

## Innovative Economy in Post-Crisis Age

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### Abstract

The global economic crisis has shifted main attention to the role of innovative technologies in the forming of the innovation economy. Russian economy has been severely impacted by the crisis downslide. This was predetermined by the export-orientated nature of Russian economy. Manufacturing sector is poorly developed which contributes to Russia's falling behind from developed economies. So now the only way to eliminate the gap is to introduce innovation into production and manufacturing and save them from shutdowns and downslides. So aim of the paper is to find a mechanism for Russia to shift to innovative economy.

**Keywords:** innovation economy, dynamics, management, information technologies, economic development

### 1. Introduction

Shifting to the innovative model of development remains the major challenge for Russia. The global economic crises of 2008 once again convinced us this is true. It demonstrated the danger of commitment to raw material exporting model of development. It was suggested that the crisis is going to become a turning point to renewal, a shift to progressive models.

In practice, though, no serious structural or technological shift in Russian economy has yet occurred. Moreover technological crisis is ever increasing. The latter could be proved by the fact that the processing industry is degrading, and long-term fuel delivery contracts with Western Europe and China are being signed. The long-running transformational crisis and a 10-year period of experiments in the economy resulted in destruction of major elements of scientific and industrial potential and sharp decrease of scientific research and development, serious structural misbalance with emphasis on the raw materials sector. Today its share in the industrial output has reached 50% (70% of export). At the same time the share of mechanic engineering amounts to 18% only (9% of export), whereas in industrially advanced countries this indicator reaches 36-45% [1, p.56].

In the past decade the share of science-intensive products fell by half. Innovative activity in the industry is less than 10% comparing to 50% in the EU countries [2, p.48]. Even in the fuel-and-power sector overflowed with financial resources there are only 3% of innovative companies. As a result Russian technologies lack competitive ability on the global science-intensive market. According to different estimates Russia's scientific products account for 0.3-0.5% of global innovative output [3, p.24].

In the past two decades Russian government was giving preference to liberal economic development and it fails to manage the industrial sector of economy efficiently. Within this period Russian innovative industries (considered to be generators of innovative demand) were washed out which resulted in reduction of innovative activity of Russian companies. The latter resulted in lower competitive ability of Russian economy, loss of positions on global markets of high-tech products. With the share of 0.3-0.5% Russian products are becoming almost invisible [4, p.46].

The existing situation is a real strategic threat of gradual loss of major and vital structures of scientific, technical and production potential of the country, absolutely necessary for stable economic growth, technical and (consequently) national security.

### 2. Problem-setting

In order to form a conceptually new situation in Russia it is necessary, first of all, to liquidate administrative and other barriers preventing innovative activity, to improve organizational

forms of financing institutions and innovative companies, to eliminate unnecessary regulation of the life-cycle and export-import operations of the latter; to improve legislation on state purchases in respect of choosing contractors and implementing the R&D, recording of specifics of the scientific products and services as commodity output, as well as specifics of implementing the R&D with long development cycle. Secondly, to create a system of incentives for innovative activity such as researches and new technologies.

The major way of coming out of recession and shifting to a new path of development is a large-scale technological and informational modernization of the country. Scientific domain is able and is bound to become a basic development tool, a drive which directs state and society resources to specific projects able to be locomotives of country's modernization in the 21<sup>st</sup> century.

Should Russia fail to acquire multiple-vector innovative development in the nearest future, it can fall behind forever. One should take into account that switching to the 6<sup>th</sup> technological mode is going to introduce considerable social innovations. The country should become a leader of the scientific, technical and social progress.

### **3. Literature review**

The problem of breakthrough to innovative economy and state support of innovative entrepreneurship was discussed in scientific literature of the 19<sup>th</sup> century. The complexity and topicality of choosing a social and economic development trend resulted in the scientists being interested in the national and state system issues throughout the history of humanity starting with Smith A, Keynes D, Marx K, Vebleh T., Hayek V., List F, Olson M., Erhard L., Mises L., Eucken W.

Conceptual and practical aspects of interaction between business, state and society are studied by such domestic scientists and practitioners as L.I. Abalkin, G.V. Gorlanov, A.G. Gryaznova, A.F. Gingolia, C.V. Ivchenko, V.L. Inozemtsev, A.I. Kapterov, G.B. Kleiner, L.N. Konovalova, S.V. Korostev, M.I. Korsakova, N.N. Lebedeva, S.E. Litovchenko, A.V. Luzina, F.F. Sterlikov, G.L. Tulchinsky, A.Yu. Yuldanov, V.N. Yakimets.

Their activity was based on theoretical researches and concepts of Moscow State University named after M.V. Lomonosov, Institute of Economy of Russian Academy of Science, Central Economic and Mathematical Institute of the Russian Academy of Science, Institute of Economic Forecast of the Russian Academy of Science, Institute of Economic Policy named after E.T. Gaydar, Scientific and Research Institute of Labour and Social Insurance, Financial Institute under the Government of the Russian Federation, National Research University "State University Higher School of Economy", Academy of National Economy under the Government of the Russian Federation and other leading scientific centers of Russia.

Topicality of the problem and necessity of further theoretical development were the key reasons for choosing the theme of this paper, its aim and tasks.

### **4. Aims and tasks of the paper**

The aim of the paper is to find a mechanism for Russia to shift to innovative economy. At the same time economy is regarded as a system functioning in a specific medium and interacting with other systems.

In order to achieve the aim the following tasks should be solved:

- To reveal the necessity to transform the economy and to estimate its state;
- To estimate relationships with other countries;
- To estimate the ability of the country to achieve the strategic aims;
- To establish resources and sources of innovations.

The object of the research is the function of various economic systems where an innovative economy is being formed and implemented.

The subject of the research is an aggregate of economic and managerial relations arising from formation and implementation of innovative economy.

## **5. Methodology**

Theoretical, methodological and informational basis of the research comprises scientific researches of domestic and foreign scientists concerning economic growth, economy regulation, legislative and regulatory basis, national and global studies. Methodologically the paper is based on general scientific methods, system approach, dialectic principles. The following scientific methods were employed: cause-and-effect method, structural and functional analysis, synthesis, economic and statistical method, comparative method, generalization, analogy, expert estimation.

At present it is essential for Russia to switch to innovative economy which requires synthesis of powerful scientific, technical and intellectual resources. In this respect the economic science has to create a new theory based on these principles [5, p.101]. When we look at modern ways of social and economic development it is obvious that researches are searching for adequate theoretical and methodological basis for innovative economy development as well as social consequences of the development. Global scientific tendencies as well as analysis of global conclusions and unsolved national problems are regarded as the basis for theoretical and methodological approaches to generating innovational and investment cycles of shifting to innovative economy of Russia.

## **6. Results and discussions**

Russian economic growth can be achieved by combining innovative and investment capabilities in all economic branches. Please, see below a mechanism of switching to innovative economy (Figure 1).

An important methodological requirement to mechanism of state regulation of switching economy to innovative type of development is full compliance with the aims, tasks and directions of state innovative policy. One should note that the rate of economic growth highly depends on the ability of economy to accelerate innovative process. Intensification of the latter depends on the innovative climate which creates conditions and capabilities of the corresponding production development.

The suggested model (Figure 1) of interrelation between competitiveness and innovative development contains two factors of impact (stimulating and destructive) upon internal and external factors of innovative development.

Russia is falling behind from advanced countries in promoting modern fifth technological mode and absorbing the prospective sixth technological mode. This tendency is going to increase and undermine the competitive ability of domestic finished product. This is going to manifest itself particularly after joining the WTO. Due to high level of deterioration of the fixed assets and low innovative activity of companies the competitive ability of the processing industry output is going to fall. Competitive ability of the export-oriented industries (oil and gas, metallurgy) or industries controlled by transnational companies (food industry) is going to maintain. High rate of foreign trade turnover which exceeds the rate of GDP growth several times contributes to Russia's dependence on the fluctuation of the global market environment. The human resources for innovative development were undermined as well.

## **7. Conclusions**

Russia has a chance to overcome the existing tendencies and to engage in the mainstream of innovational revolution, to acquire innovative niche on domestic and foreign markets. All this requires a technological breakthrough-oriented system, concentration of resources of business and government (including the existing global oil and gas rent income) to absorb basic innovations of today which promote the fifth technological mode. It is also necessary to absorb initial generations of the sixth mode.

Thus, it is impossible to shift to innovative development without implementing specific

projects and creating new science-intensive products and services. All this defines long-term competitive positions of the country both in specific industries and as a whole. The countries which failed to shift to innovative economy are doomed to economic, technological as well as irreversible cultural detachment.

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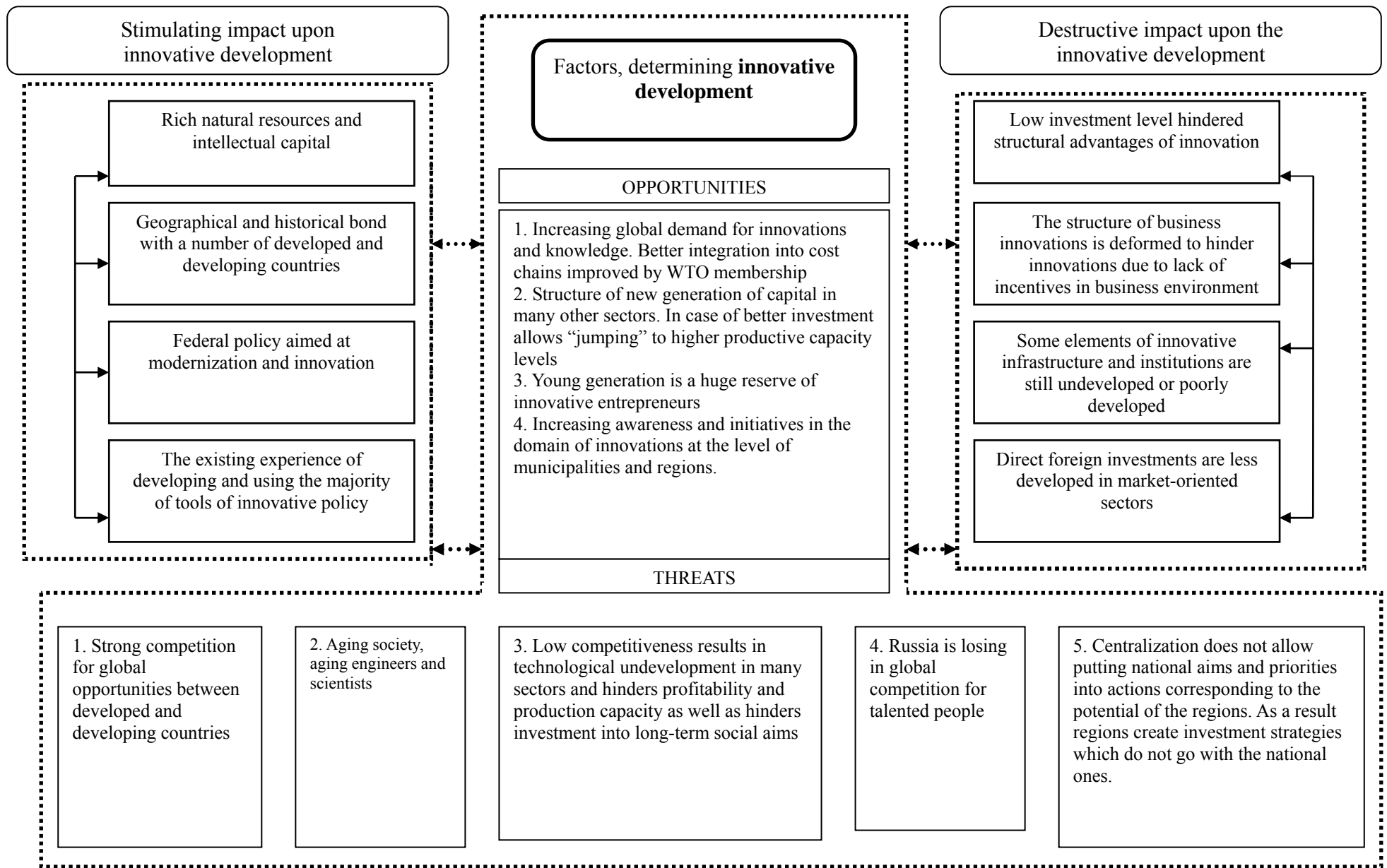


Figure 1. Model of interrelation between competitiveness and innovativeness