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The Development of The Green Economy and Its Impact on A Country's Economic Stability

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Abstract: This article analyzes the essence of the green economy concept, its global development trends, and its impact on a country's economic stability. The study examines the core principles of the green economy, as well as the advantages and challenges of its implementation. It also investigates the reforms under way in the Republic of Uzbekistan to develop the green economy and their effect on economic stability. The analysis draws on official statistics and reports of the International Energy Agency (IEA), the International Renewable Energy Agency (IRENA), and the International Labour Organization (ILO). The findings show that global clean energy investment roughly doubled between 2022 and 2026 (forecast), from $1.1 trillion to $2.2 trillion; that renewable energy employment rose from 13.7 million to 16.6 million people between 2022 and 2024; and that Uzbekistan's installed renewable energy capacity reached 10,027 MW at the end of 2025, up from 6,079 MW a year earlier. The article concludes with practical recommendations for the further advancement of the green economy.

Keywords: Green economy, economic stability, sustainable development, environmental policy, green investment, Uzbekistan.

Introduction: The world economy is changing rapidly. Climate change, the depletion of natural resources, and mounting environmental problems have clearly exposed the limitations of traditional economic models. In this context, the concept of the green economy is gaining increasing importance on a global scale.

A green economy is a system that delivers economic growth through the rational use of natural resources without harming the environment. According to the United Nations Environment Programme (UNEP, 2011), it is an economic system aimed at improving human well-being and ensuring social equity while significantly reducing environmental risks.

The Republic of Uzbekistan is among the countries taking active steps in this direction. The Green Economy Transition Strategy for 2019–2030 (President of the Republic of Uzbekistan, 2019), the national climate change adaptation goals adopted in 2021, and the updated nationally determined contribution (NDC 3.0) presented at the 30th Conference of the Parties to the United Nations Framework Convention on Climate Change (COP30) in November 2025 (Republic of Uzbekistan, 2025) confirm the country's firm commitment in this area.

The purpose of this article is to examine the patterns in the development of the green economy and to analyze its impact on a country's economic stability. To achieve this purpose, the study sets four objectives: (1) to examine the concept of the green economy and its theoretical foundations; (2) to analyze the mechanisms through which the green economy affects economic stability; (3) to assess the state of green economy

development in Uzbekistan; and (4) to develop recommendations for expanding the green economy.

LITERATURE REVIEW

The green economy has been widely studied by international and local scholars. This section reviews the main scholarly views and approaches on the topic.

The theoretical foundations of the green economy concept have been developed by a number of major international organizations and scholars. In particular, UNEP (2011) defines the green economy as one that is low in carbon emissions, resource-efficient, and socially inclusive. This definition has since served as a basis for numerous scholarly studies.

Pearce et al. (1989), in Blueprint for a Green Economy, were the first to ground the concept of the green economy systematically. By examining the relationship between the environment and economic development, they demonstrated the important role of natural capital in the economic system.

Stiglitz et al. (2010) argued that measuring economic progress by gross domestic product (GDP) alone is insufficient and proposed new systems of measurement that also account for social well-being and environmental sustainability. This approach provides an important methodological basis for assessing the impact of the green economy on economic stability.

Research on Uzbekistan has been advanced largely by international organizations. The United Nations Development Programme (UNDP, 2021) assessed the impact of greenhouse gas emission reduction measures on Uzbekistan's social and economic situation, drawing on 29 studies published over the preceding decade. The Organisation for Economic Co-operation and Development (OECD, 2023) analyzed the financing of Uzbekistan's green transition and noted that the outsized role of the state and an underdeveloped domestic capital market constrain the mobilization of private finance.

Reports of international financial institutions have likewise documented the macroeconomic dimensions of the green transition. The World Bank's (2023) Uzbekistan Country Climate and Development Report, for example, projects that without action on climate adaptation the country's economy would be about 10% smaller by 2050, resulting in significantly lower employment and household incomes, and finds that the benefits of adaptation investments are two to three times higher than their costs.

In sum, the literature shows that the relationship between the green economy and economic stability has been studied extensively, but studies offering a comprehensive analysis of this relationship in the case of Uzbekistan remain scarce. This article was written to fill that gap.

METHODOLOGY

This study employed general and specialized methods of scientific inquiry. To reveal the essence of the green economy, methods of analysis and synthesis, comparison, and logical and systematic approaches were used. To identify the causes and consequences of the green economy's impact on economic stability, economic–statistical analysis and inductive and deductive methods were applied. The study analyzed official statistical data of the Republic of Uzbekistan and international organizations, scientific articles, monographs, and regulatory and legal documents. On the basis of the results obtained, conclusions and practical proposals aimed at developing the green economy and strengthening a country's economic stability were formulated.

RESULTS AND DISCUSSION

Conceptual Foundations and Principles

The green economy is a modern economic model aimed at ensuring economic growth while protecting the environment, using natural resources rationally, and promoting social equity. According to UNEP, it is an economy that improves human well-being and social equity while significantly reducing environmental risks and ecological scarcities (Houssam et al., 2023; UNEP, 2011). The development of the green economy has passed through several historical stages. Blueprint for a Green Economy, published in 1989, was the first work to set out practical policy measures for "greening" modern economies and placing them on a path toward sustainable development (Pearce et al., 1989). In 2011, UNEP presented its report Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication as a key contribution to the Rio+20 Conference. The report shows that greening the economy is not a barrier to growth; rather, it is a new engine of growth, a net generator of decent jobs, and a vital strategy for poverty eradication (UNEP, 2011). The core principles of the green economy are resource efficiency, the use of renewable energy sources, the circular economy, eco-innovation, and social inclusion. Resource efficiency has also been examined in the Uzbek context, in particular the economic efficiency of resource-saving technologies in cotton growing and the cotton industry (Rashidov, 2019, 2021; Rashidov & Shermatov, 2023) and the efficiency of textile production (Rashidov, 2025).

The relationship between the green economy and economic stability manifests itself in several areas.

Ensuring Economic Growth

The UNEP report indicates that directing 2% of global GDP into the green economy across ten key sectors would help move the economy onto a low-carbon, resource-efficient path and would deliver economic growth equal to or higher than that of conventional economic models (UNEP, 2011). In 2023, clean energy sectors accounted for 10% of global GDP growth. At the same time, energy-related carbon dioxide (CO_2) emissions are growing more slowly than the economy. According to the International Energy Agency's (IEA) Global Energy Review 2026, their growth in 2025 was only 0.4%, although in absolute terms emissions reached a new record of approximately 38.4 billion tonnes, while global GDP expanded by about 3.1% (International Energy Agency [IEA], 2026a).

Creating Green Jobs

In 2024, 16.6 million people were employed in the renewable energy sector, 2.3% more than the 16.2 million recorded in 2023; according to the International Renewable Energy Agency (IRENA) and the International Labour Organization (ILO), the pace of growth slowed markedly compared with previous years (International Renewable Energy Agency [IRENA] & International Labour Organization [ILO], 2025). Each dollar invested in renewable energy creates about three times as many jobs as the same dollar invested in the fossil fuel industry (United Nations, 2024). A study of 33 industrialized and developing economies over 1991–2022 examined the impact of green energy production on sustainable economic growth and green economic recovery (Zeng et al., 2024).

Strengthening Economic Stability

Sustainable prosperity is a holistic economic model that combines GDP growth with environmental sustainability and social equity. Unlike conventional development models focused solely on economic expansion, sustainable prosperity secures long-term stability and ensures that growth does not come at the expense of environmental sustainability or social well-being.

Challenges for Developing Countries

Developing and emerging economies face particular constraints in the green transition. Using cross-sectional data for 60 developing countries, Houssam et al. (2023) found a statistically significant positive relationship between green economy performance and GDP per capita and a negative relationship with poverty rates. At the same time, the transition requires large financial resources: the OECD (2023) notes that in Uzbekistan the outsized role of the state and an underdeveloped domestic capital market limit the mobilization of private finance, and the World Bank (2023) stresses that accelerating private sector development is critical for absorbing the costs and seizing the opportunities of the green transition. This heightens the importance of international financial cooperation and technology transfer in the transition to a green economy.

The Green Economy Transition in Uzbekistan

Uzbekistan is among the countries pursuing a consistent policy on the transition to a green economy.

In 2019, the Strategy for the Transition of the Republic of Uzbekistan to a Green Economy in 2019–2030 was adopted by presidential resolution; it is the principal document aimed at integrating climate change issues into the sustainable development of the national economy (President of the Republic of Uzbekistan, 2019). The strategy seeks to improve energy efficiency, ensure the rational use of natural resources, reduce greenhouse gas (GHG) emissions, provide access to green energy, create green jobs, and ensure climate resilience. It sets targets of reducing GHG emissions per unit of GDP by 10% by 2030 relative to the 2010 level and doubling energy efficiency. Under the second nationally determined contribution (NDC 2.0), Uzbekistan committed to reducing GHG emissions per unit of GDP by 35% by 2030 relative to 2010; in NDC 3.0, presented at COP30 (Belém) in November 2025, this target was raised to 50% by 2035 (Republic of Uzbekistan, 2025). According to figures attributed to the Ministry of Energy, more than 17,000 MW of new renewable energy capacity is planned to be commissioned by 2030, which would raise the share of renewables in electricity generation to 54% (Central Asia Climate Portal, 2025). According to IRENA's (2026) Renewable Capacity Statistics 2026, Uzbekistan's installed renewable energy capacity reached 10,027 MW at the end of 2025, up from 6,079 MW a year earlier; of this, solar power plants accounted for 5,934 MW, wind power plants for 1,652 MW, and hydropower plants for 2,441 MW. Solar and wind plants generated more than 10 billion kWh of electricity in 2025 (4.8 billion kWh in 2024), and, including hydropower, renewable sources accounted for about 23% of total electricity generation by the end of 2025 (IRENA, 2026; Republic of Uzbekistan, 2025).

The main tasks of the strategy include improving energy efficiency through technological modernization and the rational use of natural resources; introducing green criteria into public investment; implementing pilot projects in cooperation with international financial institutions; and developing a system for training specialists in the green economy.

The analysis shows that the transition to a green

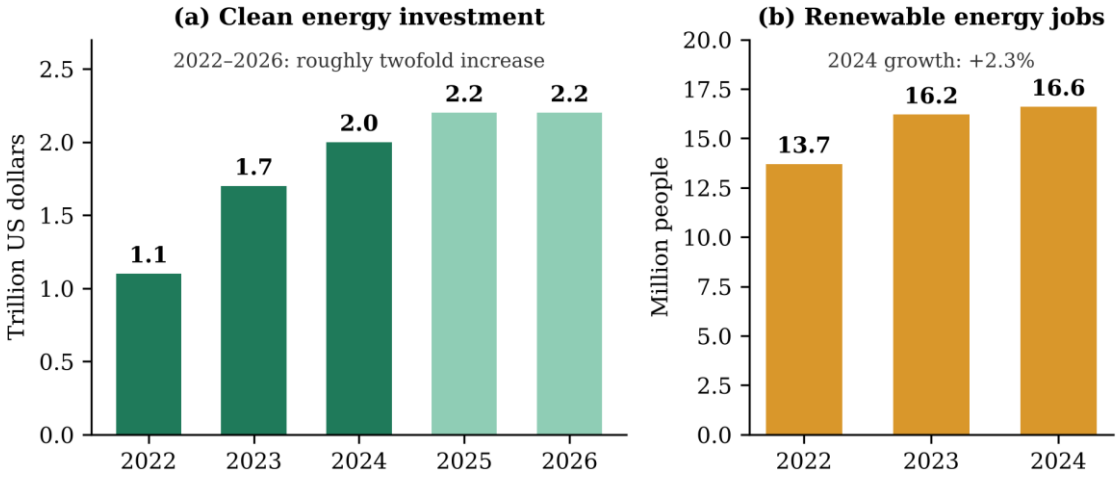
economy represents a major opportunity for Uzbekistan not only environmentally but also economically. Developing renewable energy contributes to the country's economic stability by creating new jobs, ensuring energy security, and reducing dependence on energy imports.

Global Trends in Clean Energy Investment and Employment

Figure 1 presents the development of the green economy over 2022–2026 on the basis of official IEA and IRENA reports.

Figure 1

Global Clean Energy Investment, 2022–2026, and Renewable Energy Employment, 2022–2024



Note. Lighter bars in panel (a) denote the IEA estimate for 2025 and the IEA forecast for 2026. Data from International Energy Agency (2023, 2024, 2025, 2026b), International Renewable Energy Agency (2023), and International Renewable Energy Agency and International Labour Organization (2025).

Growth in clean energy investment

In 2023, $1.7 trillion of total global energy investment went to clean technologies, including renewable energy, electric vehicles, nuclear power, grids, storage, low-emissions fuels, energy efficiency, and heat pumps. Annual investment in clean energy grew by 24% between 2021 and 2023 (IEA, 2023). In 2024, global energy investment exceeded $3 trillion for the first time, and about $2 trillion of this was directed to clean technologies, twice the $1 trillion spent on fossil fuels (IEA, 2024). In 2025, global energy investment reached a record $3.3 trillion, of which $2.2 trillion went to clean technologies and $1.1 trillion to oil, gas, and coal (IEA, 2025). According to the IEA's World Energy Investment 2026 report, published in May 2026, global energy investment is expected to rise by 5% in 2026 to approximately $3.4 trillion, with $2.2 trillion directed to clean energy and $1.2 trillion to fossil fuels (IEA, 2026b). Thus, between 2022 and 2026 (2026 being a forecast), clean energy investment increased from $1.1 trillion to $2.2 trillion, an increase of 100%, or a doubling. This indicator confirms that the green economy is becoming an increasingly powerful economic force at the global level.

Expansion of green market capitalization

After a decline in 2022, the global green economy experienced a strong recovery in 2023, and its market capitalization reached $7.2 trillion in the first quarter of 2024. The long-term growth rate, a 10-year annualized average of 13.8%, remains above that of the broad equity market (LSEG, 2024). This indicator suggests that green economy companies are becoming increasingly attractive to investors and that the green financial market rests on a stable foundation.

Growth in green employment

Employment in the renewable energy sector reached 16.6 million people in 2024, up from 16.2 million in 2023 and 13.7 million in 2022, although the growth rate slowed to 2.3% (IRENA, 2023; IRENA & ILO, 2025). These employment dynamics indicate that the transition to a green economy is effective not only environmentally but also socioeconomically: it contributes directly to employment and income growth.

Summary of the findings

The data presented above show that clean energy investment grew steadily over 2022–2026 and stabilized at around $2.2 trillion in 2025–2026, while employment in renewable energy rose from 13.7 million to 16.6 million people over 2022–2024. In 2026, approximately $1.8 is expected to be invested in clean energy for every dollar spent on fossil fuels (in 2025 the

ratio was nearly 2:1, at $2.2 trillion versus $1.1 trillion); in 2024, the ratio of investment in clean electricity to investment in fossil-fuel power plants reached 10:1 (IEA, 2025). At the same time, the fact that energy-related CO_2 emissions again reached a record level in 2025 shows that the green transition is far from complete. Overall, these indicators support the conclusion that the green economy plays a growing role in strengthening global economic stability (IEA, 2025, 2026a).

CONCLUSION AND RECOMMENDATIONS

Against the backdrop of digital and technological change, the green economy is becoming a priority direction of the modern world economy. The expansion of green energy, resource efficiency, and eco-innovation is enhancing the competitiveness of national economies not only by protecting the environment but also by creating new jobs, improving the investment climate, and strengthening economic stability.

At the same time, the sustainable development of the green economy depends directly on a country's institutional readiness, the capacity of its skilled workforce, and mechanisms of international cooperation. If these factors are not sufficiently developed, the green transition may become a source of new socioeconomic inequality rather than an economic opportunity. For this reason, alongside the expansion of renewable energy infrastructure, training specialists in the green economy, improving financing mechanisms, and developing public–private partnerships are of strategic importance. Dedicated support funds, such as the one examined for sustainable innovative techniques and technologies in the cotton sector (Rashidov et al., 2021), illustrate one such financing mechanism.

Overall, the development of the green economy emerges as an interrelated process that harmonizes economic growth, environmental sustainability, and social well-being. A comprehensive approach in this direction will help increase Uzbekistan's international competitiveness and create a sustainable economic environment for future generations.

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