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## THE ROLE OF INNOVATION IN THE DEVELOPMENT OF THE COUNTRY'S ECONOMY: ANALYSIS AND RESULTS

Ikram Abdullayevich Navruzov

PhD., Senior Lecturer at Tashkent State University of Economics,  
Department of "Evaluation and Investments".

E-mail: [navruzovikrom55@mail.ru](mailto:navruzovikrom55@mail.ru) / Tel: +998912690990

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### Abstract

In this article, scientific-theoretical views on the financing of innovation activities, theoretical aspects of innovation implementation. Also, the analysis of the sources of financing innovative projects, the experiences of foreign countries in financing innovative activities were studied, and theoretical conclusions and practical recommendations were formed on the prospects of transitioning to the innovative economy through the acceleration of innovative activities.

**Keywords:** Innovation market, scientific research developments, technologies, sources of financing, innovative position, innovative economy.

### 1. Introduction

In the interpretation of the essence of the innovation process, there are mainly three points of view: the first, innovations, that is, discovered "innovations", inventions, application of created innovations, method, methodology, etc. its introduction into practice is considered and imagined as a consequence, result of the process of scientific and creative activity; the second is to create new blessings, elements, approaches, principles, i.e., principles instead of the existing ones, and to interpret the results of more scientific and creative activities without neglecting inventions and discoveries; the third is to interpret innovation as the content, essence, and implementation of new products. The interpretations



given from the three points of view are very interrelated, but they cannot reveal the true content and essence of innovation.

As can be seen from the above definitions, “innovations” are interpreted as novelty, application of inventions. If we approach from this point of view, discovering new things, inventing them, using them in practice, in our opinion, is a very long, continuous and endless innovative process, i.e. promotion of a specific idea, recognition as a result of scientific research, development, invention, discovery, experiment. covering the processes of implementation, theoretical and practical as well as technical and economic justification, calculation of efficiency, implementation and implementation as a project takes Innovations should be recognized as a result of scientific research, an achievement of science development, a new idea, novelty, invention, discovery and used in practice, and should be considered as achieving certain results and achieving efficiency in exchange for their implementation.

## **2. Literature Review**

The concept of "innovation" is closely related to the concepts of "innovation", "creator of innovation", "loss of innovation". innovation (eng. innovationas – manufactured novelty, invention) – 1) expenses spent on acquisition to ensure exchange of generations of equipment and technology; 2) innovation in the fields of engineering, technology, management and labor organization based on scientific and technical achievements and best practices, support in additional various fields and related fields [1].

Innovation is the specialty of these enterprises. Every enterprise engages in innovative activities in its production facility. At the same time, entities engaged in specialized innovative activities serve all areas of business activity with the innovations they have gained in the development of science and technology, on the basis of organizing methods of improving the production process [2].

It can be seen from the above-mentioned opinions and conclusions of economists and experts that innovation is the creation of new goods or the improvement of the quality of manufactured goods by introducing advanced scientific achievements into the production process in order to obtain high economic and social efficiency [3].



We know that innovation can be managed. This means that it is possible to use various management tools and methods that allow the innovation process to be influenced to one degree or another, the life cycle of innovations to change, and innovations to grow effectively. The effectiveness of the methods and tools of management influence is mainly determined by the classification of innovations, classification charts and its scientific justification [4].

Reviewed issues related to innovation and gave a complete description of the innovation process and divided innovative changes into five directions. Use of new techniques and technological processes or provision of production on the basis of a new market; implementation of production of new products with new features; use of new raw materials; improving production organization and providing it with new innovative goods; opening new consumer markets [5].

At the same time, innovation is the heart of investment, without innovation, capital investment can be ineffective and even harmful, and in the future, uncompetitive products may continue to be produced. At the same time, it is impossible to carry out investment without innovation, that is, obsolete equipment that needs to be replaced is not currently produced, and its market does not exist. Therefore, the main source of innovation is investment in fixed capital [6].

### **3. Research Methodology**

As a research method, grouping, statistical analysis, comparison, graphic method, infographics and several other scientific research methods are widely used, which in turn helps to reveal the topic in detail.

### **4. Analysis and Discussion of Results**

Classification of innovations refers to the division of innovations into specific groups according to certain criteria. Classification of innovation begins with identifying its signs. The classification marks represent the specific characteristics of a particular innovation group. In the economic literature, different approaches to the classification of innovation and its division into criteria are shown. In our opinion, the classification of innovations should be as follows: complexization of the set of classification symbols intended for

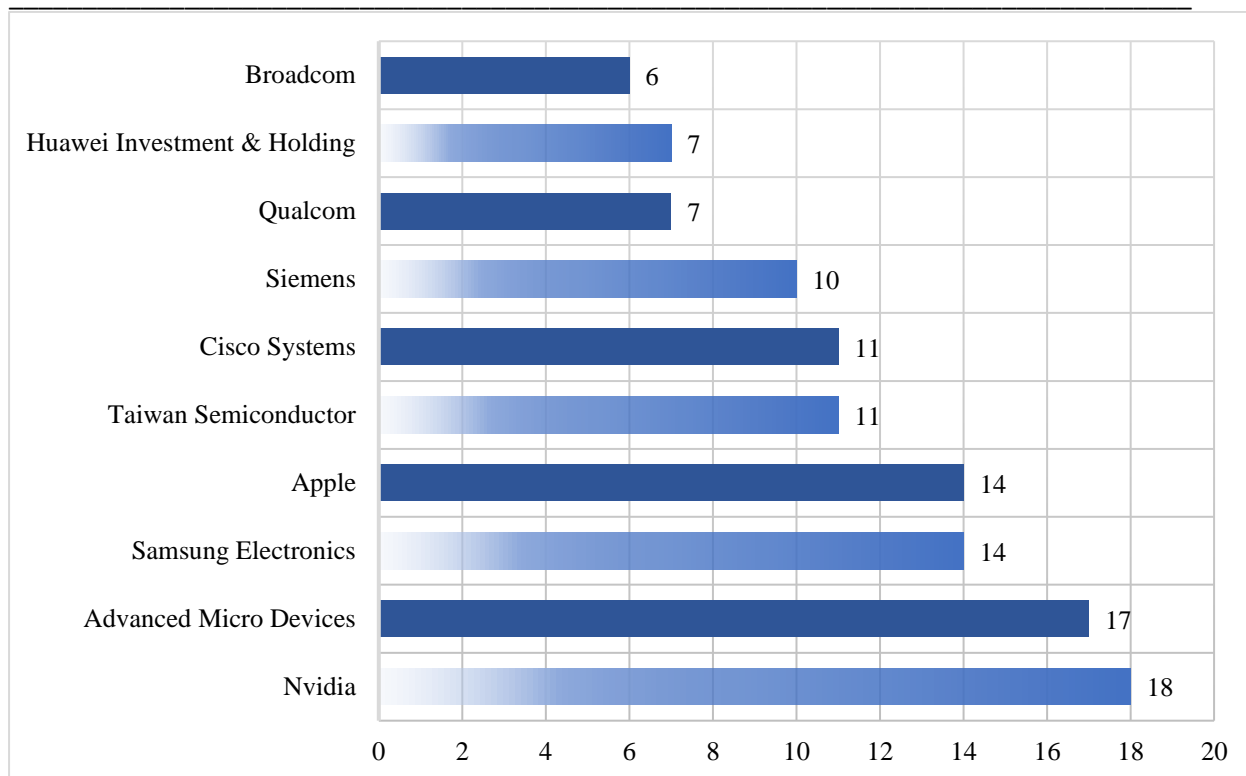


analysis; the ability to determine not only quality, but also quantity when choosing criteria; scientific novelty and practical significance (importance) of the proposed classification symbols. Based on the above, innovations can be classified through Table 1.

**Table 1 Theoretical classification of innovations [7]**

<b>№</b>	<b>Classification symbols</b>	<b>Types of innovation</b>
1.	The form of innovation is the basis of innovation	<ul style="list-style-type: none"><li>• invention, discovery, patent</li><li>• rationalization proposals</li></ul>
2.	The degree of novelty of innovation	<ul style="list-style-type: none"><li>• know-how</li></ul>
3.	Innovation scale (scale)	<ul style="list-style-type: none"><li>• trademarks, trade marks, emblems</li></ul>
4.	Sectors of the national economy where innovations are implemented	<ul style="list-style-type: none"><li>• new documents (describing technological, production, management, construction, structure, method, etc.)</li><li>• the result of marketing research</li></ul>
5.	Application of innovations	<ul style="list-style-type: none"><li>• periodic (epochal) (revolutionary)</li><li>• basic (revolutionary)</li></ul>
6.	Types of results obtained as a result of the implementation of innovations	<ul style="list-style-type: none"><li>• improving (evolutionary)</li><li>• micro-innovations (evolutionary)</li></ul>

In general, the innovation process is a chain of sequential events in which innovation is formed from an idea to a concrete product, technology and service, and spreads into business practice. The innovation process does not end with implementation, that is, with the appearance of new products and services on the market or with the delivery of new technologies to their design capacity. This process does not end even after its introduction, because the economy will improve depending on the level of diffusion of news, the level of efficiency will increase, it will acquire new consumer characteristics. This opens up new areas of implementation, new markets, new consumers.



**Figure 1. R&D spenders by industry, growth rate 2022–2023 (in percent)  
[8]**

Notably, four of the top R&D investors in ICT hardware reduced expenditure, in contrast to the year before, when all ICT top R&D investors increased R&D expenditure. In software, two firms decreased spending, while in pharmaceuticals, four firms did so. A few highlights:

In the ICT hardware sector, a slowdown was evident, with Nvidia's R&D growth rate decelerating from around 35 percent in 2022 to 18 percent in 2023. Meta's and Uber's R&D – which jointly recorded the highest growth rate last year at 30 percent – fell substantially to around 10 and 13 percentage points, respectively. In contrast, the pharmaceuticals sector experienced an accelerated growth, with Eli Lilly. The automotive industry reported a substantial rise in R&D expenditure, particularly by Tesla (by around 30 percent).



**Table 2 R&D growth rates of top global corporate R&D spenders, 2019–2023 [9]**

Year	R&D		Weighted real growth (%)	Weighted R&D intensity (%)
	Nominal (billion USD)	Weighted nominal growth (%)		
2019	894	10.5	10.4	5.6
2020	982	12.7	10.7	6.0
2021	1,089	15.2	12.8	5.7
2022	1,174	8.8	7.5	5.8
2023	1,243	8.3	6.1	5.7

In terms of unweighted nominal growth (Figure 3), the ICT hardware and electrical equipment, and the software and ICT services sector, saw their growth rates divided by two between 2022 and 2023. In contrast, the pharmaceutical sector experienced a significant rebound in R&D expenditure, with growth increasing more than threefold, from 3 percent in 2022 to 10 percent in 2023. In 2023, the pharmaceutical sector led in R&D intensity at 19 percent, followed by Software and ICT services with 14 percent.

In our view, any innovative project is threefold, that is, firstly, with the prices of various financial resources necessary for the implementation of the innovative project, secondly, the total mobilized capital cost, based on the demand of market relations, with the time unit of implementation, and thirdly, achieving the set goal limited by internal strength. Along with these, innovative projects require management of possible risks in the process of implementation. Innovative projects, like any investment projects, have a life cycle consisting of three stages, that is, life cycles consisting of pre-investment, investment and operational stages. Depending on the characteristics of the innovative project, investments are formed in different proportions and financed from different sources in the three mentioned stages.





**Table 3 The 10 companies with the highest research and development expenses in 2023 [10]**

Rank	Company	Sector	Expenditures on R&D (billions of USD)
1	Amazon	Software and Internet	73.21
2	Alphabet Inc.	Software and Internet	39.50
3	Apple	Computing and Electronics	27.65
4	Microsoft	Software and Internet	26.63
5	Huawei	Computing and Electronics	24.00
6	Volkswagen Group	Automotive	19.88
7	Samsung Electronics	Computing and Electronics	19.29
8	Intel	Computing and Electronics	17.53
9	Roche Holding	Health Care	14.72
10	Johnson & Johnson	Health Care	14.6

According to the above table, the amount of investments made by the top 10 companies in scientific research development in 2023 is given, and among the top 10, the Amazon company has 73.21 billion. Leading with the US dollar, which in turn indicates the company's high potential for innovation, according to the order of the table, Alphabet Inc., Apple, Microsoft, Huawei, Volkswagen Group, Samsung Electronics, Intel, Roche Companies such as Holding, Johnson & Johnson also have their place in the world rankings. It can be seen that the funds spent on innovative areas were considered effective for the country's economy.

## 5. Conclusions and Suggestions

In conclusion, it can be said that the innovative strategy is formed on the basis of organizational, production, technological, management and other structural potential of the enterprise. Innovative strategies differ in their scope, terms, fields and directions. The innovation strategy is based on the company's own



capabilities and the capabilities of the economy's market infrastructure. In many cases, the innovation strategy is formed based on the general environment of the economy, the state of the free competition environment, the state of the industry and sectors, production, technological, entrepreneurial potential and available opportunities. The fact that the enterprise is organized on the basis of competition encourages it to develop one or another innovative strategy. The formation of an innovation strategy is formed as an innovation project, as mentioned above.

The portfolio of innovative projects often allows you to choose from them. Innovative projects are designed for a certain period of time and differ in their aspects. The common denominator is that all innovative projects have their own life cycles and phases. Innovative projects are technically and economically justified, the feasibility of their implementation is assessed, the source is analyzed, the results of specific goals are calculated. The future results of innovative projects are effectively compared, the risks in the phases of the life cycle process are measured, and mitigation measures are developed through their management.

- development of programs for the targeted use of foreign investment for the full use of the territorial export potential and others;
- optimizing the relationship between investors and the government to completely eliminate bureaucratic barriers and restrictions in the implementation of investment projects through digitalization and remote provision of public services;
- improving the system of attracting foreign investment in the implementation of strategically important projects, deepening the localization of production and expanding inter-sectoral industrial cooperation, economic growth and structural transformation of the economy;
- creating a favorable business environment based on high technology and creating high value-added joint projects.

Based on the above scientific suggestions and recommendations, their in-depth study, analysis and substantiation will yield results in the near future. It will also have a positive effect on increasing the country's investment attractiveness by creating a favorable investment climate in the country.





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