



GEORGIAN FOUNDATION FOR
STRATEGIC AND INTERNATIONAL STUDIES

**ON INNOVATIVE ACTIVITIES IN EUROPE'S
POST-COMMUNIST COUNTRIES**

VLADIMIR PAPAVA

132

EXPERT OPINION





საქართველოს სტრატეგიისა და საერთაშორისო ურთიერთობათა კვლევის ფონდი
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The publication is made possible with the support of the US Embassy in Georgia. The views expressed in the publication are the sole responsibility of the author and do not in any way represent the views of the Embassy.

Technical Editor: Artem Melik-Nubarov

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ISSN 1512-4835

ISBN

The activation of innovation is especially important in post-Communist European states which have a more-or-less similar Communist past. This paper considers the problem of the activation of innovation in the examples of 11 European Union (EU) member states (Bulgaria, Croatia, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia and Slovenia) and six Eastern Partnership (EP) states (Armenia, Azerbaijan, Belarus, Georgia, Moldova and Ukraine) as well as the Russian Federation. The situation in the field of innovation in these countries is compared to that of the EU as a whole and its non-Communist member states.

The aim of this paper is to study the main directions of the activation of innovation in post-Communist European countries on the macro level.

As already known, the Global Innovation Index is used for characterizing innovation activities. It reflects various aspects of innovation that are supposed to facilitate the creation of correct orientation points for long-term economic growth and the productivity of resource as well as the creation of jobs.

The 2019 results of the study conducted on the bases of 129 countries in order to calculate the Global Innovation Index are shown in Table 1.¹

Table 1

Global Innovation Index and Country Ranking 2019

| | Countries | Global Innovation Index Level and Country World Rank | |
|-------------------------------------|-------------|--|---------------|
| | | Number of Points (from 0 to 100) | World Ranking |
| Non-Post-Communist EU States | | | |
| 1 | Austria | 50,94 | 21 |
| 2 | Belgium | 50,18 | 23 |
| 3 | Cyprus | 48,34 | 28 |
| 4 | Denmark | 58,44 | 7 |
| 5 | Finland | 59,83 | 6 |
| 6 | France | 54,25 | 16 |
| 7 | Germany | 58,19 | 9 |
| 8 | Greece | 38,90 | 41 |
| 9 | Ireland | 56,10 | 12 |
| 10 | Italy | 46,30 | 30 |
| 11 | Luxembourg | 53,47 | 18 |
| 12 | Malta | 49,01 | 27 |
| 13 | Netherlands | 61,44 | 4 |
| 14 | Portugal | 44,65 | 32 |
| 15 | Spain | 47,85 | 29 |
| 16 | Sweden | 63,65 | 2 |
| 17 | UK | 61,30 | 5 |

| Post-Communist EU States | | | |
|---------------------------------|--------------------|-------|----|
| 18 | Bulgaria | 40,35 | 40 |
| 19 | Croatia | 37,82 | 44 |
| 20 | Czech Republic | 49,43 | 26 |
| 21 | Estonia | 49,97 | 24 |
| 22 | Hungary | 44,51 | 33 |
| 23 | Latvia | 43,23 | 34 |
| 24 | Lithuania | 41,46 | 38 |
| 25 | Poland | 41,31 | 39 |
| 26 | Romania | 36,76 | 50 |
| 27 | Slovakia | 42,05 | 37 |
| 28 | Slovenia | 45,25 | 31 |
| EP States | | | |
| 29 | Armenia | 33,98 | 64 |
| 30 | Azerbaijan | 30,21 | 84 |
| 31 | Belarus | 32,07 | 72 |
| 32 | Georgia | 36,98 | 48 |
| 33 | Moldova | 35,52 | 58 |
| 34 | Ukraine | 37,40 | 47 |
| | | | |
| 35 | Russian Federation | 37,62 | 46 |

It should be noted that according to the Global Innovation Index, Switzerland, Sweden and the USA lead the world.²

According to Table 1, among the post-Communist EU member states, Estonia and the Czech Republic are leaders in terms of the Global Innovation Index,

holding the 24th and 26th positions, respectively. They also have overtaken non-post-Communist EU member states such as Cyprus, Greece, Italy, Malta, Portugal and Spain.

According to Table 1, the level of the Global Innovation Index in countries such as Bulgaria, Hungary, Latvia, Lithuania, Poland, Slovakia and Slovenia can be considered to be more-or-less satisfactory as they are placed between the 30th and 40th positions globally, even overtaking a non-post-Communist EU member state such as Greece.

According to the Global Innovation Index, Croatia and Romania are relatively behind among the post-Communist EU member states, occupying the 44th and 50th positions, respectively.

Among the EP states and the Russian Federation, the highest positions in the Global Innovation Index are held by the Russian Federation, Ukraine and Georgia which hold the 46th, 47th and 48th positions, respectively, overtaking only one post-Communist EU member state – Romania, which holds the 50th position. From the remainder of the EP states, Moldova has a relatively good situation as it holds the 58th place. Armenia, Belarus and Azerbaijan have a clearly worse situation, holding the 64th, 72nd and 84th places, respectively.

The post-Communist states of the EU failed to maintain the innovation potential inherited from the command economy as it was utilized by transnational corporations.³

It must be noted that the process of “Combinatorial Augmentation”⁴ has revealed itself in a rather specific way in the post-Communist EU member states. Namely, the concentration of new technologies took place mostly in the Western European states while old technologies were designated for the post-Communist EU member states.⁵ In other words, the transnational corporations are using the post-Communist EU member states as bases for retroeconomics.⁶

No less important is the fact that the post-Communist EU member states are also clearly in a worse situation⁷ in terms of high-tech manufacturing as compared to the non-post-Communist EU member states. This is confirmed by the share of high-tech manufacturing in the non-post-Communist states which was no less than 91.02% in 2015 within the EU.⁸

Innovations are performed by humans who are occupied with the functions of an entrepreneur.

Given the importance of innovation activities, the model of the “innovative man” is gradually being established in science, referred to in specific literature as one of the following two variants (which have a similar meaning) - *homo innovatus*⁹ and *homo innovaticus*.¹⁰

Homo innovaticus is an abstract model of human which is defined by:¹¹

- Generation of new ideas and ensuring their implementation
- Constant readiness to learn
- Mobility, both geographical as well as, more importantly, mental
- Openness and ability to take risks
- Ample general knowledge coupled with a narrow specialization
- Ability for strategic thinking and taking tactical actions
- Trust and partnership skills
- Cooperative skills.

It is impossible for a single human being to possess all of these skills together. In reality, they are shared by practically thousands of people who serve the functions of managers, researchers, inventors, analysts and so on.¹²

It must be noted that by their nature, *homo innovaticus* is a future oriented man. The future for future oriented societies should be considered “precisely as a territory to be conquered or colonised.”¹³ Hence, in order for the innovation activities to be conducted better, it is necessary for the process of the transformation of *homo sapiens* into *homo innovaticus* to be facilitated.¹⁴

It is almost impossible to be oriented on the future if society does not have the environment for economic optimism.¹⁵ An optimist, as a rule, aspires to getting maximum benefit despite a high level of risk while a pessimist tries to minimize risks while getting a guaranteed benefit.¹⁶

The environment of economic pessimism in society is usually created in countries characterized by political, legal and/or macroeconomic instability because of which the companies operating in these countries prefer not to work on resolving long-term strategic tasks but rather deal with shorter-term tactical ones.¹⁷ Such a situation creates a “technological trap” when despite the real possibilities of transferring to new technologies, the

company prefers to use existing, even if outdated, technologies and this is determined by the aforementioned instability when the risks with regard to the future are relatively high.¹⁸

Therefore, given political, legal or macroeconomic instabilities, companies prefer to remain within the technological trap of retroeconomics as transferring to new technologies contains relatively higher risks. This is further explained by the fact that in order to move to new technologies, a company must consider its future in a long-term perspective, a timeframe which would be enough to recoup capital investments in the new technologies.¹⁹

In order for the economic optimism of a society to be heightened, apart from eliminating the aforementioned political, legal and/or macroeconomic instabilities, it is also necessary to achieve a relatively high level of growth of the economy which, in its turn, will facilitate the creation of an emotional background in the economy that all of the entities of the market will be interested to have high rates of growth. In other words, in order to overcome a technological trap, it is necessary to perform a technological jump for the companies to become interested in transferring to qualitatively new technologies.

In order for the activation of innovation in the post-Communist European countries to become possible, it is necessary to analyze the level of economic optimism that is already present in these societies; in the case of *ceteris paribus*, this directly influences the actions of *homo innovaticus*.

As is already known, all 11 post-Communist EU member states are also members of NATO which is supposed to guarantee their security in the military and political sense. It is beyond doubt that membership in the EU and NATO creates objective bases for political stability in each of these countries. This, in the case of *ceteris paribus*, also facilitates a relatively high level of legal stability as both the EU and NATO establish stable legal frameworks for their member states. At the same time, these frameworks did not turn out to be enough for the members of these unions to be unable to move past them and stray from Euro-Atlantic values. Unfortunately, Poland²⁰ and Hungary²¹ have created such precedents.

Maintaining macroeconomic stability is an important problem. Its disruption can be caused by:

1. Incorrect economic policies exercised by various EU member states
2. A crisis situation within the EU; the Eurozone crisis is the clearest example.

Hungary once again represents an example of an incorrect economic policy (as a result of various reasons²²) as it is in confrontation with the EU with regard to 2021-2027 budgetary issues,²³ thereby creating an environment for macroeconomic instability for companies operating inside Hungary.

As for the Eurozone crisis which started in 2009,²⁴ it had a very serious negative effect²⁵ on the macroeconomic stability of EU member states. It must be noted that only five of the 11 post-Communist EU member states are members of the Eurozone – Estonia, Latvia, Lithuania, Slovakia and Slovenia.

It should also be taken into account that the EU is under an existential crisis caused by the departure of the UK, or Brexit,²⁶ as well as by the crisis caused due to the influx of migrants from Arab countries and other issues which ultimately form a complex crisis situation in Europe overall.²⁷ As a result, companies operating within the EU are forced to work in an environment of political, legal and macroeconomic instability.

Achieving political, legal and macroeconomic stability in the EU is dependent not only on the decisions of EU governing institutions but also the compatibility of the steps taken by EU member state governments with these decisions.

For multiple years now, an environment of political, legal and macroeconomic instability has been present in EP member states such as Armenia, Georgia and Moldova. Even though political stability is maintained in Azerbaijan, Belarus and the Russian Federation, the non-democratic regimes of governance in these countries (in 2018 Azerbaijan was 149th from 167 countries of the world according to the Democracy Index while Belarus was 137th and the Russian Federation was 144th)²⁸ and the relatively high levels of corruption (according to the 2018 Corruption Perception Index, Azerbaijan was 152nd among 180 countries of the world, Belarus was 70th and the Russian Federation was 138th)²⁹ do not create a just environment for developing these economies, which directly reflects on the economic growth rates of these countries.

High economic growth rates, as already pointed out above, significantly determine the creation of the environment for economic optimism within a society. Table 2 shows the economic growth rates of post-Communist EU member states, EP states and the Russian Federation before the global economic and financial crisis as well as after it. It is very important to maximally reduce the influence of the crisis on economic growth data.

Table 2

Adjusted and Actual Data of Economic Growth in Post-Communist EU States, EP States and the Russian Federation in 2006 and 2016

| Countries 2006 | | Year | | |
|---------------------------------|----------------|---------------|----------|----------|
| | | 2016 | | |
| Post-Communist EU States | | | | |
| 1 | Bulgaria | Adjusted data | 2,597773 | 1,909853 |
| | | Actual data | 6,8 | 3,9 |
| 2 | Croatia | Adjusted data | 2,729285 | 1,787114 |
| | | Actual data | 4,8 | 3 |
| 3 | Czech Republic | Adjusted data | 5,511595 | 2,293351 |
| | | Actual data | 6,9 | 2,6 |
| 4 | Estonia | Adjusted data | 6,663904 | 1,561366 |
| | | Actual data | 10,3 | 2,1 |
| 5 | Hungary | Adjusted data | 2,397438 | 1,490855 |
| | | Actual data | 3,9 | 2,2 |
| 6 | Latvia | Adjusted data | 6,297633 | 1,366986 |
| | | Actual data | 11,9 | 2,1 |
| 7 | Lithuania | Adjusted data | 4,09815 | 1,730049 |
| | | Actual data | 7,4 | 2,3 |
| 8 | Poland | Adjusted data | 3,153989 | 2,032618 |
| | | Actual data | 6,2 | 2,9 |
| 9 | Romania | Adjusted data | 3,180456 | 2,728071 |
| | | Actual data | 8,1 | 4,6 |
| 10 | Slovakia | Adjusted data | 5,387006 | 2,543542 |
| | | Actual data | 8,5 | 3,3 |
| 11 | Slovenia | Adjusted data | 4,933489 | 2,600663 |
| | | Actual data | 5,7 | 3,1 |

| EP States | | | | |
|-----------|--------------------|---------------|----------|-----------|
| 12 | Armenia | Adjusted data | 2,485313 | 0,044429 |
| | | Actual data | 13,2 | 0,2 |
| 13 | Azerbaijan | Adjusted data | 11,38706 | -1,34481 |
| | | Actual data | 34,5 | -3,1 |
| 14 | Belarus | Adjusted data | 3,824182 | -1,18067 |
| | | Actual data | 10 | -2,6 |
| 15 | Georgia | Adjusted data | 1,573437 | 0,70453 |
| | | Actual data | 9,4 | 2,8 |
| 16 | Moldova | Adjusted data | 0,514133 | 0,549841 |
| | | Actual data | 4,8 | 4,1 |
| 17 | Ukraine | Adjusted data | 1,760887 | 0,47756 |
| | | Actual data | 7,3 | 2,3 |
| | | | | |
| 18 | Russian Federation | Adjusted data | 4,106786 | -0,112447 |
| | | Actual data | 8,2 | -0,2 |
| | | | | |
| 19 | EU | | 3,3 | 1,9 |

The actual economic growth data shown in Table 2 are calculated by the World Bank³⁰ while the adjusted ones were calculated by the author.³¹

The adjusted economic growth rates differ from the actual ones by excluding the so-called “catch-up effect,”³² more adequately assessing the real level of economic growth in various countries. The exclusion of the aforementioned effect³³ requires selecting the so-called “etalon” indicator of economic growth. Such an “etalon” when calculating the corrected adjusted growth rates of each country in Table 2, was the actual economic growth rate of the EU itself. This enables us to assess how much the economic growth rate in individual EU member states facilitates the creation of the environment of economic optimism as compared to the EU as a whole itself.

Table 2 shows that according to the adjusted economic growth rate, the Czech Republic, Estonia, Latvia, Lithuania, Slovakia and Slovenia from the group of post-Communist member states had higher growth rates than those of the EU prior to 2006 or the beginning of the global economic and financial crisis. At the same time, Bulgaria, Croatia, Hungary, Poland

and Romania were behind the overall EU economic growth rate. The worst situation of them all was in Hungary.

As for 2016, the Czech Republic, Poland, Romania, Slovakia and Slovenia had relatively higher economic growth rates than the EU while the corrected economic growth rate of Bulgaria was slightly higher than that of the EU. In addition, the situation in Croatia, Estonia, Hungary, Latvia and Lithuania was not very favorable.

A unified analysis of the 2006 and 2016 adjusted economic growth rates enables us to determine the countries among the post-Communist EU member states whose economic growth rates are stably higher than that of the EU. Table 2 shows that these countries are the Czech Republic, Slovakia and Slovenia. Hence, we can conclude that among the post-Communist EU member states, it is in these countries that the economic growth rate creates an environment or economic optimism. In this regard, Hungary and Romania have the worst situations as their economic growth rates facilitate the establishment of an environment for economic pessimism. Other post-Communist EU member states have unstable situations; however, it should also be noted that the situations in these countries can be altered as they already have had higher economic growth rates than the EU as whole. This gives hope that given the coordinated actions of national governments, higher economic growth rates than that of the EU can be achieved again.

EP states and the Russian Federation have much more difficult situations. According to Table 2, even though Azerbaijan, Belarus and the Russia Federation exceeded the adjusted economic growth rate of the EU in 2006, these countries experienced economic recession in 2016. Despite the fact that other EP states had economic growth rather than recession in both 2006 and 2016, the adjusted economic growth rate was clearly lower than that of the EU. This shows that the economic growth rate in these countries does not facilitate the creation of an environment for economic optimism in society.

As a conclusion we can say that:

1. The post-Communist EU member states are mainly sites for gathering old technologies while new technologies are mainly used in Western European countries. The deficit of new technologies is even more severe in EP states and the Russia Federation.

2. Innovation-creating *homo innovaticus* is an abstract human model which is oriented on the future and, therefore, the existence of an environment for economic optimism in society becomes very important for it.
3. The existence of an environment for economic optimism in society is only possible in terms of political, legal and macroeconomic stability. In the case of instability, companies prefer to utilize the already existing old technologies as the risks for the future increase due to instability.
4. Membership in either NATO or the EU is not enough to exclude the existence of political and legal instability in a country. Clear examples of this are Poland and Hungary.
5. Hungary gives a clear example of the violation of macroeconomic stability.
6. Various reasons for instability have revealed themselves in the EU itself. The most prominent are the currency crisis starting from 2009, the EU existential problem due to Brexit, the influx of migrants from Arab countries and so on.
7. After the elimination the “catch-up effect” from the economic growth indicators of the post-Communist EU member states, EP states and the Russian Federation, it was revealed that only the Czech Republic, Slovakia and Slovenia from this group of countries have stably higher economic growth rates than the EU. It is in these countries that the level of economic growth and stability creates an environment for economic optimism which has a decisive importance for the activation of *homo innovaticus*.
8. Of the post-Communist EU member states, Hungary and Romania have the worst situations, also EP states and the Russian Federation whose economic growth rates facilitate the creation of an environment for economic pessimism, rather than economic optimism.

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