



THE BASIS OF COMPETITIVENESS AND SUSTAINABLE DEVELOPMENT: FORMING AN INNOVATIVE ECONOMY

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Аннотация: В статье на примерах обосновывается значение внедрения в производство новых идей и инновации как важного условия обеспечения конкурентоспособности предприятий, повышения доли экспорта ориентированных товаров и совокупной эффективности ресурсов (TFP).

Ключевые слова: инновации, конкуренция, рыночный механизм.

Abstract: This article discusses the importance of new ideas and innovations as supporting vital conditions for providing competitiveness of entities to increase the portion of export oriented goods and total factor productivity of resources (TFP) on the basis of examples.

Key words: innovation, competition, market mechanism.

Introduction

In the 2017-2021 "Strategy of Actions" on the five priority areas of the country's further development, approved by the Presidential Decree [1] on February 7, 2017, it was noted that the liberalization and development of the economy is one of the urgent tasks. Currently, our country is an integral part of the international community and the global financial and economic market. The confirmation of this can be clearly seen in the fact that our relations with other countries are expanding more and more, in the implementation of programs for economic development, modernization, technical and technological re-equipment with the help of developed countries, in the successful implementation of the five priority directions of further development of the country in our country. In the conditions of globalization, increasing the competitiveness of the country, increasing its economic potential, wide introduction of innovations and rational use of resources based on these are the guarantee of sustainable development and raising the standard of living of the population. The purpose of the article is to research the state of development of the republic's economy, its factors, the efficiency of resource use, and the possibilities of sustainable economic growth.

Analysis of literature on the topic

The essence, purpose, factors and formation process of innovative economy D. Romer, Chen Derek, D.A. Medvedov, A.A. Dinkin, N.I. Ivanova, V.V. Glukhov, L.N. Orlova, T. Sh. Researched



by Shodiev and others. In particular, D. Romer [2] thinks about the role and importance of innovation in the post-industrial stage of development, the formation of an intellectual, i.e. knowledge economy, to increase the standard of living of the population, to ensure sustainable economic growth. He proposed an endogenous model of economic growth and emphasizes that intellectual potential, a complex of knowledge, a new idea, and innovation have become the main factors of development. Chen Derek [3] innovative economy, that is, in his definition, the four pillars of the knowledge economy: talked about economic external environment, knowledge complex, innovation system and information communication technologies and proposed a multifactor econometric model of economic growth. D.A. Medvedov [4] spoke about the prospects of the Russian economy and noted that the main goal of the Russian Federation is the production and export of goods with a high knowledge capacity in the future development of the country. A.A. Dinkin and N.I. Ivanova [5] described the content, nature, purpose, development factors and sources of the innovative economy in the examples of the Russian economy. V.V. Glukhov [6] explained in detail the features of the innovative economy, the advantages of exporting intellectual products from exporting raw materials, and the directions of increasing the competitiveness of enterprises. L.N. Orlova [7] studied the indicators of the innovative economy and the problems of ensuring competitiveness. T.Sh. Shodiev [8] and scientists of the United Nations Center for Economic Research in Uzbekistan [9] studied the important scientific and methodological aspects of the establishment of the knowledge economy in Uzbekistan, and tried to create its econometric model.

Methodical approaches of scientists to study the process of formation of a new qualitative stage of innovative development, innovative developments, studies of ensuring economic sustainable growth through the introduction of new technologies and products in enterprises are of theoretical and practical importance. Knowledge economy, or in other words, the level of formation of the innovative economy, statistical indicators and factors, analysis by combining qualitative and quantitative analysis methods, based on econometric models, has not been comprehensively researched. This problem has also been overlooked by research scientists.

In the article, in order to intellectualize economic activity, it is required to increase the role of intangible resources in production, to ensure the priority of the share of intellectual labor in the capacity of goods, to liberalize the economy and to use the market mechanism in its regulation. The development of the innovative development strategy of the national economy in the future is of great practical importance today.

Research methodology

Statistical data on the country's development in 2010-2019, dynamic series, averages, dispersion, variation, correlation and regression equations were used in their comparison, analysis and synthesis in the research of the innovative development of our country's economy and the implementation of the Action Strategy.

And finally, the two-factor model in determining the factors and sources of economic growth constructed and the marginal efficiency of each factor (resource), resources exchange limits and optimal combinations of each factor were determined found absolute and relative "net" effects on GDP, from capital and labor the coefficient of total efficiency of external factors (TFP) was determined, directions of sustainable economic innovative development were determined.

Didactic approach, systematic and logical analysis in the research process, statistical observation, statistical summation, time series, correlation and methods such as regression analysis,



economic-mathematical modeling were used. The socio-economic development indicators of the Statistics Committee of the Republic of Karakalpakstan in the following years were used as a database. In the form of a research hypothesis, it is assumed that the formation of an innovative economy is a means of ensuring sustainable development and competitiveness.

Analysis and results

In the process of globalization of the economy, the competitive environment changes rapidly, and this requires companies and enterprises to create innovations and introduce innovations in order not to decline in market conditions. In the current period, innovations are carried out through fundamental research, practical developments and experimental plots, through the continuous implementation of new products, scientific developments, marketing and management methods. The logic of technological development and potential markets are equally valuable sources of innovative ideas. In other words, innovations can be created by passing the stage of scientific research, where an idea is born, a concept is developed, and direct development is carried out. Innovation does not always mean using a completely new product or process. Innovation is often the effective combination of previously known elements in a new combination. This does not reduce the importance of basic and applied research. However, they are referred to when difficulties arise, that is, the results of practical work are initially analyzed. In researching the process of intellectualization of the economy, first of all, it is necessary to fulfill the tasks of the Action Strategy of the development adopted in the Republic, to further develop and liberalize the economy, to use more market mechanisms in the organization of the economy, and to reduce the intervention of the state in the economy. We use production functions to study this process in depth.

Including

$$Y_t = A_t K_t^\alpha L_t^\beta$$

Here Y_t - gross domestic product, billion soums, K_t - total production value of funds, billion soums, L_t - the average number of workers and employees participating in the national economy, thousand people. $A^{\alpha, \beta}$ are parameters of the function and they are calculated using econometric methods. To determine the intensive and extensive factors of economic development, we can modify the function and write: $\alpha + \beta \neq 1$

$$Y_t = A_t (K_t^\mu L_t^{1-\mu}) (K^\mu L_t^{\mu-1})^{\nu-1}$$

$$\mu\nu = \alpha$$

$$(1-\mu)\nu = \beta$$

Also, in the research, the transition from material factors to intangible factors (new idea, knowledge, information, etc.), the overall effectiveness of factors in the Republic during the years 2010-2019, has been proven in a growing trend. For this, the two-factor macroeconomic function of the economy was calculated.

Total productivity of factors:

$$\frac{\Delta Y(t)}{Y(t)} = \alpha_\kappa(t) \frac{\Delta K(t)}{K(t)} + \beta_l(t) \frac{\Delta L(t)}{L(t)} + TFP(t)$$

Here, the growth rate of GDP is considered as a function of fixed capital and labor. The following equation can be written under the assumption that the factors and the function vary according to the law of exponential growth. $g_y = (w_\kappa \times g_\kappa) + (w_l \times g_l) + \alpha$



Based on the production function created as a result of statistical data processing for 2010-2019, the contribution of each factor to economic growth was determined. The average rate of economic growth for the covered period was 6.1 percent, the share of labor was $w_l = 1,8$ percent, and the share of capital was $w_k = 2,9$ percent. The contribution of the factors to the total efficiency was $\alpha = 1,4$ percent.

As a result, the expansion of intangible production and the replacement of labor by knowledge significantly reduce resource constraints.

Today, the development of the innovative potential of the national economy, including its reconstruction in the field of small business, the introduction of high-tech developments of scientific organizations and industrial enterprises, and the promotion of unification in order to eliminate the consequences of the disconnection of science from production that occurred during the reforms, innovative activities and direct and indirect support for applied scientific research is essential. Support of innovative activities of small business entities should be one of the priorities of state policy in the field of innovation. Small innovative business (SBI) is an integral link of the regional innovation system, a developer of effective innovations, their consumer, an intermediary between science and production.

It is necessary to recognize the general understanding of the importance of information and knowledge in economic development, political circles, entrepreneurs, business leaders should recognize the importance of introducing innovations in ensuring competitiveness. This direction cannot be underestimated as a development factor. Society and the economy are "reflective systems", changing the perception of the factors of economic growth itself changes these systems and affects their development. Awareness of the importance of knowledge and innovation forms the modern directions of management, which to a certain extent determine the behavior of firms in the markets and their development strategy. Understanding this at the state level encourages the development of state strategies and programs for the development of the knowledge-based economy. Today, one such strategy is the Action Strategy, which has been adopted and is being successfully implemented.

Intellectual activity indicates the establishment and development of innovative social production. Innovative production is the production based on new combination of technologies, know-how, factors of production, organization and management of production and the use of new knowledge that allows to gain an advantage over competitors and intellectual income.

In this case, the sources of innovation have changed from traditional research institutes, departments of design bureaus to product consumers, marketing departments. At the macroeconomic level, the effectiveness of innovations is reflected in the reduction of resource capacity per unit of production and the increase in the overall productivity of factors. In the following years, the dynamics of the overall efficiency of factors in our republic averaged around 3 percent.

1-table

Dynamics of overall efficiency of resources in economic growth in the Republic of Karakalpakstan in 2010-2019¹

¹ It was calculated by the author using the Stata computer program based on the statistical data of the Republic of Karakalpakstan.



Years	Alteration of labour force %	Investment dynamics %	GDP dynamics %	General of factors efficiency (TFP), %
2010	105,0	63,1	110,0	101,2
2011	102,6	159,9	112,0	101,8
2012	101,0	120,4	112,7	102,1
2013	101,1	184,7	112,4	102,3
2014	101,5	143,4	108,4	102,6
2015	102,0	132,8	110,7	103,2
2016	101,4	57,8	118,7	103,4
2017	103,0	49,1	105,7	103,7
2018	102,0	162,2	103,4	102,1
2019	104,9	96,6	106,8	102,6

According to the data, the dynamics of investment and economic growth fluctuated in the Republic, while the dynamics of the labor force was quite stable. Because of this, the overall efficiency of the factors tends to fluctuate over the years. It should also be noted that in the market economy, entrepreneurs and investors establish innovation relations with the entities carrying out innovation work on the basis of socio-economic interest. In addition, the organization of scientific research laboratories, institutes, special technological or design departments, as well as innovation-seeking departments in the presence of large corporations, concerns, and joint-stock associations, in order to increase the efficiency of production results with the participation of entities engaged in innovation activities, serves as the basis for high results to be achieved in the future.

Currently, the share of new goods and developments in the products, produced in the republic's enterprises is increasing. In particular, the dynamics of innovative goods, work and services in the sectors of our economy is presented in the table below.



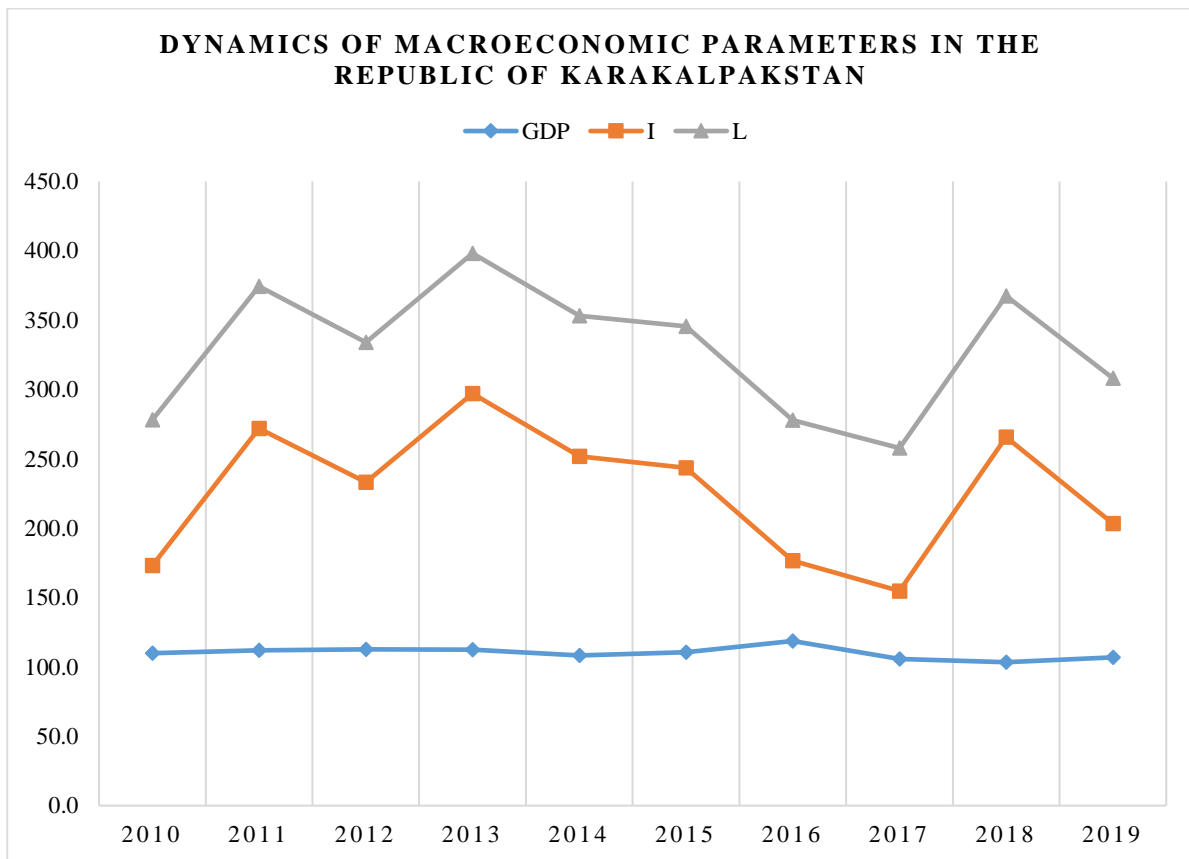


Figure. Dynamics of macroeconomic parameters in the Republic of Karakalpakstan ²

Nowadays, the innovative products produced in the republic are reflected in all spheres of the economy. One can be seen the share of innovative goods, works and services in the sectors of our economy. (See figure).

Reproducing economic growth based on these analyzes means that it manifests concrete historical features of this country, their economic potential, changes in productive forces under the influence of scientific and technical progress, economic functions of the state and the global development of international economic relations and the processes of internationalization of production on a world scale. can be concluded.

Conclusions and suggestions

The transition from a traditional economy to a knowledge-based economy requires long-term investments in education, innovation, information and communication technologies (ICT), as well as appropriate economic and institutional conditions that ensure the effective allocation and deployment of resources. World experience shows that the development of the modern economy in the direction of innovation is mainly due to small firms and companies based on high technologies.

Objectively speaking, laboratories such as small business enterprises, start-ups, and incubators are a natural and convenient area for the development of innovative processes. Due to this, it is necessary to continue the economic reforms implemented in our country from the point of

² Preparation was based on the data of the Statistics Department of the Republic of Karakalpakstan.



view of supporting innovative ideas and developments in small businesses and private enterprises, save resources at the macroeconomic level, and pay special attention to the effective use of intangible resources. It is appropriate to envisage an innovative economy as a perspective economy, requiring the continuation of the policy of rapid development of modern industries and production sectors based on high technologies and structural changes aimed at increasing the competitiveness of Uzbekistan in the world market and strengthening its position. To achieve an innovative economy: first of all, establishing cooperative relations between education, science and production; secondly, financing the production of innovative products by the enterprise based on cooperative relations; thirdly, creating an opportunity to apply scientific and technical achievements to the production process of the enterprise; fourthly, it is necessary to develop measures to create incentives for enterprises producing innovative products.

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