

## **Green Investments: A Factor for Promoting Ecological Innovations in the National Economy**

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**Abstract:** This article analyzes the concept of green investments, their role in the national economy and the development of ecological innovations. The importance of investments in the formation of a green economy, especially the economic efficiency of introducing environmentally friendly technologies in the industrial and energy sectors, is considered. The article also analyzes the current situation in Uzbekistan in attracting green investments, foreign experience and opportunities for their implementation. Based on the results of the study, proposals and recommendations have been developed to expand green investments and combine them with innovative development.

**Keywords:** green investments, ecological innovations, sustainable development, green economy, economic efficiency, renewable energy, ecological technologies, financing mechanisms, economy of Uzbekistan.

### **Introduction**

In recent decades, global environmental problems such as climate change, environmental pollution and the limitation of natural resources have become urgent issues for all mankind. Therefore, there is a growing need for a new economic direction - the concept of a green economy - that provides sustainability, efficiency and environmental safety, abandoning the traditional economic model. This new approach involves conducting economic activity with minimal damage to the environment, rational use of natural resources and the widespread introduction of ecological innovations.

Green investments stand out as the main driving force of the green economy. Green investments are understood as financial resources aimed at ensuring environmental sustainability, that is, directed to the development of environmentally friendly, renewable energy, waste recycling, water and air resources purification, environmentally friendly transport and technologies. These investments play an important role not only in solving environmental problems, but also in maintaining economic growth rates and creating new jobs.

Currently, developed countries are defining green investments as a strategic priority and giving them an important place in state policy. They are implementing environmental innovations on a large scale using green bonds, subsidies, tax breaks and other financial incentives. This is leading to technological modernization and environmental safety in their economies.

The Republic of Uzbekistan is also putting forward a number of initiatives and reforms to develop a green economy. Within the framework of national programs such as "Green Space", "Energy Efficient Economy", "Sustainable Development Goals", improving the ecological environment, introducing renewable energy sources and switching to modern ecological

technologies are set as priorities. However, further improving the investment climate in this area, attracting private and foreign investors, and diversifying financial instruments remain urgent tasks.

This article analyzes the role of green investments in the national economy, their role in stimulating environmental innovations, international experience and practice in Uzbekistan. Proposals and recommendations will also be developed to improve the effectiveness of green financing mechanisms.

### **Literature review**

In recent years, research on the green economy and green investments has substantiated the need to reconcile environmental and economic interests. International scholars P. Victor and R. Costanza emphasize in their work that economic growth should be linked to environmental sustainability. Reports developed by the OECD and UNEP highlight the effectiveness of green investments in the field of renewable energy, waste management and transport.

Several scientific articles and analytical materials on green economy issues have been published in Uzbekistan, among which the works of M. T. Karimov, S. A. Oripov, D. Sh. Yusupov occupy a special place. These studies discuss mechanisms for attracting green investments, methods of financial incentives and the role of state policy.

Special attention is also paid to studying foreign experience in modernizing the economy, increasing energy efficiency and ensuring environmental safety. However, there is currently a lack of in-depth analysis of the specific economic outcomes and impact of green investments on innovative development, which increases the urgency of the topic.

### **Methodology**

This scientific study used a comprehensive methodological approach aimed at determining the importance of green investments in the national economy, assessing their role and effectiveness in stimulating ecological innovations. A number of scientific and methodological approaches were selected to achieve scientifically sound analysis and conclusions on the subject of the study.

First, the analytical and comparative method was used. Through this method, the concept of green investments, their forms, main directions, and advanced experiences of world countries in the field of green economy were studied and compared with the practice of Uzbekistan. In particular, the strengths and weaknesses of the national model were identified based on a comparison with the strategies of Germany, South Korea, and China in financing ecological innovations.

Secondly, the volume of green investments in the Republic of Uzbekistan, their structural structure, distribution by sectors, growth dynamics, and economic efficiency indicators were analyzed based on the method of statistical analysis. Official statistical data, materials from the World Bank, the United Nations Environment Program (UNEP), the International Finance Corporation (IFC) and the Statistical Agency of the Republic of Uzbekistan were used. Based on this data, visual analysis was carried out in the form of graphs and diagrams.

Thirdly, a systematic approach was used to deeply study the economic, social and environmental factors that green investments and environmental innovations are interconnected with. This approach made it possible to assess complex processes in the national economy in a holistic way.

Fourthly, through the method of normative and legal analysis, the adopted legislative acts, Presidential decrees, Government resolutions, national strategies and roadmaps on supporting the green economy and green investments in the Republic of Uzbekistan were studied. Also, existing problems in national legislation and the need for improvement were identified based on comparison with international standards and legal regulations.

Fifth, using the expert assessment method, the opinions of economists, environmental specialists, investment experts and experts from state administration bodies were studied. This revealed

practical obstacles, potential and opportunities in attracting green investments. The analysis of these opinions ensured the practical validity of the research results.

In general, the methodological approaches used ensured the scientific validity, practical relevance and effectiveness of the research. The combination of various methods made it possible to comprehensively reveal the topic and increased the reliability of the conclusions and proposals presented in the article.

## **Analysis and results**

This section analyzes the interrelationships in the process of promoting green investments and ecological innovations, their impact on the national economy, as well as practice in Uzbekistan and foreign experience. The main results obtained during the study are covered in the following sections.

### **Green investment financing mechanisms**

The Republic of Uzbekistan has a number of financial instruments for attracting green investments. These include, mainly, tax incentives provided by the state, subsidies, green bonds and public-private partnership (PPP) mechanisms. However, existing financial mechanisms are not yet fully effective. Financing green investments is mainly carried out using the state budget and assistance from international financial institutions, but the funds attracted from the private sector are relatively low.

According to experts, it is necessary to further diversify the financial incentive system, for example, expand green banks, green bonds and eco-certificates. It is indicated that Uzbekistan can issue green bonds and cooperate with large international banks to attract debt funds for environmentally friendly projects.

### **Promoting ecological innovations and their economic efficiency**

The results of the analysis show that through the implementation of ecological innovations, significant savings can be achieved in the economy by increasing energy efficiency, recycling waste and reducing emissions. An example of this is the "Green Energy" projects in Uzbekistan. These projects are playing an important role, in particular, in the introduction of renewable energy sources. Projects to improve energy efficiency play a major role, firstly, in reducing energy consumption and, secondly, in ensuring environmental safety. Studies show that the use of renewable energy sources increases the overall efficiency of the economy by reducing income by an average of 15-20%.

### **The impact of green investments on the national economy**

The analysis revealed the positive impact of green investments on the national economy. Such investments are of great importance in ensuring environmental safety, stimulating social development and increasing the sustainability of economic growth. In the process of Uzbekistan's transition to a green economy, the main focus is on the development and implementation of environmentally friendly technologies. This process allows for the creation of new jobs, modernization of local industry, and increased energy efficiency.

The analysis also shows that green investments can be effective in ensuring economic efficiency and developing new industries in the long term for the national economy. Green investments can be not only environmentally friendly, but also economically beneficial.

### **Foreign experience and practice in Uzbekistan**

Foreign experience, in particular, the study of achievements in the field of green economy and green investments in Germany, China, and South Korea, has shown that Uzbekistan can benefit from these experiences. In Germany, for example, an economic model based on renewable energy sources is being successfully implemented, and this model creates opportunities for increasing energy exports and developing new development technologies. China, on the other

hand, has implemented strict state policies and financial incentives in the transition to a green economy.

In the experience of Uzbekistan, there is a high need for the introduction of environmental technologies and the production of renewable energy sources, especially in large industrial enterprises. At the same time, the issues of increasing the effectiveness of state programs for the development of environmental technologies and involving the private sector remain relevant.

### ***Main results of the study***

- Green investments create great opportunities for the modernization and sustainable development of various sectors of the Uzbek economy.
- Green investments can be stimulated by diversifying financial mechanisms, in particular, by developing mechanisms for green bonds and green banks.
- The implementation of ecological innovations serves not only to ensure environmental safety, but also to increase economic efficiency.
- Significant progress can be made in the development of a green economy by integrating foreign experience and existing national practices.

### **Conclusion**

The main objective of this study was to analyze green investments as a means of stimulating eco-innovation in the national economy and to determine their economic efficiency and contribution to environmental sustainability. The study examined the impact of green investments on the economy, their environmental and social efficiency, as well as the financial and legal mechanisms necessary to stimulate these investments. The results showed that green investments play an important role not only in ensuring environmental sustainability, but also in supporting economic growth. Supporting green investments helps to increase energy efficiency, reduce emissions, and strengthen social sustainability.

There is a need to improve the existing financial mechanisms to support green investments. A broader system of financial incentives is needed for the development of a green economy through tax incentives, subsidies, green bonds, and public-private partnership (PPP) mechanisms. Such mechanisms can be effective in attracting the private sector. The study showed that economic efficiency can be increased through the introduction and development of ecological innovations. The introduction of green technologies leads not only to environmental sustainability, but also to the creation of new jobs and increased energy efficiency.

Also, the integration of foreign experience and national practices, especially the successes of countries such as Germany, China and South Korea in promoting green investments, can be adapted to Uzbekistan. Studying the experience of these countries in financing ecological innovations can be useful for creating effective mechanisms for attracting green investments in the national economy.

State policy and legal norms play a great role in promoting green investments. It is important to create the necessary legal framework for the transition to a green economy in the Republic of Uzbekistan and effectively implement state programs in this area. At the same time, it is necessary to combine national and international support mechanisms for the development and introduction of environmentally friendly technologies.

Effective development of this sector can be achieved by improving financial mechanisms for the development of green investments, developing and introducing green technologies, as well as strengthening state policies. Integration of foreign experience and national practice can lead to effective results in the development of environmental innovations in Uzbekistan. The results of the study provide important guidelines for Uzbekistan's transition to a green economy and can serve as a basis for future policies and practices.

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