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ECONOMIC FOUNDATIONS FOR IMPLEMENTING THE GREEN ECONOMY CONCEPT

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Abstract

This article provides an empirical analysis of the economic foundations of implementing the green economy concept. The study was conducted on the basis of panel data for the Central Asian countries, including Uzbekistan, for the period 2015–2025. The analysis assessed the main factors affecting green growth - economic growth, industrial share, renewable energy, human capital, population growth, CO_2 emissions, and foreign direct investment. The results revealed the positive impact of industrial modernization and human capital on the development of the green economy, while traditional economic growth and investment have a negative impact in the short term. The results of the study serve as a scientific and practical basis for the formation of effective economic and institutional policies for the development of the green economy.

Key words

Green economy, green growth, sustainable development, renewable energy, human capital, industrial modernization, CO_2 emissions, Central Asia.

1. Introduction

In recent decades, the issue of ensuring sustainable development on a global scale and mitigating environmental problems has become a central focus of states economic policies. In this process, the concept of a “green economy” was formed as an important strategic direction. The term green economy was originally put forward in 1989 by Pearce and Partners, which expresses the need to maintain ecological balance alongside economic growth. Later, at the 2012 Rio+20 Summit, the green economy was hailed by the United Nations as a means to achieve sustainable development. Since then, the concept of “sustainable development” has become the main goal of the countries of the world. The culmination of this issue was marked by the adoption of a policy by 195 countries to keep global warming at +2 C at a 2015 UN conference on climate warming in Paris, France. At the conference, 147 countries presented plans for a “green economy”, 147 countries presented programs for the use of renewable energy sources, and 167 countries

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presented recommendations for improving energy efficiency in accordance with climate change.

Today, the green economy has become a central focus of economic policy in both developed and developing countries. Its main goal is to achieve economic growth in an environmentally sustainable way through efficient resource use, waste reduction, and socially inclusive development. In this process, green technologies, renewable energy, and environmentally friendly production systems act as key drivers. In the European Union, the Green Deal policy supports a transition toward a carbon-free economy by promoting job creation and environmental entrepreneurship.

However, implementing green economy principles remains challenging in many developing countries. Major obstacles include high costs of environmental technologies, weak economic diversification, insufficient green infrastructure, and low environmental awareness. In addition, traditional resource-dependent economic models still dominate, leading to resource depletion, higher emissions, and intensified climate change risks. Therefore, the transition to a green economy is increasingly viewed as a necessary pathway for ensuring not only environmental protection but also long-term economic stability and social well-being.

The main objective of this study is to analyze the economic foundations of the implementation of the green economy concept and determine the impact of this process on Sustainable Development. For this purpose, the following tasks are set: analysis of the theoretical and conceptual foundations of the green economy, assessment of its impact on economic growth, employment and environmental efficiency, to show economic mechanisms in the implementation of green economy policies on the example of Uzbekistan and other developing countries, to identify ways to ensure economic transformation through green investment and entrepreneurial activity. The results of the study are of practical importance from the point of view of ensuring environmental safety in the economy, opening up new

investment opportunities, and the formation of a sustainable growth model. According to Houssam et al, the transition to a green economy is not only an environmental benefit, but also a significant contribution to social development by creating new jobs, increasing energy efficiency, and reducing poverty. Therefore, the results of this study serve as a useful scientific basis for politicians, economists and environmental managers.

In addition, introducing green economy principles at the national level can accelerate economic modernization in developing countries such as Uzbekistan and support the creation of a competitive economic system aligned with international

environmental standards. The article is structured into five main sections. The first section introduces the topic, highlighting its relevance, problem statement, purpose, and significance. The second section examines the theoretical foundations of the green economy, its link to sustainable development, and various academic perspectives. The third section analyzes implementation mechanisms, focusing on investment, innovation, and the role of entrepreneurship. The fourth section presents a practical analysis based on the experience of developing countries, particularly Uzbekistan. The final section provides conclusions and recommendations, summarizing the main findings and outlining future research directions.

2. Literature Review

The green economy is widely recognized as a key driver of sustainable development in the modern economy. It aims to promote economic growth while strengthening environmental security, improving resource efficiency, and enhancing social well-being. According to Georgeson, Maslin, and Poessinouw (2020), the green economy represents a strategic global shift that improves resource use efficiency and supports climate change mitigation. Following the United Nations Rio+20 summit, it became integrated into national policies as a model that balances economic growth with environmental protection, particularly in developing countries. In the European Union, under the European Green Deal initiative, the green economy is also viewed as a tool for increasing economic competitiveness.

In the post-pandemic period, waste management and “green technologies” have become important drivers of economic recovery. Therefore, the green economy is now seen not only as an environmental priority but also as a key factor in global recovery and competitiveness. Recent studies use different methodological approaches: for example, Houssam et al. used the GLS model to show that the green economy positively affects GDP growth and employment, while reducing poverty in 60 developing countries. Kwilinski, Lyulyov and Pimonenko (2024), using the GMM model, found that green economic development is closely linked to entrepreneurial transformation in EU countries, where green startups and investment mechanisms strengthen economic stability. Oliinyk (2020), based on qualitative analysis, highlighted the conceptual bases of the green economy and its implementation conditions in Ukraine, offering a useful framework for developing countries. However, despite extensive theoretical research, the practical implementation mechanisms and economic efficiency drivers of the green economy remain insufficiently studied, especially in Central Asia and

Uzbekistan, where empirical evidence on institutional, investment, and structural barriers is still limited.

Also, the existing literature has not sufficiently thoroughly analyzed the issues of how the green economy can influence the balance between economic growth and social equality, how it can be supported through local business and innovative infrastructure. Therefore, this research is aimed at developing practical mechanisms and institutional proposals, studying the concept of a green economy from the point of view of economic foundations in the conditions of Uzbekistan.

3. Research Methodology

3.1 Theoretical framework

This study uses a systematic approach based on the Environmental Kuznets Curve (EKC) theory to explain the economic rationale for implementing the green economy concept. The EKC theory allows for the analysis of the complex, nonlinear relationship between economic growth and environmental quality and is widely used to empirically substantiate issues of sustainable development.

According to the EKC theory, an increase in production in the early stages of a country's economic development leads to increased pressure on the environment, that is, increased pollution, due to the intensive use of natural resources and insufficiently formed environmental standards. However, after reaching a certain level of income or stage of technological development, along with economic growth, the negative impact on the environment decreases due to the strengthening of clean technologies, energy efficiency, institutional reforms, and environmental policies. As a result, a balance is formed between economic growth and environmental sustainability.

In this study, the EKC theory is used as a tool for the economic interpretation of the green economy concept. That is, the process of economic growth is viewed not as a factor leading to environmental degradation, but as a process that can be combined with environmental protection through properly targeted policies and investments. From this point of view, indicators such as the share of renewable energy, CO_2 emissions, industry, foreign direct investment, gdp growth, population and human capital play an important role in determining the relationship between economic growth and environmental quality. Also, within the framework of the EKC theory, the green economy is interpreted as a qualitatively new stage of economic growth. At this stage, an increase in production volume is achieved through the efficient use of resources, the introduction of low-carbon technologies and environmental innovations. Especially in the conditions of developing countries, including

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Uzbekistan, the task of combining economic growth with environmental sustainability is urgent. Therefore, based on the EKC theory, this study empirically analyzes the fact that the formation of a green economy is closely related to economic factors and aims to identify mechanisms for harmonizing economic growth and ecological balance.

3.2 Empirical framework

This research is aimed at empirically analyzing the economic basis for the implementation of the concept of a green economy in Uzbekistan and Central Asian countries. The study used panel data covering the period 2015-2025. Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan were selected as the objects of observation.

The data used for empirical analysis was obtained from reliable international and national sources. The main sources of information are the World Bank's World Development Indicators (wdi) base, the UN Environment Programme (UNEP), the Global Green Economy Index (GGEI), and official statistics from the statistics agency of the Republic of Uzbekistan and the Ministry of energy. The article analyzes the relationship between independent variables, such as the number of GDP (GDP growth), renewable electricity output (RE), industry (IND), population (POP), human capital (HC), CO_2 emissions (CO_2), as well as the green growth (dependent variable) in relation to foreign direct investment (FDI). The choice of these variables allows for a deeper understanding of economic and social indicators. In this study, Microsoft Excel 2016 and STATA 17.0 were used as the main software, which helped in the management and analysis of the collected data. Prior to the start of the study, a number of preliminary measures were taken to confirm the suitability of the data.

Table 1: Data description, source, and format

Sign	Variables	Definition	Source	Format
GG	Green growth	Adjusted net savings, including particulate emission damage (% of GNI)	World Bank (WDI), 2025	CSV/Excel
GDP	GDP growth	The annual growth rate of gross domestic product indicates economic activity	World Bank (WDI), 2025	CSV/Excel
RE	Renewable electricity output	The share of renewable energy in total electricity generation, an indicator of environmental efficiency	World Bank (WDI), 2025	CSV/Excel
IND	Industry, including construction	The share of the industrial sector in the economy reflects the volume of production	World Bank (WDI), 2025	CSV/Excel

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POP	Population	Refers to all residents living within a country at a given time, regardless of legal status or citizenship,	World Bank (WDI), 2025	CSV/Excel
HC	Human capital	Refers to the knowledge, skills, education, and health of a population that contribute to individuals' productivity and economic growth.	World Bank (WDI), 2025	CSV/Excel
CO_2	CO_2 emissions	Environmental impact index	World Bank (WDI), 2025	CSV/Excel
FDI	Foreign Direct Investment	Percentage of GDP from Foreign Direct Investment	World Bank (WDI), 2025	CSV/Excel

Source: processed by the author.

Following this, the Ordinary Least Squares (OLS) regression model (Legendre, Adrien-Marie, 1805) was used for the main examination. OLS was chosen for its effectiveness in quantifying the impact of independent variables on the dependent one and for its ability to provide interpretable coefficients that reveal the magnitude and significance of these relationships. Below is the main OLS model:

$$Green\ growth = \beta 0 + \beta 1 GDP_{it} + \beta 2 RE_{it} + \beta 3 IND_{it} + \beta 4 POP_{it} + \beta 5 HC_{it} + \beta 6 CO2_{it} + \beta 7 FDI_{it} + \varepsilon_{it}$$

β0 – intercept of the model;
β1 – coefficient of the GDP growth (annual%);
β2 – coefficient of the Renewable electricity output (% of total electricity output);
β3 – coefficient of the Industry, including construction value added (% of GDP);
β4 – coefficient of the population;
β5 – coefficient of the Human capital;
β6 – coefficient of the CO_2 emissions;
β7- coefficient of the Foreigndirect investment;
ε = Error term.

4. Results

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This section presents a step-by-step analysis of the research results. The purpose of the study is to identify the economic foundations of implementing the green economy concept in Uzbekistan and Central Asian countries, in particular, to empirically assess the main factors affecting the share of green growth. Several methods were used in the analysis. First, descriptive statistics were used to identify the main characteristics, average values, fluctuation levels, and minimum and maximum indicators of the variables used in the study. This stage allows us to identify the general differences between the variables and their economic significance. In the second stage, a correlation analysis was conducted to determine the direction and strength of the relationship between the variables. This allows us to initially assess which factors have a positive impact on the development of green growth, and which, on the contrary, have a negative impact. In the third stage, multivariate regression analysis was used to determine the statistical impact of each factor on the share of green growth production. This approach relies on the EKC theory. This theory states that pollution increases in the early stages of economic growth, but decreases in the later stages of development due to technological innovation and environmental policies. Thus, the main objective of the analysis is to empirically determine the extent to which factors such as economic growth, industry, CO_2 emission, foreign direct investment, population, renewable energy and human capital affect the development of green growth. The results clearly demonstrate the relationship between these factors and provide a scientific basis for formulating green economy policies.

4.1. Descriptive statistics

Table 2 presents the descriptive statistics of the main variables included in the sample data set. The study generated a total of 50 observations based on panel data covering 5 countries and the period 2015–2024. According to the results, the green economy (GE) indicator averages 10.79 units, with a minimum value of 9.26 and a maximum value of 27.27. The high dispersion of this indicator indicates that the level of implementation of green economy policies varies between countries. The average growth rate of gross domestic product (GDP) was 5.42 percent, with negative values (–7.15%) observed in some years. This reflects the impact of business cycles, external shocks, and global economic instability. The share of renewable energy sources (RE) is on average 13.9 percent, and the high standard deviation (16.47) indicates that there are sharp differences in the level of green energy development between countries. The share of the industrial sector (IND) is on average 32.8 percent of GDP, confirming the leading position of manufacturing and industrial sectors in the economy. The minimum and maximum values (22.5–54.3%) indicate that the level of industrialization differs across countries.

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Population growth (POP) is on average around 6.4 percent, which is one of the important factors driving economic activity and energy demand. The human capital (HC) indicator is on average 1.94 units, which indicates differences in the level of education and skills. CO_2 emissions are on average 90.9 units, with a minimum value of 5.09 and a maximum value of 258.8. This sharp difference is explained by the volume of economic activity, the composition of energy sources and the effectiveness of environmental policies. Foreign direct investment (FDI) averaged 3.16 percent, with negative values observed in some years. This indicates that the investment environment is unstable and highly dependent on global financial conditions. In general, the results of descriptive statistical analysis show that there are significant differences in economic structure, level of industrialization, green energy development and environmental burden among the selected countries. This situation justifies the need to further study the relationship between economic and environmental factors in further empirical analyses.

Table 2. Descriptive statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Countries	50	3	1.429	1	5
Years	50	2019.5	2.901	2015	2024
GG	50	10.788	7.765	-9.262	27.271
GDP	50	5.424	2.88	-7.149	9.4
RE	50	13.902	16.474	.1	48.1
IND	50	32.793	6.823	22.52	54.293
POP	50	6.404	5.189	-9.513	20.451
HC	50	1.939	.333	1.283	2.558
CO_2	50	90.949	84.569	5.092	258.804
FDI	50	3.156	3.261	-4.855	17.131

Source: created by the author in STATA 17.0

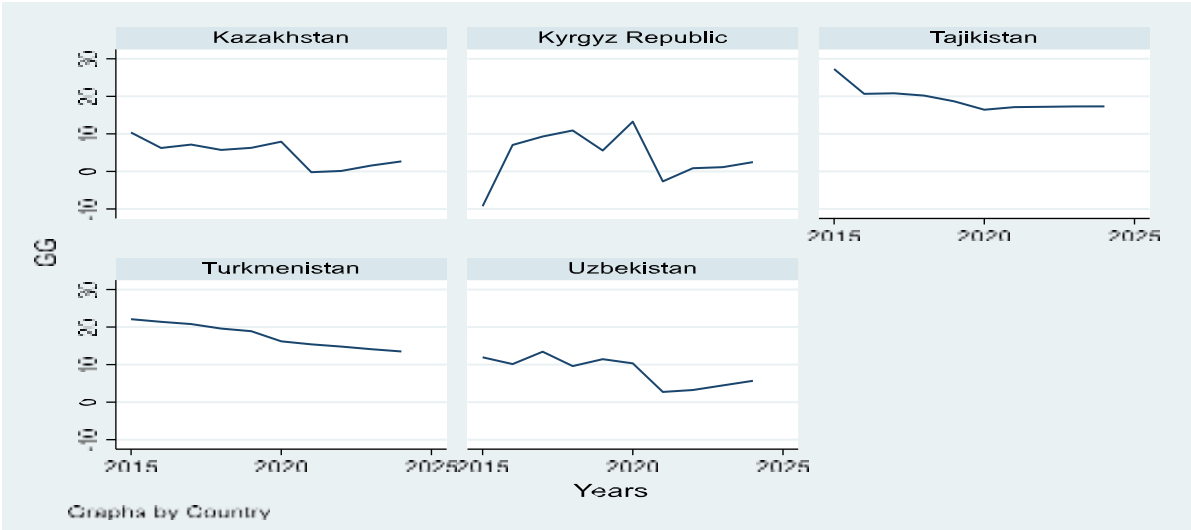

Figure 1 shows the dynamics of the green growth indicator in selected Central

Asian countries (Kazakhstan, the Kyrgyz Republic, Tajikistan, Turkmenistan and Uzbekistan) in 2015–2025. The results of the graph clearly show that the green growth processes are not uniform across countries. Although the green growth indicator in Kazakhstan has remained mostly in positive territory, there have been declines in some years, which is explained by the high carbon dependence of the industrial structure and energy consumption. In the Kyrgyz Republic, the indicator has sharp fluctuations: in some years high positive values are observed, in other years negative ones are recorded. This is due to the dependence of the country's energy system mainly on hydropower resources and its sensitivity to natural factors. Green growth in Tajikistan is relatively stable and at a high level, which indicates the effective use of hydropower potential. In Turkmenistan, the indicators have shown a gradual downward trend from a high level, which is explained by the economic model that relies on fossil fuels. In Uzbekistan, although the green growth rate is lower, it has developed in a generally positive direction and has shown signs of stabilization in recent year

Source: created by the author in STATA 17.0

Figure 1. Green growth for observing countries from 2015 to 2025

Figure 2 illustrates the relationship between the green economy indicator (GE) and key macroeconomic and environmental factors. The results show that CO_2 emissions have a negative effect on the green economy, indicating that countries with high pollution levels experience slower green transition processes. In contrast, foreign direct investment (FDI), human capital (HC), and renewable energy (RE) have positive relationships with the green economy, highlighting the importance of green technologies, education, innovation, and clean energy in sustainable development. A weak negative trend is observed between GDP growth and the green economy, suggesting continued dependence on traditional energy sources during early economic growth stages. Similarly, a higher industry share (IND) in GDP reduces the green economy indicator due to reliance on carbon-based production. Meanwhile, population growth (POP) shows a slight positive correlation with the green economy, reflecting improvements in urban infrastructure and smart technologies.

Source: created by the author in STATA 17.0

Figure 2. Scatter plot of GG, GDP, RE, IND, POP, HC, FDI, CO_2 emissions in 2015-2025

4.2. Correlation Matrix

Table 3 shows the relationships between the main variables selected for the study using pairwise correlation analysis. Correlation coefficients describe the direction and strength of the relationship between variables, and p-values indicate

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the statistical significance of these relationships ($p < 0.01$; $p < 0.05$ and $p < 0.1$). According to the results, the green economy indicator (GG) has a significant relationship with a number of economic and environmental factors. In particular, a positive and statistically significant relationship was found with the industrial share (IND) ($r = 0.5444$; $p < 0.01$). This indicates that the green economy indicator is increasing along with industrial development, that is, in some countries, industrial modernization is being combined with green technologies.

The results show a negative and statistically significant relationship between renewable energy (RE) and industry share (IND) ($r = –0.3270$; $p < 0.05$), indicating that the industrial sector still depends heavily on traditional carbon-based energy sources. In contrast, population growth (POP) has a strong positive relationship with renewable energy ($r = 0.6156$; $p < 0.01$) and GDP ($r = 0.6196$; $p < 0.01$), suggesting that urbanization and демographic growth support energy infrastructure diversification and economic expansion. Human capital (HC) also demonstrates strong positive correlations with the green economy ($r = 0.6129$; $p < 0.01$) and renewable energy ($r = 0.5630$; $p < 0.01$), confirming the importance of education, skills, and innovation in promoting environmental sustainability and green development.

The results show that CO_2 emissions have a strong negative relationship with renewable energy ($r = –0.7425$; $p < 0.01$) and human capital ($r = –0.7992$; $p < 0.01$), indicating that increases in clean energy use, education, and environmental awareness contribute to lower pollution levels. In contrast, foreign direct investment (FDI) does not have a statistically significant relationship with most variables, suggesting that FDI flows are unstable and not always directed toward green development. Overall, the correlation analysis confirms that human capital, population growth, and renewable energy support the development of the green economy, while CO_2 emissions and the traditional industrial structure remain negative factors.

Table 3. Pairwise Correlation test results

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)
(1) GG	1.000						
(2) GDP	0.1702	1.000					
	(0.2373)						
(3) RE	0.2496	0.2043	1.000				
	(0.0804)	(0.1546)					
(4) IND	0.5444*	0.1147	-0.3270*	1.000			
	(0.0000)	(0.4277)	(0.0205)				
(5) POP	0.2040	0.6196*	0.6156*	-0.2312	1.000		
	(0.1552)	(0.000)	(0.000)	(0.1063)			

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(6) HC	0.6129*	0.2861*	0.2491	0.0181	0.3603*	1.000	
	(0.000)	(0.0440)	(0.000)	(0.8257)	(0.0102)		
(7) CO_2	-0.3930* (0.0048)	-0.3436* (0.0146)	-0.7425* (0.0000)	0.1144 (0.4288)	-0.3775* (0.069)	-0.7992* (0.0000)	1.000
(8) FDI	-0.1061 (0.4632)	0.0199 (0.8908)	-0.1079 (0.4559)	0.1912 (0.1835)	-0.1127 (0.4360)	0.1919 (0.1818)	-0.0127 (0.9305)
*** p<0.01, ** p<0.05, * p<0.1							

Source: created by the author in STATA 17.0

4.3. Regression results

Table 4 reports the results of the multivariate regression model examining the determinants of the green economy (GG) indicator. The model is statistically significant overall, as confirmed by the Fisher test results ($F(7,42)=11.35$; Prob > F = 0.000). The coefficient of determination ($R^2 = 0.6542$) indicates that approximately 65.4% of the variation in the green economy indicator is explained by the independent variables included in the model, while the adjusted R^2 value (0.5966) confirms the robustness of the model.

The regression analysis shows that the industry share (IND) has a positive and statistically significant impact on the green economy ($\beta = 0.695$, $p = 0.000$). This suggests that industrial development, especially through modernization and energy-efficient technologies, contributes positively to green economic growth. Conversely, foreign direct investment (FDI) has a negative and significant effect ($\beta = -0.614$, $p = 0.012$), implying that foreign investments are still concentrated in traditional and environmentally harmful sectors rather than green projects.

Other variables, including GDP, renewable energy (RE), population (POP), human capital (HC), and CO_2 emissions, were statistically insignificant ($p > 0.1$). Although GDP and CO_2 emissions show negative coefficients, and POP and HC display positive relationships, their effects on the green economy are not yet sufficiently strong under current conditions. The negative and significant constant term (_cons = –22.51, p = 0.024) further indicates that green economy development remains highly dependent on the explanatory variables included in the model.

GG	Coef.	Std.Err.	t-value	p-value	[95% Conf	Interval]	Sig
GDP	-.6355653	.4235341	-1.50	0.141	-1.490292	.2191611	
RE	-.0276495	.0935093	-0.30	0.769	-.2163589	.16106	
IND	.6954866	.1526186	4.56	0.000	.3874897	1.003483	***
POP	.4464375	.2869654	1.56	0.127	-.1326821	1.025557	
HC	7.818742	5.067458	1.54	0.130	-2.407802	18.04528	
CO_2 FDI	-.0193117 -.6142549	.0231995 .2331304	-0.83 -2.63	0.410 0.012	-.0661302 -1.084731	.0275067 -.1437786	 ***
Constant	-22.51375	9.608102	-2.34	0.024	-41.90369	-3.123817	***
R-squared	0.6542		Number of obs		50		

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F (7, 42)	11.35		Prob > F		0.000		
Adj R-squared	0.5966		Root MSE		4.9319		

Source: created by the author in STATA 17.0

GG=-22.51-0.635(GDP)–0.03(RE)+0.69(IND)+0.45(POP)+7.82(HC)-0.19(CO_2)-0.61(FDI)+ ε

According to the results of this model, industry (IND), population (POP) and human capital (HC) have a positive impact on the green economy indicator. This means that the modernization of production processes, demographic factors and an increase in the level of education and skills support green development. On the contrary, gross domestic product (GDP), the share of renewable energy (RE), CO_2 emissions and foreign direct investment (FDI) have a negative impact on the green economy. This means that economic growth and investment are currently mainly directed towards traditional, environmentally harmful sectors. Strengthening human capital, introducing environmental technologies in industry and directing foreign investment to "green" projects are important for the development of a green economy.

5. Discussion

The results of this study are generally consistent with existing literature on the economic foundations of the green economy, while also revealing features specific to Central Asian countries, particularly Uzbekistan. The positive and statistically significant effect of the industrial sector (IND) confirms the findings of Oleksii Kwilinski, Oleksii Lyulyov, and Tetiana Pimonenko, who emphasized that industrial modernization and innovative technologies accelerate green economic development. The findings suggest that energy efficiency and technological innovation in Central Asia are beginning to contribute positively to green growth.

In contrast, foreign direct investment (FDI) was found to have a negative and statistically significant impact on the green economy. This differs from studies arguing that FDI supports green technologies in developing countries, and instead supports the view of Malikov that green investment mechanisms in Central Asia remain underdeveloped. The negative but insignificant effect of GDP is consistent with the Environmental Kuznets Curve, indicating that the region is still in the early stages of economic development where growth increases environmental pressure.

Although human capital (HC) and population growth (POP) showed positive effects, they were statistically insignificant, suggesting that their contribution to the green economy may emerge in the long term through improved education, environmental awareness, urbanization, and "smart city" development. Similarly,

the negative but insignificant effect of CO_2 emissions indicates that environmental pressure has not yet become strong enough to fundamentally influence economic policy.

Overall, the findings show that Central Asian countries are still in a transitional stage toward a green economy, with development remaining dependent on traditional industrial and investment models. However, industrial modernization, human capital development, and the redirection of foreign investment toward environmentally friendly projects create important opportunities for sustainable green growth in the region.

6. Conclusion

This study empirically analyzed the economic foundations of implementing the green economy concept in Uzbekistan and Central Asian countries based on panel data. The results obtained show that the green growth process in the region is not yet fully formed, but there are important economic and institutional factors for its development. The study partially confirms the EKC theory in the regional context and finds that the balance between economic growth and environmental sustainability has not yet reached a stable stage. The overall conclusion of the empirical results is that the IND has a positive and statistically significant impact on the green economy indicator. This indicates that the industry in the region is gradually modernizing and energy-efficient technologies are being introduced in some production sectors. Although POP and HC create a positive institutional and social basis for green growth, their impact has not yet been demonstrated to be strong and sustainable. On the contrary, FDI, GDP and CO_2 emissions have a negative impact on the development of the green economy, which indicates that investment flows and economic activity are mainly directed towards traditional, carbon-intensive sectors.

These results have important scientific and practical implications. First, it is confirmed that the development of the green economy is closely related not only to economic growth, but also to the qualitative transformation of growth. Second, it is found that industrial modernization can be a key internal driver of green growth, but this process will not yield sustainable results if it is not accompanied by environmental standards and technological innovation. Third, although human capital and demographic factors are important supports of the green economy in the long term, their real impact will only be noticeable if education, innovation and environmental culture are strengthened. Based on the results obtained, the following practical recommendations can be put forward. First of all, it is necessary to direct industrial policy towards energy efficiency and the introduction of low-carbon technologies. Second, it is necessary to strengthen incentive mechanisms to

attract foreign investment to targeted "green" projects, renewable energy and ecological innovations. Third, it is important to strengthen the institutional foundation of the green economy by developing human capital, increasing environmental knowledge and innovative capacity.

It is also necessary to gradually strengthen policy measures that limit CO_2 emissions and increase environmental responsibility. Overall, the results of the study show that the transition to a green economy in Uzbekistan and the countries of Central Asia has real opportunities, but this process requires a combination of economic policy, investment directions and institutional reforms. These conclusions and recommendations serve as a solid scientific basis for future scientific research on the green economy and regional political decisions.

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