



INSTITUTIONAL AND TECHNOLOGICAL ASPECTS OF THE IMPACT OF A GREEN ECONOMY ON SUSTAINABLE DEVELOPMENT: PROBLEMS AND PROSPECTS FOR TRANSITION ECONOMIES

Ikramova Shaxnoza Odilovna

Leading Teacher of the Tashkent Transport Technical School

Tashkent, Uzbekistan

Abstract:

This article explores the institutional and technological aspects of the green economy and their influence on sustainable development, with particular emphasis on the challenges and prospects for transitional economies such as Uzbekistan. As countries shift from carbon-intensive growth models to greener alternatives, the transformation of institutions and the integration of innovative technologies become central components of this transition. The research outlines how regulatory frameworks, market incentives, and technological readiness determine the success of green initiatives. It highlights the interplay between institutional governance and green technology adoption in fostering long-term economic resilience. By analyzing both global and local examples, the study identifies key drivers of sustainable policy implementation in economies that are still undergoing structural and economic transitions. Furthermore, it assesses the barriers to innovation and offers practical recommendations to harmonize economic, environmental, and social goals. The findings suggest that integrated institutional support and inclusive technology transfer are essential for the successful realization of green development in transitional economies. The article is particularly relevant for policymakers, educators, and students aiming to understand how systemic reform and innovation can lead to sustainable progress.

Keywords: Green economy, sustainable development, institutional transformation, green technology, transitional economies, innovation policy, climate resilience, environmental governance, economic modernization.



Introduction

YASHIL IQTISODIYOTNING BARQAROR RIVOJLANISHGA TA'SIRINING INSTITUTSIONAL VA TEXNOLOGIK JIHATLARI: O'TISH DAVRI IQTISODIYOTLARI UCHUN MUAMMOLAR VA ISTIQBOLLAR

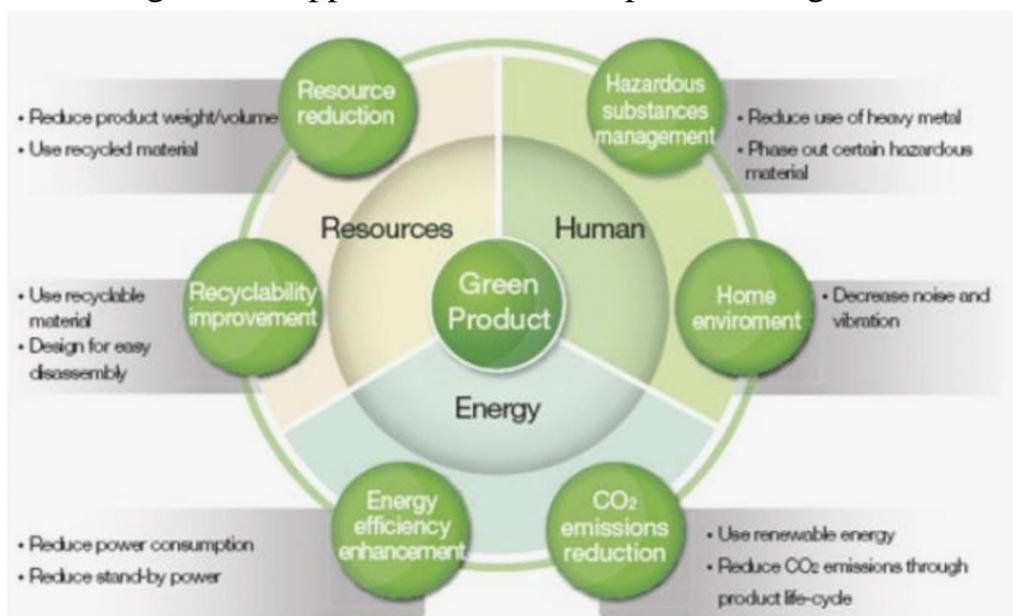
Ikramova Shaxnoza Odilovna

Toshkent transpot texnikumi yetakchi o'qituvchisi

Toshkent, O'zbekiston

Introduction

The concept of sustainable development has evolved into a global imperative, particularly in the face of escalating environmental challenges, resource depletion, and climate change. As traditional economic growth models rooted in the exploitation of natural resources have proven unsustainable, a paradigm shift toward green economy has gained momentum. A green economy, by definition, aims to reduce environmental risks and ecological scarcities while promoting inclusive growth and sustainable livelihoods. This transition requires not only technological innovation but also deep institutional transformation, particularly in economies that are undergoing structural changes and development reorientation. In transitional economies such as Uzbekistan, where legacy systems coexist with emerging market mechanisms, the shift to a green economy presents both significant opportunities and complex challenges.

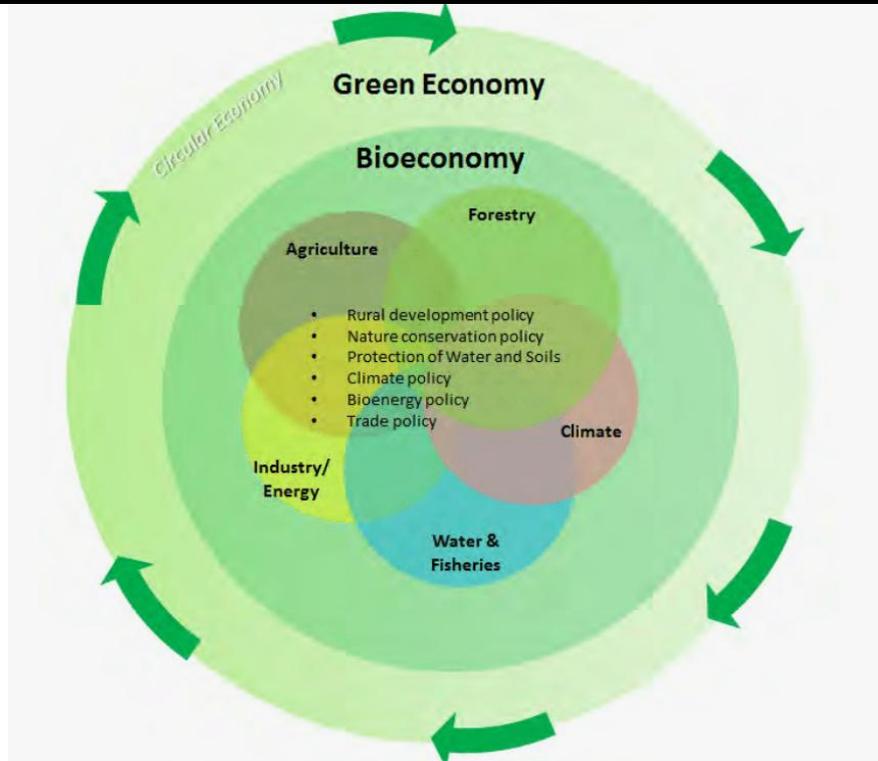




Institutional frameworks play a decisive role in shaping the pathways toward green growth. These frameworks determine the rules, incentives, enforcement mechanisms, and governance structures that either enable or hinder green initiatives. In the context of transitional economies, institutions are often in flux, characterized by weak regulatory capacity, limited policy coherence, and fragmented governance systems. Nevertheless, it is precisely within these conditions that systemic reform and capacity-building can create a fertile environment for green innovation. For example, developing a coherent legal foundation for renewable energy investments, environmental taxation, and sustainable public procurement can catalyze the greening of key sectors.

Technological innovation, meanwhile, acts as a transformative force within the green economy. Advanced technologies such as renewable energy systems, energy-efficient infrastructure, waste recycling, and digital monitoring tools have the potential to decouple economic growth from environmental degradation. Yet, the effective deployment of these technologies depends heavily on institutional readiness, human capital, and access to green finance. In transitional economies, technology adoption is often hampered by outdated industrial bases, insufficient funding mechanisms, and a lack of coordination between public and private sectors. Therefore, understanding the interdependence between institutions and technology is critical for designing strategies that promote long-term sustainability.

Uzbekistan, a landlocked Central Asian country transitioning from a centrally planned economy to a market-based one, exemplifies the multidimensional challenges associated with green development. In recent years, the country has undertaken reforms aimed at liberalizing its economy, attracting foreign investment, and improving public governance. Simultaneously, the Uzbek government has committed to a green transformation, particularly in the energy, agriculture, and transportation sectors. However, aligning institutional reforms with technological progress remains an ongoing task. Issues such as bureaucratic inertia, limited stakeholder engagement, and insufficient environmental awareness continue to impede progress.



This article seeks to examine how institutional and technological dimensions interact to influence the trajectory of green economic development in transitional contexts. It focuses on identifying the key drivers and barriers within Uzbekistan's evolving green agenda, while drawing comparative insights from other economies undergoing similar transformations. The study also emphasizes the importance of policy coherence, capacity development, and public-private partnerships in building a resilient and sustainable economy.

By exploring both theoretical underpinnings and practical implementations, the article contributes to a deeper understanding of how integrated approaches can foster sustainable development. It also offers recommendations tailored to the unique socio-economic and political landscape of transitional economies. Through this analysis, we aim to shed light on pathways that enable these nations to move beyond mere environmental compliance toward a proactive, innovation-driven green transition.

Literature Review

The discourse surrounding green economy and sustainable development has significantly expanded in the academic and policy domains over the past two



decades. Scholars such as Pearce, Markandya, and Barbier (1989) laid the foundational concept of green economy by highlighting the need to internalize environmental costs into economic systems. Later, the United Nations Environment Programme (UNEP, 2011) defined the green economy as one that results in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities. This framework has since guided many nations, including developing and transitional economies, in designing policies aligned with sustainability objectives.

Several studies have explored the institutional dimensions of green development. North's institutional theory (1990) emphasizes the importance of formal rules, informal norms, and enforcement mechanisms in shaping economic behavior. In the context of green economy, this perspective has been applied to analyze the effectiveness of environmental regulations, governance capacity, and institutional coherence (Meadowcroft, 2007; Jordan et al., 2013). These works highlight that without strong and adaptive institutions, technological solutions alone cannot lead to lasting sustainable development.

Technological innovation has also been extensively examined as a driver of green transformation. The theory of ecological modernization (Mol & Spaargaren, 2000) asserts that environmental problems can be addressed through modern industrial practices and technological advancements. More recent research by Rennings (2000) introduces the concept of "environmental innovation," emphasizing the need for supportive policy environments and market structures that facilitate the adoption of clean technologies.

Specific attention has been paid to the challenges facing transitional economies in implementing green strategies. For instance, studies on post-Soviet economies, including Uzbekistan, point to institutional inertia, centralized governance, and lack of investment in green infrastructure as major barriers (Mickiewicz et al., 2015; Kassenova, 2017). In contrast, successful cases in Eastern Europe and Southeast Asia demonstrate the value of targeted reforms, international cooperation, and capacity-building programs in advancing green objectives.



While the existing literature offers a robust theoretical base, there remains a gap in research that explicitly links institutional transformation with technological readiness in transitional settings. Moreover, studies focusing specifically on Uzbekistan and its unique socio-political context are limited, indicating a need for localized analyses. This article aims to fill that gap by offering a comprehensive exploration of how institutional and technological factors intersect and shape green economic outcomes in Uzbekistan and similar economies.

Methodology

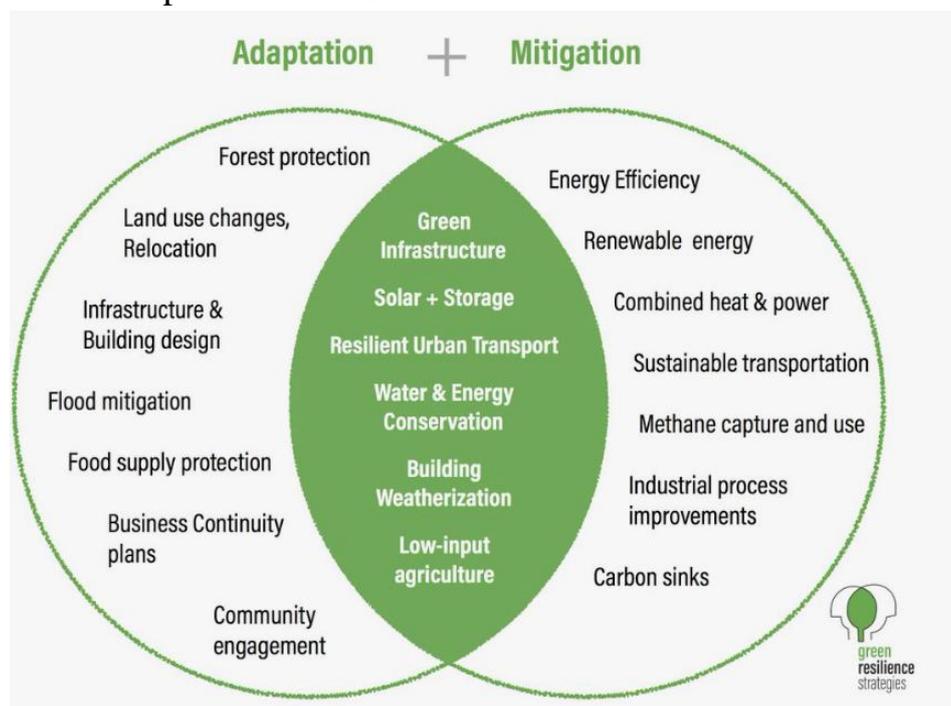
This study adopts a qualitative analytical approach to explore the institutional and technological aspects of the green economy in the context of transitional economies, with a specific focus on Uzbekistan. The methodology combines case study analysis, document review, and comparative analysis to provide a holistic understanding of how these dimensions interact to influence sustainable development trajectories.



The primary method involves a case study of Uzbekistan, chosen due to its ongoing economic transition, recent policy reforms, and emerging green initiatives. The case study allows for an in-depth exploration of national strategies, institutional frameworks, and technological adoption processes. Government documents, national development strategies, regulatory frameworks, and reports from international organizations such as the World Bank, UNEP, and UNDP were systematically reviewed to identify policy trends, institutional structures, and technological interventions.

In addition to official documents, secondary data from academic publications, research papers, and journal articles were analyzed to contextualize findings and identify theoretical linkages. This document-based analysis is supported by a review of publicly available datasets and progress reports on Uzbekistan's environmental and green economic performance, including data on renewable energy deployment, emission reduction targets, and green finance flows.

To strengthen the study's comparative aspect, selected examples from other transitional economies, such as Kazakhstan, Georgia, and Bulgaria, were examined. These comparisons provide insights into best practices and common obstacles in the transition to a green economy and help highlight factors that are transferable or adaptable to the Uzbek context.





The analytical framework of this study is grounded in the integration of institutional theory and innovation systems theory. Institutional theory provides the lens through which governance, regulatory alignment, and enforcement mechanisms are examined. Innovation systems theory focuses on the dynamics of technological diffusion, research and development capacity, and the role of public-private partnerships in fostering green innovation.

By triangulating multiple sources of evidence and perspectives, this methodology aims to ensure the validity and reliability of findings. It also allows for the development of grounded policy recommendations that are both theoretically informed and contextually relevant.

Results

The analysis reveals that Uzbekistan has made notable strides in aligning its economic reforms with sustainable development goals, particularly through recent policy frameworks aimed at integrating green economy principles. Among the most significant advancements is the adoption of the 2021–2030 Strategy for the Transition to a Green Economy, which outlines national objectives in areas such as renewable energy, energy efficiency, sustainable agriculture, and waste management. This strategy serves as an institutional anchor for green initiatives and reflects a growing political commitment to environmental modernization.

One of the most prominent areas of progress is in the energy sector. Uzbekistan has launched a series of renewable energy projects, primarily in solar and wind power, supported by international financial institutions and public-private partnerships. By 2023, over 2 GW of renewable energy capacity was under development, with plans to increase this figure to 8 GW by 2030. Institutional support for these projects is evident in the establishment of the Ministry of Energy's green energy unit and the implementation of transparent bidding processes for foreign investors. These steps reflect the increasing coherence between technological innovation and institutional governance.

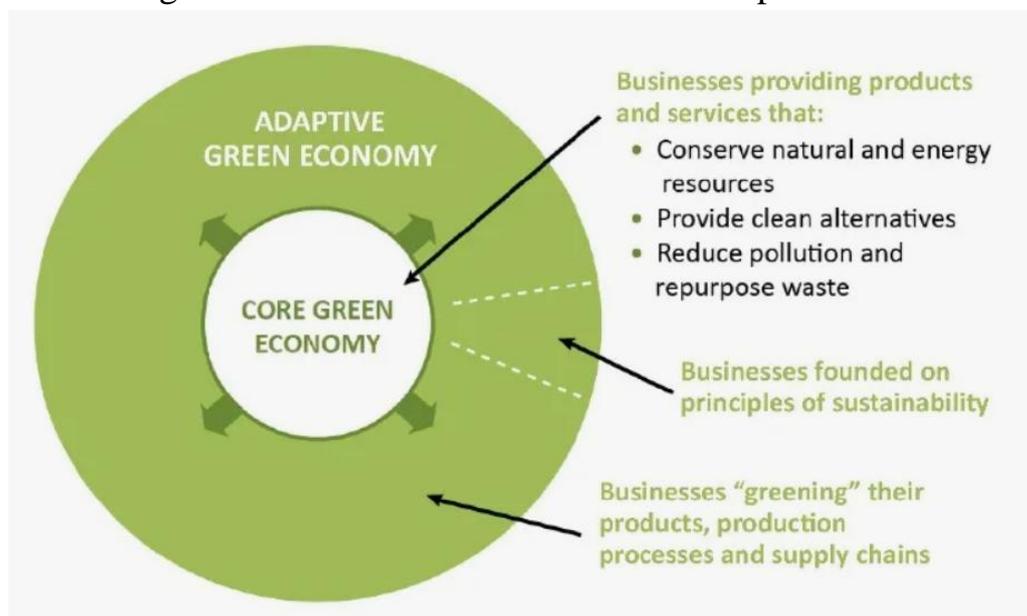
However, the results also indicate several persistent institutional challenges. Regulatory inconsistencies, overlapping mandates among governmental agencies, and limited enforcement capacity continue to hinder the implementation of green policies. For instance, environmental monitoring remains fragmented, with gaps



in coordination between central and regional authorities. Additionally, although Uzbekistan has introduced environmental impact assessment procedures, the enforcement of compliance remains weak due to a lack of qualified personnel and limited technological infrastructure for environmental data collection.

In the realm of technology, the adoption of energy-efficient systems in the construction and industrial sectors remains limited. Most enterprises continue to rely on outdated equipment and lack incentives to modernize. Although international donors and financial institutions have introduced pilot projects and technical assistance programs, the overall rate of technology diffusion remains slow. One of the reasons is the insufficient availability of green finance mechanisms. While commercial banks have begun to experiment with green loans and ESG frameworks, the financial sector remains cautious, partly due to the perceived risk and low profitability of long-term sustainable investments.

Another key result is the rising public and institutional awareness of sustainability issues, particularly among younger generations and academic institutions. Universities and research centers are increasingly incorporating environmental studies and green innovation topics into their curricula and research agendas. In addition, media coverage and civil society advocacy around issues such as air pollution, water scarcity, and climate change are contributing to a more informed public discourse. Nevertheless, this awareness has yet to translate into large-scale behavioral change or mass mobilization for sustainable practices.





The comparison with other transitional economies such as Georgia and Kazakhstan highlights several transferable practices that could benefit Uzbekistan. These include the establishment of independent green economy oversight bodies, the use of digital platforms for environmental reporting, and targeted subsidies for clean technology adoption. In contrast, Uzbekistan's centralized decision-making process, while effective in launching large-scale projects, often limits the involvement of local actors and non-state stakeholders in the planning and implementation stages.

Overall, the results of this study show that Uzbekistan's green economy transition is underway but remains in a formative stage. Progress in policy formulation and pilot technological projects demonstrates potential, yet structural institutional reforms and increased technological readiness are required to scale up and sustain green development.

Discussion

The findings of this study underscore the critical interplay between institutional structures and technological innovation in advancing the green economy in transitional settings such as Uzbekistan. While the country has demonstrated political will through strategic documents and initial investments in renewable energy, the depth and sustainability of these efforts depend heavily on the capacity of institutions to manage complex reforms and foster innovation ecosystems.

One major theme emerging from the analysis is the need for coherence across institutional levels. In Uzbekistan, the fragmented nature of environmental governance limits the effective coordination of green initiatives. Multiple ministries and agencies often operate in silos, leading to duplication of efforts and inconsistencies in regulation. For example, the Ministry of Energy, Ministry of Ecology, and regional authorities may have overlapping responsibilities but lack mechanisms for integrated planning. Successful international models suggest that a central coordination body with multi-sectoral representation could improve policy alignment and accelerate implementation.



Furthermore, the discussion highlights that institutional transformation must go beyond formal strategies. The quality of governance, transparency, rule of law, and administrative efficiency are equally vital. Even the most ambitious green policies may fail without accountability mechanisms and stakeholder engagement. In Uzbekistan, progress could be enhanced through greater inclusion of civil society, academia, and the private sector in environmental policymaking. Participatory governance models not only improve the legitimacy of green policies but also expand the knowledge base and social capital required for effective implementation.

On the technological front, the study emphasizes that innovation cannot be imported wholesale; it must be adapted to local contexts. The slow pace of technological diffusion in Uzbekistan reflects not only financial constraints but also institutional and cultural factors. For instance, resistance to change among traditional industries and limited technical expertise pose significant barriers. A robust innovation system requires investment in research and development, university-industry linkages, and mechanisms for knowledge transfer.



Uzbekistan's current efforts in expanding STEM education and vocational training are promising but need to be scaled up and connected with industrial policies.

The lack of green finance remains a major constraint to technological advancement. Although some steps have been taken to develop ESG standards and issue green bonds, financial institutions still regard sustainability-focused investments as high risk. This situation calls for public intervention, particularly in the form of guarantees, tax incentives, and dedicated green finance institutions. A hybrid financing model involving multilateral development banks, domestic capital markets, and state-backed funds may offer a pathway forward. Additionally, aligning national monetary and fiscal policy frameworks with sustainability goals would create a more conducive environment for green investments.

The discussion also situates Uzbekistan's experience within a broader global and regional context. Lessons from transitional economies in Eastern Europe and Southeast Asia demonstrate the value of cross-sectoral partnerships, international technical cooperation, and capacity-building programs. For instance, Bulgaria's experience with EU environmental acquis or Vietnam's deployment of decentralized renewable energy models offer valuable insights. Uzbekistan could benefit from more active participation in regional and global environmental governance platforms, which provide access to knowledge, funding, and networks of expertise.

In sum, the transformation toward a green economy in transitional contexts like Uzbekistan is a multi-dimensional challenge requiring integrated efforts across institutions, technologies, and financial systems. This discussion reinforces the idea that successful green transitions are not merely about adopting new technologies or writing policy documents but about creating an enabling ecosystem for sustainability. Bridging institutional gaps, enhancing technological adaptation, and ensuring inclusive stakeholder engagement are key steps in this journey.

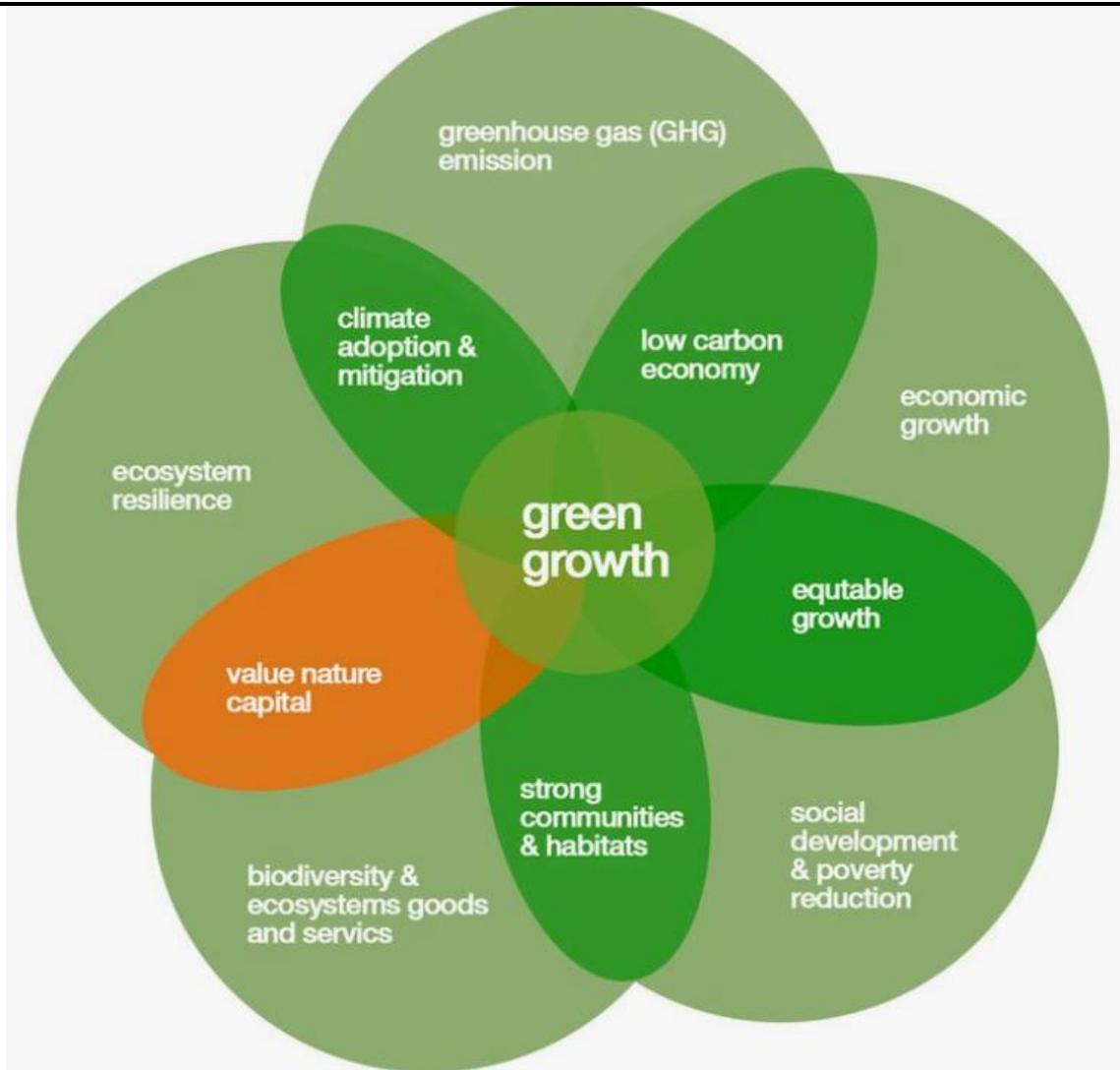


Main Part

The shift towards a green economy represents a fundamental reorientation of development policy and practice, particularly in countries undergoing systemic economic transitions. In Uzbekistan, the transition is shaped by a unique convergence of inherited institutional legacies, emerging governance reforms, and increasing pressure to respond to environmental degradation. As the country seeks to decouple economic growth from ecological harm, it faces the dual challenge of reforming outdated institutional frameworks and embracing technological innovation that supports long-term sustainability.

At the institutional level, Uzbekistan's move towards green development is supported by a number of strategic documents, including the Strategy for Transition to a Green Economy (2021–2030), the Climate Change Adaptation Strategy, and the Renewable Energy Law. These instruments aim to embed sustainability principles into national planning and governance. However, implementation remains uneven due to structural weaknesses such as limited inter-agency coordination, centralized decision-making, and gaps in enforcement capacity. A sustainable green economy requires institutions that are not only capable of designing robust policies but also flexible enough to respond to changing environmental and technological contexts.

Institutional inertia, often inherited from the Soviet administrative model, continues to influence policy execution in Uzbekistan. Bureaucratic delays, risk aversion, and limited stakeholder engagement impede the operationalization of green policies. Moreover, corruption and lack of transparency in public procurement processes reduce the effectiveness of investments in sustainable infrastructure. Addressing these issues requires institutional transformation that is not merely procedural but also cultural, involving shifts in values, incentives, and accountability structures. Civil service reform, digitalization of administrative processes, and capacity-building in environmental governance are essential components of this transformation.



Technological innovation, meanwhile, offers powerful tools to advance green development goals. Uzbekistan has begun to harness renewable energy, especially in solar and wind power, but its broader technological ecosystem remains underdeveloped. Most industrial enterprises operate with outdated equipment that is inefficient and environmentally harmful. Modernizing these sectors requires both the import of green technologies and the development of local innovation capabilities. This includes fostering collaboration between universities, research institutions, and private firms to develop context-specific solutions, such as water-efficient irrigation technologies and low-emission transportation systems.



Digital technology also plays a crucial role in enabling green transformation. Smart grids, environmental monitoring systems, and digital platforms for public engagement can increase transparency, efficiency, and responsiveness in environmental governance. However, the digital divide between urban and rural areas in Uzbekistan, coupled with limited technical expertise, constrains the diffusion of these innovations. Bridging this gap requires targeted investments in digital infrastructure and inclusive education policies that equip the workforce with the necessary skills.

Another critical factor is financing. Transitioning to a green economy entails substantial upfront investment in renewable energy, sustainable agriculture, waste management, and green transport. Uzbekistan's financial system, however, is still evolving and has limited experience in assessing and managing environmental risk. The lack of standardized frameworks for green finance, coupled with low awareness among investors and financial institutions, hampers the development of a dynamic green finance market. To overcome this, Uzbekistan needs to develop regulatory guidelines for green finance, create incentive structures for sustainable investment, and support pilot projects that demonstrate financial viability.

In addition to domestic reforms, international cooperation is a key enabler of green transition. Uzbekistan has joined several multilateral environmental agreements and collaborates with organizations such as the World Bank, UNDP, and the Asian Development Bank. These partnerships provide technical expertise, funding, and institutional support. However, Uzbekistan could further leverage these collaborations by aligning its national priorities with global sustainability frameworks such as the Paris Agreement and the UN Sustainable Development Goals.

Ultimately, the path to a green economy in Uzbekistan requires a systemic approach that integrates institutional reform, technological advancement, financial innovation, and international collaboration. The success of this transition will depend not only on policy choices but also on the capacity to implement and adapt them to local realities. Sustainable development in transitional economies is not a linear process but an ongoing negotiation between competing priorities, resource constraints, and emerging opportunities.



Conclusion

The transition to a green economy represents both a strategic necessity and an opportunity for transitional economies like Uzbekistan to achieve long-term sustainable development. As this study has demonstrated, institutional and technological dimensions are inseparable components of this transformation. Effective governance systems are essential for the design, coordination, and enforcement of green policies, while technological innovation provides the tools needed to operationalize those policies in a way that is efficient, scalable, and responsive to environmental challenges.

Uzbekistan has made commendable progress in setting a vision for its green future, particularly through national strategies, initial renewable energy projects, and increased engagement with international development organizations. These developments signal a growing recognition of the value of sustainability within policymaking circles. Yet, the results of this analysis show that the country's institutional frameworks are still evolving and face significant limitations in terms of regulatory coherence, enforcement capacity, and inter-agency collaboration. These institutional shortcomings impede the scaling and diffusion of green technologies, which are further constrained by insufficient financial mechanisms and weak innovation infrastructure.

To move forward effectively, Uzbekistan must prioritize the modernization of its institutions in tandem with investments in technological capabilities. This includes establishing cross-sectoral governance platforms, enhancing transparency and accountability in public policy processes, and promoting inclusive stakeholder engagement. Institutions must evolve not only in structure but also in function, embracing flexibility, adaptability, and innovation. A clear regulatory environment that supports green finance, enables public-private partnerships, and fosters citizen participation will be crucial in driving sustainable outcomes.



On the technological front, Uzbekistan must shift from passive adoption to proactive development and contextual adaptation of green solutions. Building domestic innovation systems through research, education, and entrepreneurship is key to creating a resilient green economy. The government should continue to support clean technology incubation, industry-university collaboration, and digital transformation that enhances environmental monitoring and policy implementation. Equally important is the integration of green competencies into education and training programs to prepare the future workforce for sustainability-oriented sectors.

Moreover, international cooperation should be strategically deepened to bridge resource and knowledge gaps. Participation in global climate frameworks, alignment with international standards, and access to climate financing mechanisms can accelerate the pace of transformation. Uzbekistan's engagement with multilateral institutions should not only be project-based but also aimed at institutional learning and long-term capacity development.

In conclusion, the green economy in transitional economies such as Uzbekistan cannot be viewed merely as a policy domain but must be approached as a systemic shift that spans all facets of development—economic, institutional, technological,



and cultural. The interdependence of institutions and technologies must be acknowledged and leveraged to create a development trajectory that is both inclusive and environmentally sound. By embracing integrated strategies, Uzbekistan has the potential to become a model for sustainable transformation in the region, demonstrating that even economies in transition can lead in building a greener, more resilient future.

REFERENCES

1. Akhmedov, B. A. (2023). Improvement of the digital economy and its significance in higher education in tashkent region. *Uzbek Scholar Journal*, 12, 18-21.
2. Тожибоева, Г. Р. (2022). Профессиональная компетентность учителя начальных классов. *World scientific research journal*, 2(1), 94-99.
3. Akhmedov, B. A., & Jakhongirova, Y. J. (2022). Use of Information Technologies in The Development of Writing and Speech Skills. *Uzbek Scholar Journal*, 9, 153-159.
4. Akhmedov, B. A., & Dulan, J. (2025). Creation of a smart employment tracking system for university graduates using AI. *EduVision: Journal of Innovations in Pedagogy and Educational Advancements*, 1(1), 22-41.
5. Akhmedov, B. A. (2023). Innovative pedagogical technologies in the modern educational system. *World Bulletin of Social Sciences*, 19, 107-112.
6. Akhmedov, B. A. (2022). Principles of Developing the Professional Competence of Future Teachers on the basis of a Cluster Approach. *Galaxy International Interdisciplinary Research Journal*, 10(6), 760-770.
7. Akhmedov, B. A., & all (2022). Pedagogical science education manegment in teaching science of pedagogical sciences. *Uzbek Scholar Journal*, 10, 529-537.
8. Ахмедов, Б. А. (2022). Развития индикаторов рынка труда молодежи в условиях трансформационных преобразований. *Вестник НамГУ*, 4(1), 77-85.
9. Ахмедов, Б. А. (2023). Анализ эффективности формы профессиональной подготовки молодых специалистов в процессе трудоустройства. *Вестник НамГУ*, 1(4), 125-131.



10. Ахмедов, Б. А. (2023). Реформирование трудоустройства молодых специалистов в условиях нового этапа развития Республики Узбекистан. *Мировая наука–Проблемы и перспективы развития*, 1(1), 92-115.
11. Ахмедов, Б. А. (2021). Таълимда ахборот технологиялари фанининг модулларини ўқитишда кластерли-инновацион технологиялардан фойдаланиш тамойиллари. *О‘zbekiston respublikasi oliy va o‘rta maxsus ta’lim vazirligi*, 441(15), 18-21.
12. Akhmedov, B. A. (2022). Methodology of teaching informatics in under-developed schools of the Tashkent region. *FIZIKA MATEMATIKA va INFORMATIKA*, 1(6), 66-74.
13. Ахмедов, Б. А. (2022). Профессиональный выбор и предпочтения молодых специалистов вузов Узбекистана. *Хорезмская академия Маъмуна*, 5(2), 209-218.
14. Akhmedov, B. A., & Jakhongirova, Y. J. (2022). Methodology of teaching english: approach of national way. *Uzbek Scholar Journal*, 10, 218-224.
15. Ахмедов, Б. А. (2022). Повышение питательности завтрака с помощью биодобавок для укрепления здоровья студентов. *Uzbek Scholar Journal*, 11, 7-11.
16. Abduqahhorova, X. A. (2024). TERMIN VA REALIYALARNING O‘ZIGA XOS XUSUSIYATLARI. *Inter education & global study*, (10 (1)), 558-563.
17. Abduqahhorova, X. A. Q. (2023). O‘ZBEK TILINING IZOHLI LUG‘ATLARIDAGI TARIXGA OID TERMINLARNING SEMANTIK TUZILISHI, XUSUSIYATLARI. *Academic research in educational sciences*, 4(5), 882-896.
18. Abduqahhorova, X. A. Q. (2022). ONA TILI MASHG‘ULOTLARI O‘QUV TOPSHIRIQLARINING BERILISHI VA ULARNING MAZMUNI. *Academic research in educational sciences*, 3(5), 237-243.
19. Абдурасул, Х., & Абдуқаҳҳорова, Қ. (2021). ИЖТИМОЙЙ ЧЕГАРАЛАНГАН ЛЕКСИКАНИНГ НУТҚИМИЗДАГИ ЎРНИ. *Scientific progress*, 2(4), 886-880.



20. Abduqahhorova, X. A. (2021). Kundalik hayotda qo'llaniluvchi chegaralangan leksik qatlam va uning vazifalari. *Актуальные вызовы современное науки*, 5(59), 208-212.
21. Akhmedov, B. A. (2022). Psychological and pedagogical possibilities of forming tolerance in future teachers. *Uzbek Scholar Journal*, 11, 289-295.
22. Axmedov, B. A. (2023). Muammoli ta'limda Suqrotona yondashuv metodikasi. *Mugallim*, 6(3), 126-130.
23. Ахмедов, Б. А. (2023). Модель управления процессами распределения молодых специалистов в профессию. *БухГУ Образование и инновационные исследования*, 1(3), 339-350.
24. Akhmedov, B. A. (2023). Methods to increase algorithmic thinking in primary education. *Uzbek Scholar Journal*, 12, 22-26.
25. Кадилова, О. Х. (2024). Литературный цикл и его функции в литературе XX века. *Xorazm ta'mun akademiyasi axborotnomasi*, 1(12), 545-548.
26. Кадилова, О. Х. (2024). Жанровое многообразие циклических произведений. *Филологические исследования: язык, литература, образование*, 2(12), 83-90.
27. Тожибоева, Г. Р., & Нисамбекова, С. (2021). Инклюзивное образование в условиях современной образовательной среды. *Academic research in educational sciences*, 2(4), 1436-1442.
28. Тожибоева, Г. Р., & Умарова, З. (2024). Проблема развития творческих способностей студентов в процессе обучения. *Science and innovation*, 3(Special Issue 18), 529-532.
29. Tojiboyeva, G. R. (2022). Development of the skill of calligraphic writing as a professional competence in a future primary school teacher. *Galaxy International Interdisciplinary Research Journal*, 10(12), 830-835.
30. Rifovna, T. G. (2022). The specificity of the school" rivoqe"(development) in the development of the professional competence of the future primary education teacher. *Conferencea*, 478-480.
31. Тожибоева, Г. Р., & Бекирова, Э. Р. (2020). Актуализация гендерного равенства в современном обществе. *Academic research in educational sciences*, (4), 389-395.



32. Тожибоева, Г. Р., & Бекирова, Э. (2022). Формы развития социальной компетентности младших школьников во внеурочной деятельности. *Conferencea*, 244-246.
33. Кадилова, О. Х. (2024). Исторический обзор развития литературного цикла. *Modern Science and Research*, 3(10), 403-406.
34. Khamedovna, K. O. (2024). Понятие и особенности литературного цикла. *Philological research: language, literature, education*, 8(9).
35. Kadirova, O. K. (2023). Small epic genre in Russian and Uzbek literature from the aspect of cyclicity (using the example of literature of the 20th century). *International Scientific Journal Theoretical & Applied Science*, 3(12), 173-177.
36. Kadirova, O. H., Yusupaliyeva, F. Y. (2023). Methods of development of English-speaking skills of elementary school students. *Ethiopian International Journal of Multidisciplinary Research*, 10(11), 332-334.
37. Kadirova, O. K. (2023). Cyclization and cycle in Russian and Uzbek literature of the early 20 the century. *TA'LIM FAN VA INNOVATSIYA*, 2(6), 440-443.
38. Кадилова, О. Х. (2023). Проблема циклизации малых прозаических форм в русской литературе начала 20 века. *Филологические исследования: язык, литература, образование*, 8(9), 53-57.
39. Ахмедов, Б. А. (2024). Модель трудоустройства молодого специалиста в современном обществе. *Проблемы применения инновационных и цифровых технологий в системе образования*, 1(1), 955-970.
40. Ahmedov, B. A. (2023). Umumta'lim maktablarida informatika va axborot texnologiyalari fanini muammoli o'qitish metodlarining turlanishi. *Ta'lim fan va innovatsiya*, 6(1), 478-480.
41. Ахмедов, Б. А. (2023). Интеграллашган таълимда талабалар билимларини виртуал тест назорат қилиш тизимларини ишлаб чиқиш концепцияси. *PEDAGOG*, 6(1), 86-92.
42. Ахмедов, Б. (2018). Oliy ta'lim muassasalarida chet tili o'rganish jarayonida elektron ta'lim kurslarini qo'llash tamoyillari. *Toshkent davlat pedagogika universiteti*, 1(1), 51-56.