



## Problems of forming conditions for increasing innovation activities in Uzbekistan

Alisher ABDULLAEV<sup>1</sup>

Fergana Polytechnic Institute

### ARTICLE INFO

**Article history:**

Received December 2022

Received in revised form

15 December 2022

Accepted 20 January 2023

Available online

15 February 2023

**Keywords:**

innovation,

innovative development,

R&D,

economic growth,

GDP,

national innovative system,

technology.

### ABSTRACT

As a dynamic economic element, innovation is a mechanism that involves continuous, developing, and mastering management. Hence creative companies need to assess their potential for innovation. Literature attests to work being carried out in the area of assessing innovation or analyzing innovation capabilities. This paper examines the current situation related to innovation potential worldwide and the challenges confronted by countries. It also examines the innovation system in Uzbekistan and strategies to improve the climate for the development of the innovation economy.

2181-1415/© 2023 in Science LLC.

DOI: <https://doi.org/10.47689/2181-1415-vol4-iss1/S-pp10-14>

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## O'zbekistonda innovatsion faoliyatni oshirish uchun shart-sharoitlarni shakllantirish muammolari

### ANNOTATSIYA

**Kalit so'zlar:**

innovatsiya,

innovatsion rivojlanish,

ilmiy-tadqiqot,

iqtisodiy o'sish,

YaIM,

milliy innovatsion tizim,

texnologiya.

Maqolada innovatsiyalar dinamik iqtisodiy element sifatida ko'rib chiqilgan. Innovatsiyalarni, innovatsion imkoniyatlarni baholash tahlili butun dunyoda, xususan, O'zbekiston Respublikasida mavjud vaziyatni aniq tasvirlab berdi. Tadqiqotlar innovatsion iqtisodiyotni rivojlantirish uchun iqlim strategiyasining ba'zi elementlarini taklif qilishga imkon berdi.

<sup>1</sup> Doctor of Philosophy in Economics, Associate Professor of Economics, Fergana Polytechnic Institute.

# Проблемы формирования условий для повышения инновационной активности в Узбекистане

## АННОТАЦИЯ

### *Ключевые слова:*

инновация,  
инновационное развитие,  
НИОКР,  
экономический рост,  
ВВП,  
национальная  
инновационная система,  
технология.

В статье инновации рассмотрены как динамичный экономический элемент. Проведенный анализ оценки инноваций, инновационных возможностей, наглядно охарактеризовал текущую ситуацию как во всем мире, так и, в частности, в Республике Узбекистан. Проведенные исследования позволили предложить некоторые элементы стратегии по дальнейшему улучшению климата для развития инновационной экономики.

## INTRODUCTION

In the increasingly competitive world, several nations are striving to enhance creative ability with a view to economic growth and efficiency. Competition and innovation are important in building innovation capacity for the countries, as they provide possible pathways to accelerate the technological catch-up cycle as well as maintain productivity growth and competitiveness. Charting the innovation index will enable developed economies to catch up, as it provides countries' overall innovation output. At the heart of the innovative development of the economy is the process of finding, training, creating, implementation, and commercialization of innovations, i. e. ensuring the transformation of ideas directly to innovation [1].

Companies' ability to fulfill customer standards is highly dependent on their ability to develop and produce new products at reasonable prices. Innovation is a crucial catalyst for achieving sustainable competitive advantages and is becoming one of the biggest obstacles for small and medium-sized enterprises (SMEs) in particular. Many analysts believe that this century would be a culture focused on know-how. It will be defined by the development, diffusion, and adoption of new technologies that are very active. In this sense, a new term, the national system of innovation (NIS), has been introduced and intensively studied. Some analysts also suggest that this century is going to be a century of regionalization these days. Within the globalized world, the nation-state has lost its significance in cultural, R&D, and innovation activities. A system approach is needed to effectively strengthen the national potential for innovation. Efficient Regional Innovation Systems (RIS) create a competent NIS (National Innovation Systems) through the generation of competitive SISs (Sectoral Innovation Systems) in the regions. The correct number of applicable innovation actors should be composed of a RIS in three groups: academia, the public research sector, and industry.

## METHODOLOGY AND RESEARCH

In the process of preparing the study, general scientific methods of cognition, observation, abstract-logical thinking, a systematic approach, and economic interpretation were used. Methods of a systematic approach to solving problems, as well as analysis, synthesis and unity of logical analysis and dialectical development, historical approach, and analysis of the materiality of cognition. statistical hypotheses and relationships, expert research.

## **ANALYSIS AND RESULTS**

Global economic growth appears to be losing momentum relative to last year. Productivity growth is at a record low. Trade battles are brewing. Economic uncertainty is high. Despite this contemplative outlook, innovation is thriving worldwide. Formal innovation – as measured by research and development (R&D) and patents – and less formal forms of innovation are flourishing in developed and emerging economies simultaneously. Established and emerging economies of all kinds today facilitate innovation for economic and social growth. This is now well understood that creativity exists in all economic fields, not just in high-tech firms and development sectors. As a result, economies are concentrating their attention squarely on building and sustaining environments and networks for sound and dynamic innovation.

### **ROLE OF INNOVATION IN ECONOMIC GROWTH**

International research and development spending expanded faster than the world economy, more than doubling between 1996 and 2016. Global government spending on R&D (GERD) increased by about 5% in 2017, while company R&D spending increased by 6.7%, the largest increase since 2011. Only so many scientists around the world have ever worked in history to address the most important global scientific problems.

Over the past years, the globe has seen a rise in expenditure on innovation, as assessed by the economies' average investments at all stages of growth. In 2017 and 2018 the use of the intellectual property (IP) hit record highs. Amid economic instability, spending on innovation has increased and seems robust in given the current economic cycle. The challenge is whether this pattern will continue as global economic growth declines in 2019. There are two issues that stand out [4]:

First, the Global Innovation Index 2019 shows that public R&D expenditures – in particular, in some high-income economies responsible for driving the technology frontier – are growing slowly or not at all. Waning public support for R&D in high-income economies is concerning given its central role in funding basic R&D and other blue sky research, which are key to future innovations including health innovation.

Second, increased protectionism – in particular, protectionism that impacts technology-intensive sectors and knowledge flows – poses risks to global innovation networks and innovation diffusion. If left uncontained, these new obstacles to international trade, investment, and workforce mobility will lead to a slowdown of growth in innovation productivity and diffusion across the globe.

It is well known that innovation is one of the main factors of intensive economic growth. It is no coincidence that the most developed countries (Switzerland, 63.9 thousand dollars of GDP per capita at PPP, USA – 57.6 thousand dollars, Singapore – 87.8 thousand dollars, the Netherlands – 50.5 thousand dollars., Ireland – 71.5 thousand dollars, etc.) top the list of countries with the highest competitive indices, according to experts from the World Bank for 2016.

Uzbekistan Global Innovation Index is about 30 points (on a 100-point scale), and the republic takes a position within the 80-90th place in World Economic Forum (WEF) ranking by the global competitiveness index. The gap with the average rating of this index for the leading countries (57.8) is about 2 times. In other indicators of innovative development, the gaps are even more significant: in the number of articles in international scientific journals (per million people) – almost 400 times, in the export of high-tech products (in the structure of exports) Uzbekistan is 4.5 times behind. A similar

picture develops for indicators of patent activity, the number of innovative small enterprises, the share of innovative products in the volume of output industries and sectors of the economy, the presence of innovative products in the market, and other indicators of innovative activity. Nevertheless, in Uzbekistan, there are certain scientific and technological reserves in cotton growing, solar metallurgy (solar physics), plant breeding, biology, chemistry, mathematics, geology, and a number of other areas. This state of affairs indicates the relevance and timeliness of the issue of creating the necessary conditions and macroeconomic prerequisites for the intensification of innovation activity in Uzbekistan. A key challenge in all countries is to accelerate the technological development of the global economy, increasing competition for the factors that determine the competitiveness of national innovation systems. Thus, the aim is to increase the level of innovation activity in the economy. Currently, due to the reduction of the period of realization of scientific innovations to entrepreneurs/enterprises, it is necessary to quickly respond to changing national and international needs. The main factors hindering the transition to an innovative economy in Uzbekistan, are underdeveloped institutions and inadequate funding of science and new technologies. In Uzbekistan, there are certain divided scientific and technological backlogs in cotton growing solar metallurgy breeding plants and row other directions.

### **CONCLUSION**

In order to accelerate the development of the innovation economy in Uzbekistan is proposed to pay particular attention to the following points:

- provide incentives for enhance innovation activities that arise only in conditions of amplification fair competition competitive markets for goods and services through all kinds of contests, and innovation fairs, and stimulate large corporations in the development of long-term plans for innovation development;

- use credit and investment resources efficiently. An econometric analysis of world development statistics carried out at the IPMI showed that an increase in investments in science and technology, and the training of researchers and technicians employed in the R&D sector, does not necessarily automatically entail an increase in total factor productivity (TFP).

This is possible only when the index of the quality of the country's institutions exceeds the identified threshold a value of 5.0 on a 10-point scale. The quality of state institutions by the corruption control index is 7.2 in Chile, 5.3 in Malaysia, 7.3 in Slovenia, and 2.1 in Uzbekistan;

- focus on the modernization and development of the manufacturing sector. However, this process will be lengthy and should be carried out as part of carefully planned steps based on the existing comparative advantages of the country. In Uzbekistan, the rural economy plays an important role in the economy. Therefore creating new manufacturing capacities integrated with agriculture, as well as the formation of new agricultural value chains can become important an element of diversification strategies.

The main factors hindering the transition to an innovative economy in Uzbekistan are underdeveloped institutions and inadequate funding of science and new technologies.

**REFERENCES:**

1. Abdullayev A.M. & ets. (2020) Analysis of industrial enterprise management systems: essence, methodology and problems. *Journal of Critical Reviews*, 7 (14), 1254-1260. Doi: <http://dx.doi.org/10.31838/jcr.07.14.261>
2. Burkhanov A.H., Abduvakhidov A.A., & Toshboev B.B. (2019). Directions of Organizing the Activities of Clusters in Uzbekistan.
3. Chung S. Building a national innovation system through regional innovation systems. *Technovation*, 22(8), 485-491, 2002.
4. Dutta S., Bruno L., and Sacha W-V., eds. *Global innovation index 2019: Creating Healthy Lives – The Future of Medical Innovation*, 2019.
5. Kurpayanidi K. (2020) About some questions of classification of institutional conditions determining the structure of doing business in Uzbekistan. *South Asian Journal of Marketing & Management Research* 10 (5), – PP. 17–28. <http://dx.doi.org/10.5958/2249-877X.2020.00029.6>
6. Muminova E., Honkeldiyeva G., Akhunova Sh., Khamdamova U.O. (2020) Features of Introducing Blockchain Technology in Digital Economy Developing Conditions in Uzbekistan. *E3S Web Conf.*, 159 (2020) 04023 Doi: <https://doi.org/10.1051/e3sconf/202015904023>
7. O'Regan N., Ghobadian A., Martin S. Fast tracking innovation in manufacturing SMEs. *Technovation* 26 (2), 251–261, 2006.