

The Major Determinants of Innovative Environment Formation in Georgia

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Abstract

In parallel to the globalization of the modern world economy, the development of innovative policies for economic development is considered as a topical problem in a number of countries around the world. For developed countries, innovative economies have become one of the key preconditions for the country's economic success. In Georgia, despite recent economic reforms, the country has not achieved tangible results in terms of innovation development. Hence the development of the economy needs to facilitate the formation of an innovative economy. Experience in developed countries shows that in a transformative economy the crucial role lies in the development of innovations and technological novelties.

Accordingly, the article examines the contribution of innovation to the economic development of transformational countries. Priorities of innovation policy in Georgia have been identified, and the role of innovation in creating a competitive environment, increasing productivity and raising living standards has been assessed. The article uses the Global Innovation Index (GII) to assess the level of innovation in a country. There are discussed mechanisms that can help achieve long-term

economic growth, productivity and job growth as well.

Keywords: Innovation, Innovative policy, Global Index of Innovation, Research, Technology, Research Innovation, High-Tech Innovation, Economic growth.

JEL: O30, O31, O38, O10

Introduction.

The introduction of innovation makes an invaluable contribution to the economic development of both developed and transformational countries. Much of the innovation in the transformative countries is achieved by attracting foreign direct investment, introducing high-tech innovation, and increasing the import of machinery and technology. Innovative system development is a time-consuming process that requires the creation and implementation of new technologies, the improvement of the education system, the development of science and information systems, which is impossible without the development of national innovation policies and strategies in the country.

Based on the all above mentioned, it is important to create a model of Georgia's innovative development, taking into account the specificity of the country and its economic potential. This will accelerate the country's innovative development.

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Innovation and economic development.

One of the founders of the term "innovation" is Austrian economist Joseph Schumpeter. According to him, "innovation is a commercialized invention." He also introduced differentiation into concepts: economic growth and economic development. According to Schumpeter, economic growth is the increase in production and consumption of the same production and service. Economic development, first and foremost, involves the creation of novelty. Finally, it is the innovation process that determines the progress of the economic system.

At the same time, innovative economics can be seen as the aspiration of developing countries not to fall behind the developed world and to improve the standard of living and quality of life. Innovative processes involve a variety of innovative actions, namely:

- Research innovation - the development of a new system developed by the national research system;
- Dissemination of technology/knowledge - dissemination of news introduced in one part of the country (for example in a high-tech free economic zone);
- Innovative management - mastering new methods of production organization, new business management schemes or models;
- Creating a new product or converting an existing product into a new one;
- Introduction of new methods of production or sale of the product, etc.

Development and support of innovative policy in Georgia

State innovative policy represents one of the key areas of socio-economic policy that reflects the state's approach to innovation and the development of scientific and technical progress in the economy.

Innovation policy implemented by the State aims at the:

- Creation of economic, legal and organizational framework for innovative activities;
- Increase of productivity and product competitiveness;
- Introduction of high-tech innovations in production;
- Supporting innovative products produced in the country and international market to ensure export potential development 'Bakhtadze L. (2006) Transition Economy'.

Introducing innovation in the national economy creates a competitive environment, promotes productivity growth and improves the standard of living.

The level of country innovation is measured by the Global Innovation Index (GII). It gives us insights into current trends in innovation in the world. It also outlines the mechanisms through which long-term growth and productivity can be increased, as well as job creation. Analyzing GII data allows countries to determine what conditions are needed to foster innovation. It is also worth noting that based on the GII annually is conducted the research which includes 80 indicators that are integrated into seven categories, organized by Cornell University, INSEAD Business School and the World Intellectual Property Organization (WIPO).

Each country is rated on seven criteria by the Global Innovation Index. Namely:

- institutions (political environment, legislative base);
- human capital and research (education, Research and development (R&D), government funding per secondary student);
- infrastructure (information and communication technologies, general infrastructure, environmental sustainability);
- market sophistication (investments, trade, competition, market scope,

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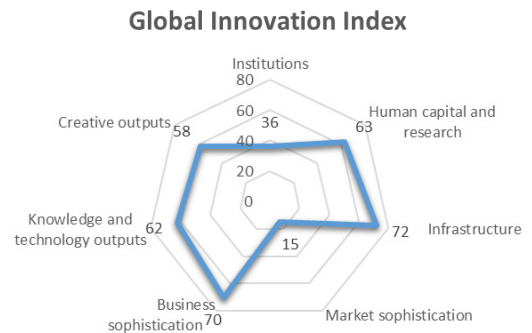
- market capitalization);
- business sophistication (level of knowledge of employees, use of innovation in business);
- knowledge and technology output (knowledge creation, knowledge impact on innovation and knowledge dissemination);
- creative output (Intangible Assets, Innovative Services, Electronic Innovation).

Switzerland, Sweden the US, the Netherlands and the UK are in the top five in the 2019 Global Innovation Index. As for Georgia, according to 2019, the country gained 37 score (out of 100) in the Global Innovation Index, which is 2 score higher than in the previous year (35 points). Georgia is up 11 positions in 2019 and is 48th out of 126 countries. The above data shows that Georgia has achieved a higher position than in previous years, which indicates the improvement of the state innovation policy. This contributes to the development of an innovative economy in the country.

The Global Innovation Index survey also compiles sub-indices on Innovation input and Innovation products (result of innovation) (Innovation output), according to which Georgia is in the 70th place in terms of innovation spending by 42.4 score.

Georgia ranks 3rd out of 26 countries in the group of low- and middle-income countries. As of 2019, Georgia was ranked 48th by evaluation of different components with the following scores:

Table 1: Results of Georgia in Global Index of Innovation in 2019¹



Source: <https://www.globalinnovationindex.org/analysis-indicator>

According to the Global Index of Innovations in Georgia, the most tangible results have been identified in terms of infrastructure development. This was due to the improvement of information and communication technologies (72nd place). At the same time, telecommunications infrastructure is a key factor in determining Georgia's "Innovation Strategy 2020". It is also worth noting that in terms of employee knowledge and innovation in business use (70th place), despite some progress, research and development are regarded as the country's weakest (63rd). Innovative knowledge creation and its impact on the development of innovative products and services are also considered to be weak (62nd place).

It is important to emphasize the essential role of Georgian Innovation and Technology Agency to create the ecosystem needed for innovation and technology development in Georgia, to promote the commercialization of knowledge and innovation in every sector of the economy, to stimulate the use of innovations and technologies, to create the environment needed for the growth of exports

¹ Compiled by the author based on the source - <https://www.globalinnovationindex.org/analysis-indicator>

of high-tech products and to develop high-speed Internet nationwide.

Table 2: Georgia according to the Global Innovation Index

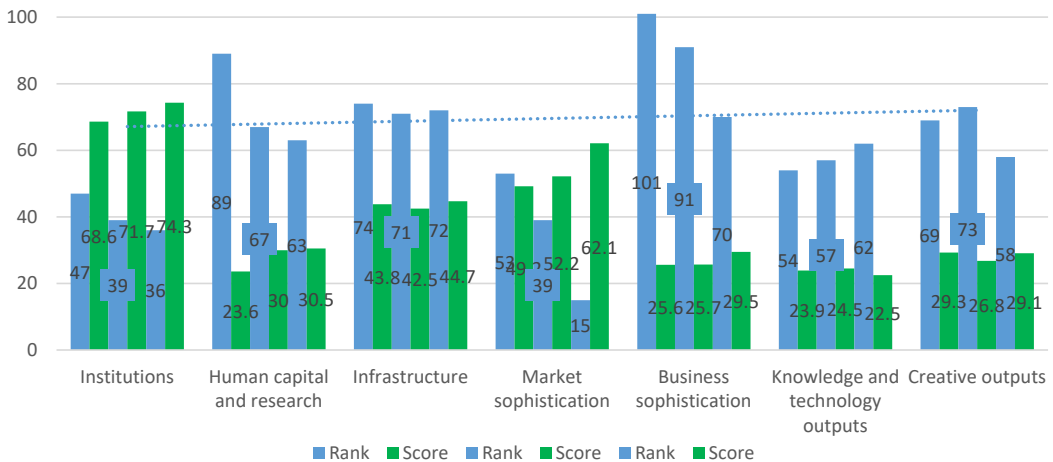
Georgia in Global Innovation Index		
Year	Rank	Score (0-100)
2019	48	37
2018	59	35,05
2017	68	34,4
2016	64	33,86
2015	73	33,83
2014	74	34,53
2013	73	35,56
2012	71	34,3
2011	73	31,87

Source: <https://www.globalinnovationindex.org/analysis-indicator>

As noted above and in the table below, by 2018, Georgia was ranked 11th in the Global Innovation Index 2019. Georgia's significant success in this regard has been driven by the improvement of export indicators of high-tech goods import, information and communication (ICT). This is clearly illustrated in Table 2, which shows the dynamics of innovation growth rates over the last nine years.² According to the ratings given in Table 2 in 2011, Georgia was ranked 73rd, while the Innovation Index was 31.87 points (out of 100). From 2015 to 2019, the country's ratings are growing every year. The innovation index declined slightly in 2015 compared to the previous year, but despite this, the ratings among the counties are marked by increasing dynamics. This is likely to be explained by the slow pace of innovation development in Georgia compared to other countries.

Table 3: Components of the Global Index of Innovation in 2017- 2019 compared to the previous year³

Components of Global Innovation Index in 2017-2019



Source: <https://www.globalinnovationindex.org/analysis-indicator>

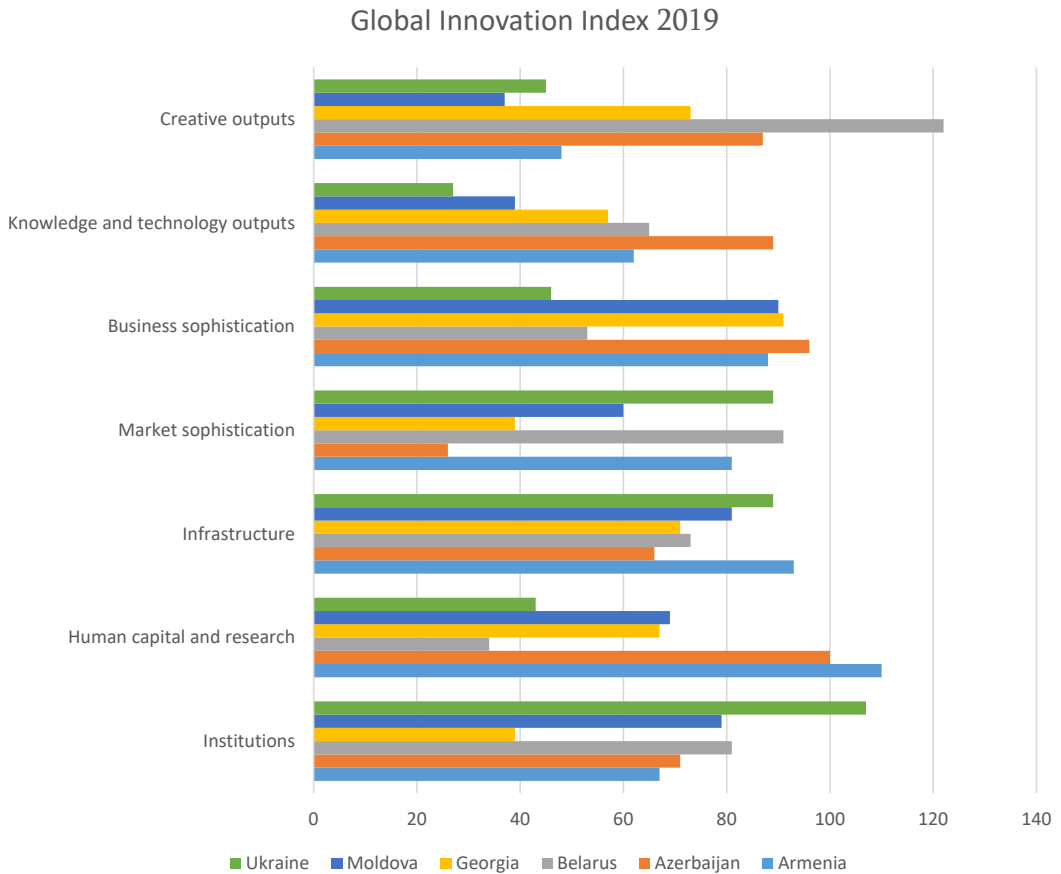
An analysis of the results of the 2017-2019 Global Index of Innovation Components reveals that in the components of business

development and human capital research, with the exception of the innovation production indicator, the situation is improving.

² Global Innovation Index 2018 Report https://www.wipo.int/edocs/pubdocs/en/wipo_pub_gii_2018.pdf

³ Compiled by the author based on the source - <https://www.globalinnovationindex.org/analysis-indicator>

Table 4: Comparison of Georgia and Eastern Partnership countries by components of Global Innovation Index.



The growth of the other component was driven by the increase in the use of information and communication technologies by the private sector. Table 6 illustrates the Comparison of Georgia and Eastern Partnership countries by components of Global Innovation Index.⁴ The analysis of the above presented tables shows that, according to the institutional framework, which includes the effectiveness of governance and measures implemented by the state, Georgia is ahead of the Eastern Partner countries. In terms of human capital and research component, Georgia is lagging

behind Belarus and Ukraine, according to the level of business development (employee knowledge level, availability of innovation links, access to knowledge). In terms of infrastructure, only Azerbaijan is ahead of Georgia; in terms of market development, it can be said that Georgia is leading. In the other components (knowledge and technology production, creative production, human capital/research and business development) Georgia is only behind Moldova and Ukraine in our ranking of Eastern Partnership countries. Based on the analysis of the study results, we

⁴ The table is compiled by the author based on the source <https://www.globalinnovationindex.org/analysis-indicator>

can **draw the following conclusion:** Although Georgia's position in the global innovation index has advanced by several ratings, there are still some difficulties in terms of innovation development in Georgia. Specifically, the knowledge and technology criteria are still unfavorable due to the slow economic growth in the country, compared to our Eastern Partnership countries.

- The formation of the country's innovation system requires improvement of the country's political environment and long-term stability, improvement of legislation, improvement of the business environment, minimization of production costs, approximation of international quality standards.
- In our opinion, in order to improve the key determinants of innovation development, it is necessary to increase funding for science and research in the country, as well as to increase funding for research and construction work;
- To accelerate the export of patents to the international market;
- To promote the development of innovative and high-tech products;
- The priority of the state government should be to strengthen science and its orientation to solve the problems of innovative development of the country;
- Develop innovative development management systems based on experience gained worldwide;
- Increase the capacity of technoparks and incubators with the support of the Georgian Technology and Innovation Agency, as well as improve the infrastructure needed to develop innovative economies, educational institutions and research laboratories;
- The Government of Georgia is committed to ensuring the protection of intellectual property rights in order to promote innovation. Improving the

legislative and institutional framework and best practices for the protection of intellectual property rights, according to the deep and comprehensive free trade agreement (DCFTA) between Georgia and the EU.

- The Government of Georgia should attract foreign direct investment focused on modern technologies, for the purpose of innovation and development of modern technologies. Encourage the development of advanced technologies, the inflow of FDI, which will focus on the introduction of environmentally friendly resource-saving technologies and the development of a green economy.
- It is also important to adapt local innovations to the country, as well as create favorable conditions for the import of innovations. It is necessary to prioritize the country's spending on education in relation to GDP.

Finally, we can say that the creation and implementation of an innovation system in the country can be ensured only through deep theoretical studies and effective management of innovation processes.

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