present stage, the policy of a majority of developed states and dynamically developing countries is aimed at implementation of the innovation scenario of development through efficient utilization of the foreign economic factor. It is to be noted that the “quality” of foreign economic ties is a direct indicator of the general level of social and economic development of the state whose material base is R&D outputs and advanced technologies developed on their basis.

In autumn 2009, a modernization concept was formulated in Russia. It provides for development of intellectual and scientific potential of the country by means of both import of leading-edge technologies required for the economy and the export of competitive domestic innovation products to the global market¹.

Also, five strategic lines of economic modernization were determined. At the present stage, implementation of the above lines suggests active engagement in that work of Russia's foreign economic complex:

- Energy-efficiency and energy-saving;
- Nuclear technologies;
- Computer technologies and software;
- Space technologies and telecommunications;
- Medical technologies and pharmaceuticals .

At present, a transfer to the innovation way of development of the Russian economy is carried out within the frameworks of the catching-up modernization concept. In that context, the official approach suggests an interchangeable option of a switch over to innovations by means of combining the “catching-up” way of development (where foreign finished R&D products are actively utilized) with Russia's leading positions in some segments of the global innovation process.

Within a short period of time, the issue of economic modernization became popular and largely predetermined the lines of activities of the Government of the Russian Federation, including the Ministry of Economic Development of the Russian Federation which is responsible for development and realization of the state policy in foreign economic relations. It is to be noted that in a broad sense the term *modernization* is not quite clear to Russia's foreign partners because its foreign analogue suggests a technological aspect only. Due to that, difficulties often arise both in trade and political negotiations and implementation of the achieved arrangements.

¹ D. A. Medvedev. Russia, Forward! // Web-site of the President of the Russian Federation, September 10, 2009. <http://www.kremlin.gov.ru>

Despite the three-year period of implementation of the modernization concept, at the present stage a number of small and non-system transformations in development of the foreign economic component in compliance with objectives of the innovation development can be mentioned².

So, in particular, to carry out technical due-diligence of the foreign economic projects selected for support the Ministry of Economic Development of the Russian Federation concluded 43 agreements on cooperation with experts and research entities, as well as institutions of development, including the Russian Academy of Sciences, the Skolkovo Fund, GK Rostekhnologii and other. Under the auspices of the above ministry's working group on coordination of development of foreign economic activities in modernization of the country's economy, measures of target state support of international innovation projects, including "technical assignments" to Russia's commercial consulates abroad were developed³.

In development of the above lines, inter-government and inter-departmental agreements with foreign states, as well as plans of actions (lists of pilot projects) on cooperation in modernization, including *Partnership for Modernization: Russia – the EU*, a multiparty initiative were signed⁴.

For objective analysis, it is necessary to point out development of the information component of the foreign economic factor of modernization. In 2010 and 2012, the web-site of foreign economic activities, as well as the site of Partnership for Modernization: Russia – the EU⁵ started to operate. In addition to the above, in accordance with international experience the practice of business-missions of public officers with a group of Russian businessmen within the frameworks of large international events became more and more required.

Positive examples in the above area are not numerous. They include a successful expansion abroad of domestic innovation nuclear technologies and services. So, in 2012 GK Rosatom's portfolio of orders from abroad amounted to \$69bn (for reference, Rosvooruzhenie – a traditional exporter of high-tech products – has got \$40bn worth of potential contracts)⁶.

Also, at present the government program on promotion of Russian navigation technologies and GLONASS equipment in six foreign countries is being developed. Target

² In practice, a project-oriented approach to an economic modernization based on the need to produce quick results without taking into account real problems requiring long-term solutions was carried out. It appears that the Government of the Russian Federation did not virtually deal on a system basis with issues of development of innovations in foreign economic activities.

³ The web-site of the Ministry of Economic Development of the RF <http://www.economy.gov.ru>

⁴ The main mechanism of implementation of the initiative -- *Partnership for Modernization: Russia – the EU* -- signed at the Russia-EU summit on June 1, 2010 in Rostov-on-Don was sectorial dialogues which deal with profile technical assignments and innovation projects within the frameworks of the specific sector. On October 11-12, 2012, a Conference on Partnership was held at the Ministry of Economic Development of the RF where the outputs of such dialogues were summed up and topical issues of cooperation and prospects of future networking discussed. <http://www.formodernization.com>

⁵ <http://www.ved.gov.ru>, <http://www.formodernization.com>

⁶ So, for instance, at present the sphere of interests of GK Rosatom in Eastern Europe includes supplies of fuel, modernization and building of new projects on the basis of capacities of the nuclear power plants in the Check Republic (Temelin Nuclear Power Plant), Slovakia (Mokhovitse NPP and Bogunitse NPP) and Hungary (Paksh NPP).

purchases of high-tech assets abroad were carried out by Rosnano and a number of private investment funds.

Late in 2011, an important innovation was the approval of the Strategy for Innovation Development of the Russian Federation till 2020 which included, among other things, a foreign economic component (see *Table 1*).

Table 1

Target indicators of fulfillment of objectives as regards the line: Participation in the Global Innovation System

Indicator name	2010	2013	2016	2020
Unit weight of the export of Russian high-tech products in the aggregate global export volume of high-tech products, %	0.35 (2008)	0.4	1.1	2
Number of triad patent families (patents registered on an annual basis by Russian individuals and legal entities at patent offices of EPO, USPTO and JPO)	66 (2008)	over 300	over 1000	over 2500
Unit weight of researchers at the age below 39 years delegated to work (take a trainee job) at foreign research institutions, %	23	37	48.5	50
Balance of export-import of technologies, billion \$.	-1 (2009)	-0.9	-0.6	over 0.3

Source: *The Strategy for Innovation Development of the Russian Federation in the Period till 2020*; October 2011 p. 110, the Web-site of the Ministry of Economic Development of the Russian Federation: <http://www.economy.gov.ru>

In October 2012, a draft state program – *The Economic Development and Innovation Economy* – was published. It is expected that the above program’s implementation estimated at Rb 356bn will permit Russia by means of development of international cooperation to move from the 64th place (in 2010) in INSEAD, a global innovation index to the 40th place by the year 2015⁷.

It is to be noted that in the 2012 WEF Global Competitiveness Rating Russia moved down to the 67th place (out of 144 places) from the 66th place in 2011. In addition to that, as regards the extent of innovation which is a base component of the rating Russia moved 11 positions down to the 108th place.

As stated by experts, foreign investments in general do not bring to Russia new technologies and know-how⁸. Despite the orientation to attract the so-called high-tech investments, as regards the extent of the impact of direct foreign investments (DFI) on technological process Russia is rated 135th in the WEF rating (the 129th place in 2011)⁹. Notably, in the WEF ratings as regards the level of protection of ownership rights, independence of the judicial system and efficiency of state governance Russia is rated the 133rd, the 122nd and the 130th, respectively.

⁷ In 2011, Russia was rated the 56th (between Serbia and Oman) in the INSEAD rating. The Web-site of the Ministry of Economic Development of the Russian Federation -- <http://www.economy.gov.ru>

⁸ S. Pukhov., Direct Investments: the Quantity does not Always Turn into Quality, "Comments on the State and Business" (KGB), Development Center of NRU HSE, No. 7, October 2011, p. 12.

⁹ The Global Competitiveness Report 2012-2013, World Economic Forum, Geneva, 2012, 545 p.

The fact that the above positions in the ratings are not far from one another is evidence of interrelation between the state of the institutional environment and the extent of development of innovations in the country. It is for that reason that foreign capital investments in Russia are regarded less and less as a source of technologies and it is becoming clear that strategic foreign investors do not take any large-scale interest in Russian assets due to the existing business climate and institutional environment.

Due to the above, the concept of “attraction of technologies in return for the market” is of interest. The main objective of that approach consists in opening up of some segments of the domestic market for attraction of DFI in order to acquire modern equipment and technologies. As they are introduced and adopted, in the receiving country independent competence in the sphere of development of technological support is to be formed and, thus, the level of development of national innovations will be upgraded.

The National Entrepreneurial Initiative to Improve the Investment Climate in the Russian Federation is worth mentioning; it is a priority program of the Russian Government which includes 22 projects (road maps) aimed at making the existing business procedures simpler and less expensive and lengthy¹⁰.

As it appears, successful fulfillment of tasks set in “road maps” may have an effect both on development of innovations in case of a qualitative change in the investment climate and upgrading of the institutional environment in the country. It means that a high-tech product from the start-up date till commercialization and promotion onto foreign markets should be in a favorable environment, that is, ownership rights are protected, researchers supported, patenting procedures made simpler, corrupt practices fought against and effective measures of support of innovation export taken.

However, successful implementation of the objectives set in the above documents should be treated with cautious optimism. For instance, the export support road map¹¹ was approved in general in May 2012, however, in the past six months nothing substantial, except for the implementation plan, has been done.

At the same time, at the current stage it would be expedient to pay higher attention to a major factor of innovation development, that is, rendering of support to purchases of foreign high-tech assets¹². However, at present in Russia (unlike China and the USA¹³) there are no effective state agencies which assist purchasing of high-tech assets. Established late in 2011, the Russian Agency for Export Credit and Investments Insurance (EKSAR) has failed to produce any tangible outputs so far.

¹⁰ The strategic objective of that initiative consists in quality improvement of the investment climate in the Russian Federation and upgrading of the country's position in the World Bank's rating of accessibility and simplicity of business procedures from the 120th place to the 20th place by 2020.

¹¹ The implementation plan of the road map on Support of Access to Foreign Markets and Support of Export was approved by Resolution No. 1128-r of July 29, 2012 of the Government of the Russian Federation.

¹² For more detail refer to: A. Pakhomov. Purchasing of High-Tech Assets Abroad as a Factor Behind Innovation Development / Strategy of Innovation Transformations of Russian Economy in the Post-Crisis Period // edited by A.N. Folomiev, Moscow, RAGS, pp. 159–169.

¹³ China's State Investment Corporation, the US Ex-Im Bank and the US Corporation of Foreign Private Investments.

Another factor which may determine in the mid-term prospect the innovation development is Russia's membership in the WTO¹⁴. In that connection, in the short-term prospect Russia's foreign economic complex will face the following three groups of objectives with Russia's rights and obligations in the WTO¹⁵ taken into account:

- Utilization of foreign technologies, equipment, leading edge know-how and competence and attraction of not only foreign experts in the area of innovations and high technologies, but also managers and experts in commercialization of R&D outputs;
- Attraction of foreign investments, primarily, those related to a transfer of technological designs and R&D and introduction of leading international know-how and advanced experience into Russian practice;
- Expansion of the presence of the Russian innovation business and domestic products on the global market.

Due to the above, the most important advantage in terms of the foreign economic policy is a nondiscriminatory regime for Russian participants in foreign economic activities on foreign markets and development of innovation branches of industry in a competitive international environment. As regards the system issues, the main instruments established by the WTO norms and rules should serve as catalysts of development of innovation branches of the national economy.

To facilitate a switch-over of the economy to the innovation way of development, it is crucially important to ensure protection of outputs of intellectual activities (intellectual property - IP) on the basis of the universally recognized international rules. As expected, the WTO Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS)¹⁶ which is based on the norms of the World Intellectual Property Organization (WIPO) and sets such minimum standards of protection of intellectual property as are applied in international trade has the main role to play in that context.

The TRIPS provisions ensure a non-discriminatory regime within the frameworks of systems and procedures for registration of intellectual property projects abroad, an access to the international and public mechanism of settlement of disputes and positioning of Russia as a state which created favorable conditions for development of joint forms of innovation, commercialization and export of innovation products.

Also, with flexible application of the General Agreement on Trade and Services (GATS) the innovation sector of innovation services may become more highly technological and will be able meet the OECD "middle-tech" and "high-tech" criteria. At present, sales of Russian science-intensive services are growing fast (including those of the military industrial complex).

¹⁴ On August 22, 2012, the Russian Federation became the 156th member-state of the World Trade Organization in accordance with the adopted procedures.

¹⁵ Strategy of Innovation Development of the Russian Federation till 2020, Web-site of the Ministry of Economic Development of the Russian Federation -- <http://www.economy.gov.ru>

¹⁶ The Results of the Uruguay Round of Multilateral Trade Negotiations (The Legal Texts), Annex 1C, Agreement on Trade-Related Aspects of Intellectual Property Rights, WTO, Geneva, 1995, 492 p.

It appears that due to both a tougher global competition for innovation assets in the post-crisis period and the historical specifics of Russia's sectorial economic structure in which low-innovation industries dominate¹⁷, technologies and services of the "middle-tech" category are more perspective and required for Russia at the current stage.

So, a professional utilization of provisions of the WTO agreements on TRIPS, GATS, TBT¹⁸ and other may produce a synergistic effect on the country's innovation development and domestic business as regards growth in technological effectiveness of goods and services provided in Russia in conditions of competition with leading foreign producers, as well as in the area of export deliveries by Russian companies to foreign markets.

In terms of development of the Russian foreign economic policy in the mid-term prospect, it is worth mentioning preparations for Russia's joining the OECD. High standards and recommendations developed by the above organization on various social and economic issues¹⁹ may become an additional factor behind motivation of innovations.

At the same time, it is important to pay attention to the fact that the foreign economic factor in general and in implementation of the Russian modernization strategy, in particular, was highly underestimated and utilized ineffectively which situation, by the way, reflects Russian realities. It is a trans-border exchange of goods, services, technologies and investments that predetermines to a large extent innovation development of any country in the long-term prospect.

According to the estimates of the Center for Macroeconomic Analysis and Short-Term Forecasting (CMASTF), by the year 2015 with the global financial and economic situation and stages of development of global technologies taken into account Russia will have to choose a scenario of foreign economic policy in the mid-term prospect: either remain in the "technological mainstream" and keep exporting energy resources and primary products or find a niche of its own in production of finished products²⁰.

The first option suggests that Russia will continue to be oriented at export of energy carriers and primary products, while the other one is aimed at development of domestic products that will be competitive on international markets. In such a case, efforts are to be concentrated on individual lines of development of highly technological products (primarily, transport engineering and energy industry), as well as broad modernization of mid-tech industries (heavy engineering, machine-tool building and chemical industry).

At present, the government's objective should consist in creation of "points of growth" all over the country and not the ephemeral modernization for which there are no relevant conditions so far. So, according to the research – *Clusters and Innovations in Constituent*

¹⁷ V. Kondratiev. Competitiveness of Russian Corporations on Global Markets, the Web-site of *Perspektivy*, <http://www.perspektivy.info>, 26.08.2008 r.

¹⁸ Norms of the Agreement on Technical Barriers in Trade (TBT) are meant to ensure a situation where regulations, standards, tests and certification procedures do not create unnecessary obstacles and, at the same time, grant WTO member-states the right to apply measures to achieve legitimate goals of regulation.

¹⁹ Including the main components of the investment climate: from intellectual property and taxation to corporate governance and foreign trade.

²⁰ Web-site of CMASTF -- <http://www.forecast.ru>

Entities of the Russian Federation – Russia is not yet the country where innovations and social and economic development directly depend on each other²¹.

Technologies alone without a favorable investment climate and developed infrastructure cannot be effectively adopted and become catalysts of economic growth because technically backward industries cannot be consumers of innovation products, nor will they create large-scale demand on such a basis. At the same time, both borrowing of technologies and development by Russian companies of modern methods of management (which is crucially important for Russia at the current stage) will permit to upgrade efficiency of production and create prerequisites for formation of the demand in innovations and comprehension of technologies in general in Russia.

It is to be noted that for a specific domestic company introduction of technologies used in developed countries, gaining of an access to export markets and ensuring compliance of its products with international quality standards is already a serious breakthrough. Due to the above, in the specific Russian conditions expansion of the export of high-tech products (goods and services) -- as a compensation of low demand in them on the domestic market and an additional factor of development -- is becoming particularly important.

It appears that a skillful utilization of WTO and OCED instruments should bring higher stability both to the Russian investment climate and development of the adequate infrastructure and, thus, create a favorable environment for innovation development. However, there are well-known risks and limitations due to low competitive edge of the Russian business, the innovation sector and the country's economy in general.

²¹ E. Kutsenko, D. Tyumentseva. *Clusters and Innovations in Constituent Entities of the Russian Federation : Outputs of Empiric Research* // *Voprosy Ekonomiki*, No. 9, 2011, p. 103.