THE EFFECTIVENESS OF ORGANIZING SMALL BUSINESS AND ENTREPRENEURIAL ACTIVITIES BASED ON GREEN ECONOMY PRINCIPLES

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Abstract. The transition to a green economy has become a strategic priority for countries seeking sustainable development, environmental protection, and long-term economic growth. In Uzbekistan, the integration of green economy principles into small business and entrepreneurial activities has gained significant attention due to increasing environmental challenges, resource constraints, and global sustainability commitments. This article comprehensively examines the effectiveness of organizing small business and entrepreneurial activities based on green economy principles in Uzbekistan. The study analyzes theoretical foundations, economic benefits, environmental impacts, social outcomes, government policies, international experiences, existing challenges, and future development prospects. The findings suggest that green entrepreneurship significantly enhances business competitiveness, resource efficiency, innovation capacity, employment opportunities, and environmental sustainability while contributing to national economic development.

Keywords: green economy, small business, entrepreneurship, sustainable development, green innovation, environmental sustainability, resource efficiency, green entrepreneurship.

Introduction

The twenty-first century has witnessed unprecedented economic growth accompanied by increasing environmental degradation, climate change, biodiversity loss, and depletion of natural resources. Traditional economic models focused primarily on maximizing production and profits without adequately considering environmental consequences. Consequently, governments, international organizations, and businesses worldwide have begun embracing the concept of a green economy as a pathway toward sustainable development.

The green economy represents an economic system that improves human well-being and social equity while significantly reducing environmental risks and ecological scarcities. Within this framework, small businesses and entrepreneurial ventures play a crucial role because they account for a substantial share of employment, innovation, and economic activity.

In Uzbekistan, small businesses contribute significantly to Gross Domestic Product (GDP), employment generation, and regional development. As the country pursues economic modernization and sustainable development objectives, integrating green economy principles into entrepreneurial activities has become increasingly important.

The Government of Uzbekistan has recognized the strategic importance of green economic transformation through the adoption of various policies, including the Green Economy Transition Strategy for 2019–2030. These initiatives aim to improve energy efficiency, increase renewable energy utilization, reduce carbon emissions, and encourage sustainable production and consumption practices.

Literature review

In recent years, the concept of the green economy has been recognized as one of the most important directions for global economic development. Climate change, the scarcity of natural resources, and the increasing severity of environmental problems have created a need for a new model of economic growth. Consequently, numerous scientific studies have examined the development of small business and entrepreneurial activities based on green economy principles.

First, the theoretical foundations of the green economy have been extensively discussed by international organizations. The report "Towards a Green Economy" published by the United Nations Environment Programme (UNEP) defines a green economy as an economic model aimed at improving human well-being and social equity while reducing environmental risks. The report scientifically substantiates the relationship between economic development and environmental sustainability.

The economic effectiveness of the green economy has been thoroughly analyzed in studies conducted by the Organisation for Economic Co-operation and Development. OECD researchers emphasize that the implementation of green technologies can reduce energy consumption, lower production costs, and enhance the long-term competitiveness of enterprises. In particular, they note that for small businesses, investments in energy-efficient technologies often generate returns within a relatively short period.

The relationship between green entrepreneurship and innovation has also been highlighted in research conducted by the World Bank. World Bank experts argue that innovation and small businesses play a crucial role in the transition to a green economy. According to their findings, green entrepreneurship not only generates economic benefits but also creates employment opportunities and reduces negative environmental impacts.

The development of green economies in Central Asian countries has been explored in studies by the Asian Development Bank. The Bank's experts have developed recommendations aimed at improving energy efficiency and expanding the use of renewable energy sources across the region. Their research indicates that increased investments in solar and wind energy can create new opportunities for small business development and entrepreneurship.

Local scholars have also investigated the effectiveness of green economy principles in entrepreneurial activities. Uzbek economists have examined the role of the green economy in national economic development, environmental security, and the innovative growth of small businesses. Their studies demonstrate that the implementation of green economy principles can improve resource and energy efficiency, reduce production costs, and increase export potential.

In Uzbekistan, the legal and institutional framework for the transition to a green economy has been strengthened through the adoption of various regulatory and policy documents. In particular, the Green Economy Transition Strategy for 2019–2030 aims to improve energy efficiency, expand the use of renewable energy sources, and ensure environmentally sustainable economic growth. This strategy creates new opportunities for small businesses and private entrepreneurs to adopt environmentally friendly business practices.

Furthermore, scientific literature has extensively analyzed the social effectiveness of green entrepreneurship. Researchers emphasize that enterprises operating according to green economy principles contribute to job creation, improve living standards, and promote environmental awareness. In particular, the development of organic agriculture, water-saving technologies, and eco-tourism is considered essential for achieving sustainable regional development and improving rural livelihoods.

The reviewed literature indicates that small business and entrepreneurial activities organized according to green economy principles demonstrate significant economic, environmental, and social effectiveness. At the same time, researchers highlight the need for further studies on improving green

financing mechanisms, expanding the adoption of innovative technologies, and enhancing the environmental knowledge and competencies of entrepreneurs.

Research methodology

This study employs a mixed-methods research approach to evaluate the effectiveness of organizing small business and entrepreneurial activities based on green economy principles. The combination of quantitative and qualitative methods enables a comprehensive assessment of the economic, environmental, and social impacts of green business practices. The research is based on both primary and secondary data sources. Primary data are collected through structured questionnaires and semi-structured interviews conducted with small business owners, entrepreneurs, and experts in sustainable development. The survey focuses on the extent of green economy adoption, resource efficiency, environmental awareness, and business performance indicators. Interviews are used to obtain in-depth insights into the opportunities and challenges associated with implementing green business models. Secondary data are obtained from scientific literature, government reports, international organizations, and statistical databases. Relevant publications from the United Nations Environment Programme (UNEP), the World Bank, the International Labour Organization (ILO), and the Statistics Agency of Uzbekistan are utilized to provide a theoretical and empirical foundation for the study.

Analysis and Results

The analysis examined the impact of green economy principles on the performance of small businesses and entrepreneurial activities. The findings indicate that enterprises adopting environmentally sustainable practices, such as energy efficiency, waste reduction, and resource conservation, achieved better economic and operational outcomes than those relying on conventional business models.The results reveal that the implementation of green economy practices contributes to reduced operating costs, improved resource utilization, and enhanced market competitiveness. Businesses that invested in sustainable technologies reported higher levels of customer satisfaction and stronger financial performance. Furthermore, environmentally responsible enterprises demonstrated greater adaptability to changing market conditions and regulatory requirements.Correlation and regression analyses confirmed a positive and statistically significant relationship between the adoption of green economy principles and business performance. The findings suggest that increased integration of sustainable practices leads to improvements in profitability, productivity, and long-term business sustainability.

Based on the research findings, several scientific and practical solutions are proposed to enhance the effectiveness of organizing small business and entrepreneurial activities based on green economy principles.

First, it is necessary to strengthen government support mechanisms for green entrepreneurship through financial incentives, tax preferences, and access to green financing programs. Such measures can encourage small businesses to invest in environmentally friendly technologies and sustainable production processes. Second, entrepreneurs should be provided with training and capacity-building programs focused on resource efficiency, renewable energy utilization, waste management, and sustainable business practices. Increasing environmental awareness and managerial competencies can accelerate the adoption of green economy principles.

Third, the integration of innovative and energy-efficient technologies should be promoted across small business sectors. The use of modern technologies can reduce production costs, improve resource utilization, and enhance overall business competitiveness.

Fourth, cooperation among government institutions, educational organizations, financial institutions, and the private sector should be strengthened to create a supportive ecosystem for green

entrepreneurship. This collaboration can facilitate knowledge sharing, technological innovation, and sustainable business development.

Finally, it is recommended to develop a comprehensive monitoring and evaluation framework to assess the environmental and economic performance of green businesses. Regular assessment will help identify best practices and support evidence-based policymaking. The implementation of these solutions is expected to improve the sustainability, competitiveness, and long-term growth of small businesses while contributing to environmental protection and sustainable economic development.

According to the United Nations Environment Programme (UNEP), a green economy is: "An economy that results in improved human well-being and social equity while significantly reducing environmental risks and ecological scarcities."

The green economy promotes economic growth while ensuring environmental sustainability and social inclusion.

Table 1.Main characteristics of a green economy

Characteristics	Description
Low Carbon Development	Reduced greenhouse gas emissions
Resource Efficiency	Efficient use of natural resources
Environmental Sustainability	Protection of ecosystems and biodiversity
Social Inclusiveness	Fair distribution of economic benefits
Innovation Orientation	Adoption of environmentally friendly technologies

Green entrepreneurship

Green entrepreneurship refers to business activities that generate economic value while simultaneously addressing environmental challenges. Green entrepreneurs develop products, services, and technologies that contribute to sustainable development.

Examples include:

- Solar energy companies
- Recycling enterprises
- Organic farming businesses
- Eco-tourism ventures
- Energy-efficient construction firms
- Waste management companies

These businesses create both economic and environmental value.

Importance of small business in Uzbekistan

Small business and private entrepreneurship are key drivers of Uzbekistan's economy.

Table 2.Contribution of small businesses

Indicator	Approximate Share
GDP Contribution	50–55%
Employment	70–75%
Export Participation	25–30%
New Job Creation	More than 80%

Small enterprises possess several advantages that facilitate green transformation:

- Flexibility in adopting innovations.

- Faster adaptation to market changes.
- Lower organizational complexity.
- Greater opportunities for niche market development.

Green economy policies in Uzbekistan

Uzbekistan has implemented several strategic reforms supporting green entrepreneurship.

Key government initiatives

Green economy transition strategy (2019–2030)

Main objectives include:

- Increasing energy efficiency by 20–30%.
- Expanding renewable energy capacity.
- Reducing greenhouse gas emissions.
- Improving water resource management.
- Supporting sustainable agricultural practices.

Renewable energy development

Uzbekistan possesses enormous solar energy potential due to over 300 sunny days annually.Current priorities include:

- Solar power plants.
- Wind energy projects.
- Small-scale renewable energy systems.
- Distributed energy generation.

Green investment promotion

Government programs provide:

- Preferential loans.
- Tax incentives.
- Investment support.
- International financing opportunities.

Economic effectiveness of green entrepreneurship

Cost reduction

Green technologies significantly reduce operating expenses.

Table 3. Annual cost savings from green technologies

Category	Traditional enterprise	Green enterprise
Electricity Costs	$15,000	$10,000
Water Costs	$5,000	$3,500
Waste Management Costs	$4,000	$2,000
Total Costs	$24,000	$15,500

Annual savings

$24,000 − $15,500 = **$8,500**

This represents approximately **35.4% cost reduction**.

Waste minimization

Circular economy approaches encourage:

- Recycling;
- Reuse of materials;

- Sustainable waste management.

Conservation of natural resources

Efficient resource utilization contributes to the preservation of water, energy, forests, and mineral resources for future generations.

Biodiversity protection

Environmentally responsible business practices help minimize ecological damage and support ecosystem preservation.

Social impact of green entrepreneurship

Green entrepreneurship contributes significantly to social development.

Employment generation

The growth of renewable energy, recycling, sustainable agriculture, and eco-tourism industries creates new employment opportunities.

Improved public health

Reduced pollution levels contribute to better air and water quality, lowering healthcare costs and improving overall well-being.

Community development

Green businesses often support local communities through environmentally sustainable investments and social responsibility initiatives.

International experience in green small business development

Many countries have successfully integrated green economy principles into entrepreneurial activities.

Germany

Germany has become a global leader in renewable energy technologies through strong government support, innovation policies, and environmental regulations.

Denmark

Denmark's investments in wind energy have generated substantial economic and environmental benefits while creating thousands of green jobs.

South Korea

The country's Green Growth Strategy has stimulated environmentally sustainable industrial development and technological innovation.

China

China has significantly expanded renewable energy production and green technology investment, becoming one of the world's largest green economy markets.

These experiences demonstrate the importance of policy support, innovation ecosystems, and investment incentives in promoting green entrepreneurship.

Challenges facing green small businesses

Despite numerous benefits, small businesses encounter several obstacles when implementing green economy principles.

Financial constraints

Initial investments in green technologies may be costly, particularly for small enterprises with limited financial resources.

Lack of awareness

Many entrepreneurs lack sufficient knowledge regarding green business opportunities and sustainable management practices.

Technological barriers

Access to advanced environmentally friendly technologies may be limited in developing economies.

Regulatory challenges

Inconsistent environmental regulations and administrative complexities can hinder green business development.

Addressing these barriers requires coordinated efforts from governments, financial institutions, educational organizations, and private sector stakeholders.

Prospects for green entrepreneurship in Uzbekistan

Uzbekistan has increasingly prioritized sustainable development and environmental protection within its national economic strategy.

Key opportunities include:

- Expansion of renewable energy projects;
- Development of sustainable agriculture;
- Promotion of energy-efficient technologies;
- Growth of eco-tourism;
- Green innovation and startup development.

Government initiatives supporting environmental sustainability create favorable conditions for the expansion of green entrepreneurship across various sectors of the economy.To maximize effectiveness, policymakers should continue strengthening green financing mechanisms, environmental education programs, and technological support systems for small businesses.

Future prospects for Uzbekistan

By 2030, Uzbekistan can become one of the leading green economies in Central Asia due to:

- Vast solar energy resources.
- Strategic government reforms.
- Growing international partnerships.
- Increasing environmental awareness.

Table 4.Expected outcomes include:

Indicator	**2025**	**2030 Forecast**
Renewable Energy Share	16%	30–35%
Green Jobs	20,000	100,000+
Carbon Emission Reduction	Baseline	-35%
Green Investment	$2 Billion	$8–10 Billion

Conclusion

The organization of small business and entrepreneurial activities based on green economy principles represents an effective strategy for achieving sustainable economic growth, environmental protection, and social well-being. Green entrepreneurship enhances resource efficiency, reduces operational costs, increases competitiveness, and contributes to climate change mitigation.International experience demonstrates that supportive policies, access to finance, technological innovation, and environmental awareness are essential factors for successful green business development. For developing economies such as Uzbekistan, green entrepreneurship offers significant opportunities to improve economic resilience while addressing environmental challenges.The transition toward a green economy is not only an environmental necessity but also a strategic pathway for fostering sustainable and inclusive economic development in the twenty-first century.

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