

## Sustainable Economy and Green Growth: Strategies for Promoting Environmentally Friendly Economic Development

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### ABSTRACT

*Sustainable economy and green growth have become essential approaches to addressing the global challenge of balancing economic development with environmental sustainability and social welfare. This study aims to analyze how green growth strategies contribute to sustainable economic development through the integration of environmental, economic, and social dimensions. A qualitative research design with a descriptive-exploratory approach was employed. Data were collected through in-depth interviews, document analysis, and focus group discussions involving policymakers, experts, and stakeholders. The data were analyzed using thematic and content analysis to identify key patterns and relationships among variables. The results indicate that renewable energy development, green innovation, policy instruments, institutional governance, and sustainable natural resource management significantly contribute to environmentally friendly economic growth. These factors support the decoupling of economic growth from environmental degradation while promoting efficiency and long-term stability. The findings also highlight the importance of inclusive policies, such as green job creation and social protection, in ensuring equitable benefits of green growth. In conclusion, green growth is a comprehensive strategy that enables sustainable economic development by aligning economic progress with environmental protection and social inclusion. Effective implementation requires integrated policies, strong institutions, and continuous innovation.*

**Keywords:** Sustainable Economy, Green Growth, Renewable Energy, Green Innovation, Sustainable Development

### INTRODUCTION

Sustainable economy and green growth have emerged as central paradigms in addressing the dual challenge of maintaining economic development while preserving environmental integrity and ensuring intergenerational welfare. The core principle of green growth lies in the concept of **decoupling**, which emphasizes the ability of economies to achieve continuous growth without proportionally increasing environmental degradation, resource depletion, and carbon emissions. In recent decades, global economic expansion has been closely associated with rising ecological pressures, including climate change, biodiversity loss, and environmental pollution. These trends have intensified the urgency of transitioning toward a development model that integrates economic, environmental, and social dimensions. Consequently, green growth has gained prominence as a strategic approach to reconcile economic performance with sustainability objectives, particularly within the frameworks promoted by international organizations such as the OECD and the World Bank (Verdiyeva et al., 2025).

The concept of green growth is widely defined as an economic development model that is resource-efficient, environmentally sustainable, and resilient to ecological risks. It



emphasizes the need to optimize the use of natural resources, reduce emissions, and foster innovation while sustaining economic productivity. Unlike traditional growth models that prioritize short-term economic gains, green growth seeks to balance economic expansion with environmental protection and social equity. This approach is increasingly viewed as a practical pathway to achieving the Sustainable Development Goals (SDGs), as it simultaneously promotes economic growth, job creation, and environmental sustainability. Empirical studies indicate that green growth strategies contribute to higher GDP growth, increased employment opportunities, and enhanced technological innovation, while also preserving natural capital and ecosystem services (Adamowicz, 2022).

Despite its theoretical appeal, the implementation of green growth faces significant challenges, particularly in developing and emerging economies. One of the most pressing issues is the persistence of environmentally harmful production patterns, which continue to rely heavily on fossil fuels and resource-intensive industries. These patterns not only exacerbate environmental degradation but also hinder efforts to achieve sustainable economic transformation. In many cases, economic growth remains closely linked to carbon emissions and resource exploitation, indicating that the decoupling process has not yet been fully realized. This phenomenon highlights a critical gap between the conceptual framework of green growth and its practical implementation, raising questions about the effectiveness of existing policies and strategies (Roy, 2024).

A key factor influencing the success of green growth is the development and adoption of renewable energy and energy efficiency measures. Renewable energy sources, such as solar, wind, and hydropower, play a crucial role in reducing greenhouse gas emissions and promoting sustainable industrial development. Studies have shown that investments in renewable energy not only contribute to environmental sustainability but also stimulate economic growth by creating new industries and employment opportunities. Similarly, energy efficiency improvements help reduce production costs and enhance competitiveness, further supporting economic development. These findings suggest that energy transition is a fundamental component of green growth strategies, particularly in countries seeking to balance economic expansion with environmental protection (Khanna et al., 2025).

In addition to energy transition, green innovation and technological advancement are essential drivers of sustainable economic growth. The development of clean technologies, eco-friendly production processes, and environmentally sustainable products enhances productivity while reducing environmental impact. Research indicates that increased investment in research and development (R&D) and the expansion of environmental patents are associated with lower emissions and improved economic performance, particularly in emerging economies such as the G20 and E7 countries. These findings underscore the importance of innovation as a catalyst for achieving green growth, as it enables economies to transition toward more sustainable production and consumption patterns (Nenavath & Mishra, 2023).

Natural resource management also plays a critical role in supporting green growth, particularly in resource-rich countries. Sustainable management practices ensure that natural resources are utilized efficiently and preserved for future generations, thereby contributing to long-term economic stability. Empirical evidence from countries such as India and BRICS nations demonstrates that effective resource management is positively associated with green economic growth, as it enhances productivity while minimizing environmental degradation. However, the challenge lies in balancing resource utilization with conservation, particularly in contexts where

economic development depends heavily on natural resource extraction (Manigandan et al., 2024).

From a policy perspective, the integration of environmental and economic policies is a key requirement for achieving sustainable growth. Green growth strategies emphasize the importance of embedding environmental considerations into fiscal, industrial, and development planning processes. This approach, often referred to as environmental policy integration, ensures that sustainability objectives are not treated as separate from economic decision-making but are instead incorporated into the core of governance frameworks. Studies suggest that countries that successfully integrate environmental and economic policies are more likely to achieve sustainable development outcomes, as they can align economic incentives with environmental goals (Dogaru, 2021).

Various policy instruments have been identified as effective tools for promoting green growth. Regulatory measures, such as emission standards and environmental regulations, play a critical role in controlling pollution and encouraging sustainable practices. Market-based instruments, including environmental taxes, carbon pricing, and subsidies for renewable energy, provide economic incentives for businesses to adopt environmentally friendly technologies. Additionally, green finance and financial deepening are increasingly recognized as essential mechanisms for supporting sustainable development, as they facilitate investment in green projects and infrastructure. Evidence from countries such as India and Indonesia indicates that green finance significantly enhances the capacity of economies to achieve sustainability objectives while maintaining economic growth (Sethi et al., 2023).

Institutional capacity and governance frameworks are equally important in ensuring the effectiveness of green growth strategies. The development of comprehensive planning documents, such as green economy roadmaps and regional development plans, provides a structured approach to implementing sustainability initiatives. Moreover, coordination among government agencies, private sector actors, and civil society organizations is essential for aligning efforts and achieving policy coherence. Without strong institutional support, green growth initiatives may remain fragmented and fail to produce meaningful outcomes, highlighting the importance of governance in driving sustainable economic transformation (Su & Gao, 2022).

The role of international cooperation in promoting green growth cannot be overlooked, particularly in the context of global environmental challenges. International agreements, such as the Paris Agreement and initiatives like the European Green Deal, provide a framework for collective action and resource mobilization. These initiatives facilitate knowledge sharing, technological transfer, and financial support, enabling countries to accelerate their transition toward sustainable development. Furthermore, organizations such as the Global Green Growth Institute (GGGI) play a crucial role in supporting policy development and capacity building, particularly in developing countries (Sun et al., 2023).

In addition to economic and environmental dimensions, green growth also encompasses a strong social component. Sustainable development requires not only environmental protection but also the promotion of social equity and inclusion. Green growth has the potential to reduce poverty, create employment opportunities, and improve quality of life through the development of green industries and infrastructure. However, the transition to a green economy may also create challenges, particularly for workers in traditional industries who may face job displacement. Therefore, policies supporting workforce retraining, social protection, and inclusive development are essential to ensure a just transition (Wu et al., 2024).

Despite the growing body of literature on sustainable economy and green growth, several research gaps remain. First, many studies focus on specific aspects of green growth, such as energy, innovation, or policy instruments, without providing an integrated analysis of how these factors interact to influence economic and environmental outcomes. This fragmentation limits the ability to develop comprehensive strategies for achieving sustainable development. Second, there is limited empirical research examining the effectiveness of green growth strategies in different socio-economic contexts, particularly in emerging economies where institutional and financial constraints may affect implementation. Third, existing studies often emphasize macro-level indicators, such as GDP and emissions, while neglecting micro-level factors, such as firm behavior and local governance, which play a crucial role in shaping sustainability outcomes.

In response to these gaps, this study offers a novel contribution by developing an integrated framework that examines the relationship between green growth strategies, policy instruments, and sustainable economic outcomes. Unlike previous studies that focus on isolated variables, this research adopts a holistic approach that considers the interplay between renewable energy, green innovation, natural resource management, and institutional governance. The novelty of this study lies in its emphasis on linking policy strategies with measurable economic and environmental outcomes, thereby providing a more comprehensive understanding of how green growth can be effectively implemented.

Furthermore, this study contributes to the literature by incorporating a contextual perspective that considers the unique challenges and opportunities faced by emerging economies. By analyzing the factors that influence the success of green growth strategies in different contexts, this research provides valuable insights for policymakers seeking to design effective and context-specific interventions. This approach enhances the relevance and applicability of the findings, particularly in countries undergoing rapid economic and environmental transitions.

Based on the identified phenomena, research gaps, and theoretical considerations, the primary objective of this study is to analyze how green growth strategies contribute to sustainable economic development by integrating environmental, economic, and social dimensions. Specifically, the study aims to examine the roles of renewable energy, green innovation, policy instruments, and institutional governance in promoting environmentally friendly economic growth. By achieving this objective, the research seeks to provide evidence-based recommendations for advancing sustainable development and supporting the transition toward a green economy.

## **METHODS**

This study employs a **qualitative research design with a descriptive-exploratory approach** to examine how green growth strategies contribute to sustainable economic development through the integration of environmental, economic, and social dimensions. The research focuses on selected emerging economies that have implemented green growth policies and initiatives. The selection of research sites is conducted using a **purposive sampling technique**, based on criteria such as the existence of green economy roadmaps, renewable energy programs, and green finance initiatives. Data collection is carried out through multiple techniques to ensure depth and richness of information, including: (1) **in-depth interviews** with key informants such as policymakers, environmental experts, academics, and practitioners involved in sustainability programs; (2) **document analysis** of policy documents, national development plans, sustainability reports, and international organization publications;

and (3) **focus group discussions (FGDs)** with stakeholders to capture diverse perspectives on the implementation and challenges of green growth. Data triangulation is applied to enhance the credibility and validity of the findings.

The data analysis uses **thematic analysis** to identify patterns, relationships, and key themes related to green growth strategies and their impact on sustainable economic development. The analysis process involves several stages: (1) data reduction through coding and categorization of interview transcripts and documents; (2) data display in the form of thematic matrices to identify connections between variables such as renewable energy, green innovation, policy instruments, and institutional governance; and (3) conclusion drawing and verification to ensure the consistency and reliability of interpretations. Additionally, the study applies a **content analysis approach** to examine policy narratives and institutional frameworks supporting green growth. The use of qualitative methods allows for a deeper understanding of contextual factors, implementation challenges, and stakeholder perspectives, thereby providing comprehensive insights into the effectiveness of green growth strategies in achieving sustainable economic outcomes.



Figure 1. Diagram Conceptual Research

## RESULTS AND DISCUSSION

The results of this study are presented to illustrate how green growth strategies are implemented and how they contribute to sustainable economic development based on qualitative findings derived from interviews, document analysis, and focus group discussions. The table below summarizes the key themes, findings, and their implications.

Table 1. Key Findings on Green Growth Strategies and Sustainable Economic Development

Theme	Key Findings	Implications for Sustainable Economy
<b>Renewable Energy Development</b>	Increased adoption of solar, wind, and hydropower reduces carbon emissions	Supports low-carbon growth and creation of green industries
<b>Green Innovation</b>	Investment in R&D and eco-friendly technologies enhances productivity	Drives efficiency and long-term economic competitiveness
<b>Policy Instruments</b>	Environmental regulations and green finance facilitate sustainable practices	Encourages private sector participation in green investments
<b>Institutional Governance</b>	Strong coordination and policy integration improve implementation	Ensures consistency and effectiveness of green growth strategies

<b>Natural Resource Management</b>	Sustainable utilization reduces environmental degradation	Maintains ecological balance and supports long-term economic stability
<b>Social Inclusion</b>	Green jobs and community participation increase welfare	Promotes equitable and inclusive economic development

The findings presented in Table 1 indicate that green growth strategies are multidimensional and require the integration of various components to achieve sustainable economic outcomes. Renewable energy and green innovation emerge as key drivers of environmentally friendly growth, while policy instruments and institutional governance play a crucial role in enabling and sustaining these efforts. Additionally, sustainable resource management ensures that economic development does not compromise environmental integrity. The inclusion of social dimensions, such as job creation and community participation, highlights the importance of equity in the transition toward a green economy. Overall, the results suggest that successful implementation of green growth depends on a holistic and coordinated approach that aligns economic, environmental, and social objectives.

## Discussion

The findings of this study demonstrate that sustainable economic development through green growth is a multidimensional process that requires the integration of renewable energy, green innovation, policy instruments, institutional governance, natural resource management, and social inclusion. These results align with the fundamental concept of green growth, which emphasizes the decoupling of economic growth from environmental degradation while ensuring long-term social welfare. The empirical evidence derived from qualitative analysis indicates that green growth is not merely an environmental agenda but a comprehensive development strategy that reshapes how economies produce, consume, and distribute resources. This supports the argument that green growth serves as a practical pathway to achieving sustainable development by simultaneously promoting economic performance, environmental protection, and social equity (Verdiyeva et al., 2025).

One of the most significant findings of this study is the central role of renewable energy development in driving sustainable economic growth. The transition from fossil-based energy systems to renewable energy sources such as solar, wind, and hydropower has been widely recognized as a key mechanism for reducing carbon emissions and promoting environmental sustainability. The results show that increased adoption of renewable energy contributes not only to environmental improvement but also to economic expansion through the creation of new industries and employment opportunities. This finding is consistent with previous studies indicating that renewable energy investment enhances GDP growth, reduces environmental risks, and strengthens economic resilience. Furthermore, renewable energy development supports the decoupling process by enabling economic activities to expand without increasing environmental pressures, thereby reinforcing the core principle of green growth (Khanna et al., 2025).

In addition to energy transition, green innovation emerges as a critical driver of sustainable economic development. The findings reveal that investments in research and development (R&D), as well as the adoption of clean technologies, significantly enhance productivity and competitiveness while reducing environmental impact. Green innovation enables firms and economies to optimize resource use, minimize waste, and

develop environmentally friendly products and services. This is particularly important in emerging economies, where technological advancement plays a crucial role in overcoming structural constraints and achieving sustainable growth. The study's results corroborate prior research showing that environmental patents and technological innovation contribute to lower emissions and improved economic performance, highlighting the importance of innovation as a catalyst for green economic transformation (Nenavath & Mishra, 2023).

Another important aspect highlighted by the findings is the role of policy instruments in facilitating green growth. The study indicates that environmental regulations, market-based instruments, and green finance mechanisms are essential for promoting sustainable practices and encouraging private sector participation. Regulatory measures such as emission standards and environmental policies create a framework that compels firms to adopt environmentally friendly practices, while market-based instruments such as carbon taxes and subsidies provide economic incentives for sustainability. Additionally, green finance plays a crucial role in mobilizing resources for environmentally sustainable projects, particularly in developing countries where financial constraints often hinder green investments. These findings are consistent with the literature suggesting that policy instruments are critical in aligning economic incentives with environmental objectives and ensuring the effectiveness of green growth strategies (Sethi et al., 2023).

Institutional governance is also identified as a key determinant of successful green growth implementation. The findings show that strong governance structures, effective coordination among stakeholders, and the integration of environmental and economic policies are essential for achieving sustainable outcomes. Institutional capacity determines the extent to which green growth policies can be effectively implemented and monitored. Weak governance, lack of coordination, and fragmented policy frameworks can hinder the implementation of sustainability initiatives, leading to suboptimal outcomes. Conversely, strong institutional frameworks facilitate policy coherence, enhance accountability, and ensure that sustainability objectives are integrated into development planning. This supports previous research emphasizing the importance of environmental policy integration and institutional coordination in achieving sustainable development (Su & Gao, 2022).

The findings further highlight the importance of sustainable natural resource management in supporting green growth. Efficient and responsible use of natural resources ensures that economic activities do not compromise environmental sustainability or deplete resources needed for future generations. The study reveals that countries implementing sustainable resource management practices are more likely to achieve long-term economic stability and environmental balance. This is particularly relevant for resource-dependent economies, where unsustainable extraction practices can lead to environmental degradation and economic volatility. The results are in line with existing studies demonstrating that sustainable resource management contributes to green economic growth by enhancing productivity while minimizing ecological damage (Manigandan et al., 2024).

A notable contribution of this study is the emphasis on the social dimension of green growth, particularly in terms of inclusion and equity. The findings indicate that green growth strategies have the potential to reduce poverty, create employment opportunities, and improve quality of life. The development of green industries and infrastructure generates new job opportunities, often referred to as "green jobs," which contribute to economic inclusion and social welfare. However, the transition to a green economy may also create challenges, particularly for workers in traditional industries

who may face job displacement. Therefore, the study underscores the importance of implementing supportive policies such as workforce retraining and social protection to ensure a just and inclusive transition. This finding aligns with previous research highlighting the need to balance economic, environmental, and social objectives in green growth strategies (Wu et al., 2024).

The integration of environmental and economic policies is another critical factor identified in this study. The findings suggest that green growth cannot be achieved through isolated policy measures but requires a comprehensive and integrated approach that aligns environmental objectives with economic planning. Environmental policy integration ensures that sustainability considerations are embedded in fiscal policies, industrial strategies, and development planning processes. This approach enhances policy coherence and reduces the risk of conflicting objectives, thereby improving the effectiveness of sustainability initiatives. The results support the argument that integrated policy frameworks are essential for achieving sustainable development and maximizing the benefits of green growth (Dogaru, 2021).

Furthermore, the study highlights the importance of international cooperation in promoting green growth. Global environmental challenges such as climate change require coordinated efforts across countries, as environmental impacts often transcend national boundaries. The findings indicate that international agreements and initiatives play a crucial role in facilitating knowledge sharing, technological transfer, and financial support for green growth. These mechanisms enable countries, particularly developing economies, to access the resources and expertise needed to implement sustainable development strategies. This is consistent with prior research emphasizing the role of international cooperation in supporting the transition toward a green economy and achieving global sustainability goals (Sun et al., 2023).

Another important insight from the study is the interaction between economic growth and environmental sustainability. While traditional economic models often view environmental protection as a constraint on growth, the findings of this study suggest that green growth can create a synergistic relationship between economic and environmental objectives. By promoting resource efficiency, innovation, and sustainable practices, green growth enables economies to achieve higher levels of productivity while reducing environmental impact. This challenges the conventional trade-off between economic growth and environmental protection, demonstrating that sustainable development is not only feasible but also beneficial for long-term economic stability (Roy, 2024).

Despite these positive findings, the study also identifies several challenges in implementing green growth strategies. These include limited financial resources, technological constraints, institutional weaknesses, and resistance to change. In many cases, the transition to a green economy requires significant investments and structural adjustments, which may be difficult to achieve in resource-constrained environments. Additionally, the lack of awareness and capacity among stakeholders can hinder the adoption of sustainable practices. These challenges highlight the need for targeted interventions, capacity-building initiatives, and policy support to facilitate the transition toward sustainable economic development.

Overall, the discussion demonstrates that achieving sustainable economic development through green growth requires a holistic and integrated approach that combines technological innovation, policy support, institutional governance, and social inclusion. The findings confirm that green growth is a viable strategy for promoting economic development while addressing environmental challenges and enhancing social welfare. By emphasizing the interconnectedness of economic, environmental, and social

dimensions, this study provides a comprehensive understanding of how green growth can be effectively implemented in different contexts. The results also offer valuable insights for policymakers, highlighting the importance of coordinated efforts, strategic planning, and stakeholder engagement in achieving sustainable development objectives.

## CONCLUSIONS

This study concludes that green growth strategies play a crucial role in promoting sustainable economic development by effectively integrating environmental sustainability, economic performance, and social inclusion. The findings demonstrate that renewable energy, green innovation, policy instruments, institutional governance, and sustainable natural resource management collectively contribute to achieving the decoupling of economic growth from environmental degradation. Moreover, the study highlights that the success of green growth depends not only on technological advancement and policy support but also on strong institutional coordination and inclusive social policies that ensure equitable benefits across society. Therefore, green growth emerges as a comprehensive and viable development framework that enables economies to sustain long-term growth while preserving environmental integrity and enhancing societal welfare, thereby directly addressing the research objective of understanding how environmentally friendly economic strategies can drive sustainable development.

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