Chapter 7

Green Economic Growth and the Performance of the Turkiye Economy

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Abstract

This study examines the concept of green economic growth within the framework of Türkiye's transition to a sustainable green economy. By outlining the historical and theoretical foundations of green economy principles, it explores Türkiye's economic, environmental, and policy transformations in the context of global green transitions. Key indicators from the 2017-2023 period are analyzed to evaluate Türkiye's efforts in promoting renewable energy, enhancing energy efficiency, and encouraging environmentally friendly practices.

The findings highlight significant progress in renewable energy investments, particularly in wind and solar power, which have enabled substantial advancements in this sector. By 2023, the share of renewable energy in total electricity generation reached 41.73%. However, challenges persist in achieving substantial reductions in CO2 emissions and improving energy efficiency. Türkiye's development plans and national policies emphasize alignment with international standards, the promotion of green financing, and the adoption of innovative technologies. For Türkiye to achieve its green economic growth objectives, more integrated strategies and robust policy support are essential. This analysis aims to contribute to the academic literature and policymaking processes by presenting Türkiye's experiences and potential pathways in green transformation.

This study aims to provide insights into Türkiye's green transformation journey, offering valuable contributions to both academic discourse and policymaking processes by identifying key experiences and outlining potential pathways for further progress in sustainable economic development.

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1. INTRODUCTION

The Industrial Revolution marked the beginning of a period during which economic systems prioritized competitive growth and industrialization, often disregarding the finite nature of natural resources. This trend intensified in the post-World War II era, resulting in production and consumption patterns that have led to significant global challenges. In recent decades, growing international competition, technological advancements, rapid urbanization, and environmental degradation have contributed to a reduction in green spaces, overuse of natural resources, and escalating climate change issues.

The concept of "sustainable development," which gained prominence in the late 20th century and became widely recognized through international agreements in the 1990s, proposes a model aimed at meeting the needs of the present generation without compromising the ability of future generations to meet their own needs. However, the relentless pursuit of economic growth has heightened pressure on limited natural resources, raising critical concerns about sustainability. To address these concerns, it has become crucial for nations to align their economic policies with sustainability principles (Tsonkoy, 2021: 1-2).

In light of the increasing inability of existing economic systems to tackle the intensifying global crises linked to inefficient resource use, a paradigm shift has become essential. Economies must incorporate the limitations of natural resources into their development strategies, emphasizing environmental sustainability and the well-being of future generations. Within this context, the concepts of green economy and green economic growth have emerged as key tools for fostering environmentally conscious and sustainable economic progress. Through policies focused on green growth, it will be possible to achieve broader economic integration, enhance technological cooperation, and develop regulatory frameworks and standards aimed at reducing dependency on and pressure on limited natural resources (Özen Atabey, 2022: 55).

This study aims to explore the concept of green economic growth, assess its scope, and evaluate Türkiye's efforts in transitioning to a green economy while examining its performance in this area. The study delves into the historical development and evolution of green economic growth as a concept, situating it within a broader theoretical framework. Additionally, it investigates the structural transformations occurring within Türkiye's economy, particularly as it navigates the global shift toward sustainable development and resource-efficient practices. Through an analysis of Türkiye's policy approaches and economic adjustments in this transition,

the research provides insights into the country's position within the broader green economic movement. Furthermore, it offers policy recommendations to support Türkiye's ongoing adaptation to this global green transformation, contributing both to the academic discourse and to the development of actionable strategies.

2. THE SCOPE AND CONCEPTUAL FRAMEWORK OF GREEN ECONOMIC GROWTH

2.1. The Concept of Green Economy

At the core of economics lies the principle of meeting unlimited human needs with limited resources. Throughout history, individuals have focused on increasing their personal incomes to satisfy their boundless needs, leading nations to develop policies aimed at enhancing economic growth and development, often disregarding the constraints of limited resources. This competitive approach to economic growth, which placed resource scarcity as a secondary consideration, has caused irreversible damage to ecosystems. Over time, these growing problems have necessitated the more efficient use of limited resources to ensure the sustainability of economic growth and leave a more livable planet for future generations.

As a result, the concept of a "green economy," which prioritizes ecosystems, equitable resource distribution, and sustainable economic growth, has emerged as a focal point for researchers. Within the literature, the concept of the green economy has undergone significant transformations over time, resulting in various definitions. Therefore, it is challenging to identify a single, universally accepted definition of what the green economy entails (Newton & Cantarello, 2014: 2–3).

The United Nations Environment Programme (UNEP) defines the concept of a green economy as a policy proposition aimed at enhancing societal well-being and social equity while simultaneously reducing environmental risks and damages (UNEP, 2011). The optimal utilization of natural resources and all forms of capital is achievable through sustainable development, which, in turn, is made possible through green economy policies. Furthermore, the goals of green economic growth have been identified as the revitalization of the global economy, achieving inclusive and sustainable growth, creating new green jobs and employment opportunities to address unemployment, and protecting disadvantaged groups within society by providing them with necessary support (UNEP, 2011).

Although the emergence of the green economy concept is often attributed to the ecological and environmental degradations observed in developed economies, it was first explicitly articulated in the work "*Blueprint for a Green Economy*" (Ehresman & Okereke, 2015: 5). Researchers generally approach the green economy by focusing on its environmental and economic dimensions. The environmental dimension encompasses issues such as renewable energy, climate change, and natural capital, while the economic dimension includes economic growth, sustainable development, cost management, and competitive efficiency (Loiseau et al., 2016: 362–363). Since the global financial crisis of 2008, interest in the green economy has exhibited an upward trend. Before the crisis, subsidy policies aimed at promoting green economic activities were implemented, and the valuation of green technology firms increased. However, on a global scale, it appears that the steps taken toward a green economy have yet to reach a transformative level (Georgeson et al., 2017: 3).

The *Guidebook to the Green Economy* is a comprehensive guide that consolidates the principles of the green economy from various organizations. When these principles are evaluated as a whole, the concept of the green economy can be analyzed through three fundamental dimensions: environmental, social, and economic (UNDESA, 2012: 20-21).

- Economic Dimension:

The economic dimension of the green economy focuses on goals such as achieving sustainable development, enhancing energy and resource efficiency, supporting green economic growth, and creating green jobs. These principles emphasize the transition to an economic model that responsibly manages limited resources while fostering sustainability.

- Social Dimension:

The social dimension prioritizes reducing poverty, improving societal well-being, and ensuring intergenerational and international equity. This dimension supports an inclusive approach that ensures all segments of society benefit equally from economic growth.

- Environmental Dimension:

The environmental dimension revolves around principles such as preventing biodiversity loss and pollution, investing in natural resources, and achieving international environmental sustainability targets. It promotes the protection of ecosystems and encourages global collaboration to mitigate the adverse impacts of climate change.

By integrating economic, social, and environmental dimensions, the green economy offers a framework that promotes sustainable growth while aiming for ecological preservation and social equity. The simultaneous consideration of these three dimensions provides a viable alternative to the unsustainable practices associated with the brown economy.

The United Nations Environment Programme (UNEP) defines the green economy as a concept that enhances societal well-being and equitable distribution while reducing environmental risks and promoting the efficient use of limited natural resources (UNEP, 2011: 1).

The Green Economy Coalition has identified five fundamental principles to ensure a fair, effective, and swift global economic transition (Green Economy Coalition, 2020: 13-18):

- The Wellbeing Principle:

The green economy places human well-being and equitable distribution of resources at its core. Well-being refers not only to financial prosperity but also to improvements in social, human, natural, and physical dimensions of welfare. This principle aims to create a sustainable investment environment that fosters global opportunities for all individuals, driving national prosperity through the transition to green jobs.

- The Justice Principle:

As an inclusive concept, the green economy emphasizes intergenerational equity and the fair distribution of costs. It supports the empowerment of disadvantaged groups, including women, workers, and minorities, while promoting fairness and equality across all sectors of society.

- The Planetary Boundaries Principle:

The green economy acknowledges the importance of addressing economic issues while safeguarding cultural and ecological values. It advocates for investments in natural resources and aims to create societal awareness of potential risks associated with limited natural resources, with the goal of minimizing these risks.

- The Efficiency and Sufficiency Principle:

The green economy promotes the adoption of sustainable development models that prioritize resource efficiency, low-carbon usage, and innovative technologies. It seeks to establish an economy where sustainable and innovative technologies are central to growth.

- The Good Governance Principle:

Grounded in scientific evidence, the green economy emphasizes the integration of institutions into the economy with a focus on transparency, accountability, inclusivity, and reliability. This principle also underlines the importance of sustainable and dependable employment opportunities that serve the broader interests of society.

These principles collectively provide a robust framework for achieving sustainable and inclusive economic development, offering solutions to ecological and societal challenges through the lens of a green economy.

2.2. The Concept of Green Economic Growth

In the literature, there are various definitions of the concept of green economic growth. The World Bank defines green economic growth as an economic growth model that ensures the efficient use of limited natural resources, incorporates resilient and effective environmental management, and includes policies that enable rapid recovery from natural disasters (World Bank, 2021: 24).

The concept of green economic growth was first introduced at the Fifth Ministerial Conference on Environment and Development in 2005, where the necessity of green economic growth policies for achieving sustainable development was emphasized (Kanianska, 2017: 19). Following the global financial crisis of 2008, green economic growth was adopted as a strategy. The inability of existing economic policies to address the global crisis led to the emergence of green economic growth strategies. Notably, the Organisation for Economic Co-operation and Development (OECD) and the United Nations Environment Programme (UNEP) have conducted various policy studies at the global level to facilitate economic growth and sustainable development in countries. Consequently, the concept of sustainable development has gained a new dimension.

Green economic growth has been recognized in the literature as both a complement to the dimensions of sustainable development and a concept that promotes green economy initiatives. Among the various definitions, the OECD's definition of green economic growth is one of the most widely accepted in the literature. According to the OECD, green economic growth is an economic system that promotes economic growth and innovation while ensuring the efficient use of natural resources and maintaining the ecological system for societal well-being (OECD, 2011: 4).

The concepts of green economic growth and green economy offer solutions to address the challenges of limited natural and energy resources. They propose more effective and innovative policies while taking into

account climate issues and resource scarcity. These concepts also aim to ensure sustainability by providing actionable policy solutions (Kasztelan, 2017: 491).

Economic growth is typically defined as the annual increase in Gross Domestic Product (GDP). However, GDP is not widely regarded as a macroeconomic indicator that accurately reflects improvements in societal well-being (Stiglitz et al., 2009: 21). The concepts of economic growth and green economic growth differ significantly in this regard.

Green economic growth emphasizes the efficient use of limited natural resources, minimizing environmental damage, and adopting more equitable distribution mechanisms alongside sustainable policy strategies (Hallegatte et al., 2012: 3).

3. TÜRKİYE'S GREEN ECONOMIC TRANSITION PROCESS AND GROWTH PERFORMANCE

3.1. Steps Toward Green Economic Growth and Green Transformation Policies in Türkiye

Türkiye's development plans serve as crucial guidelines for the advancement of environmental policies, green economic transformation, and the determination of sustainable development goals. In these plans, environmental policies are adopted as fundamental components of sustainable development and the green economy. Türkiye has set concrete goals in several areas, including aligning its environmental management practices with European Union standards, reducing greenhouse gas emissions, and promoting the widespread use of environmentally friendly technologies.

These development plans present a long-term vision for Türkiye's environmental and green economic transformation, as well as for achieving sustainable economic growth. They have become foundational documents reflecting the state's perspective on the environment by addressing economic, social, and environmental development in an integrated manner. A comprehensive understanding of sustainable development and the green economy necessitates a detailed examination of these plans.

In Türkiye's First and Second Five-Year Development Plans (1963–1972), concepts such as the environment, nature, or sustainability were absent. Environmental issues were addressed for the first time in the Third Five-Year Development Plan (1973–1977). This plan emphasized the need to resolve environmental problems without hindering economic development and aimed to enable individuals to maintain a sustainable balance in their

interactions with the environment. Additionally, policies to raise public awareness for the protection and development of nature were proposed (Presidency of Strategy and Budget, 1972: 866–867).

The Fourth Five-Year Development Plan (1979–1983) expanded the scope of environmental considerations, drawing attention to issues such as air, water, and soil pollution, as well as erosion and land degradation. It underlined the necessity of addressing environmental problems alongside societal transformation processes and set goals to incorporate environmental considerations into agriculture, industry, and urbanization practices. Furthermore, increasing green spaces in major cities was identified as a fundamental policy objective (Presidency of Strategy and Budget, 1978: 83–297).

With the Fifth Five-Year Development Plan (1985–1989), the concept of sustainability was introduced into environmental policy for the first time. The plan aimed not only to prevent environmental pollution but also to ensure the transfer of natural resources to future generations. It prioritized research and development (R&D) activities related to environmental issues, advocated for the support of universities and non-governmental organizations, and implemented policies to control air pollution (Presidency of Strategy and Budget, 1984: 171).

The Sixth Five-Year Development Plan (1990–1994) adopted the protection of human health and the environment as a fundamental objective alongside economic and social development. Concrete measures were proposed, including the development of renewable energy sources, the establishment of solid waste management facilities by municipalities, and the creation of environmental risk assessment centers in urban areas. Additionally, regulations were planned for facilities utilizing nuclear energy and radiation-based technologies (Presidency of Strategy and Budget, 1989: 312–313).

The Seventh Five-Year Development Plan (1996–2000) included a significant self-critique regarding environmental policies. It highlighted the inadequacies in implementing the environmental goals outlined in previous plans, pointing to legislative and institutional gaps, insufficient personnel and resources, and a lack of coordination among environmental organizations. The plan emphasized adopting environmentally friendly technologies, addressing environmental challenges in alignment with European Union standards, and applying the "polluter pays" principle as a fundamental policy (Presidency of Strategy and Budget, 1995: 189–194).

The Long-Term Strategy and Eighth Five-Year Development Plan (2001–2005) focused on resolving environmental issues through strengthened legislative and institutional frameworks. During this period, emphasis was placed on enhancing energy efficiency in the transportation, energy, industrial, and construction sectors to reduce greenhouse gas emissions. Furthermore, the development of sustainable development indicators and the integration of environmental policies with economic and social strategies were proposed as essential measures for achieving long-term sustainability (Presidency of Strategy and Budget, 2000: 187–189).

The Ninth Development Plan (2007–2013) emphasized the harmonization of environmental policies in line with Türkiye's European Union accession process. Policies focused on conserving natural resources, increasing investments in environmentally friendly technologies, and implementing the "polluter pays" principle. Moreover, financing strategies were developed to support environmental infrastructure investments (Presidency of Strategy and Budget, 2006: 2–74).

The Tenth Development Plan (2014–2018) stands out as one of the most comprehensive in addressing environmental policies. This plan highlighted the need for economic growth to be based on a green economy framework. It aimed to accelerate environmentally friendly practices such as renewable energy, clean production technologies, and ecological efficiency. Additionally, concrete steps such as constructing disaster-resilient and sustainable cities and preparing integrated risk maps to address climate change were proposed (Presidency of Strategy and Budget, 2013: 117–137).

The Eleventh Development Plan (2019–2023) aimed to enhance efficiency and sustainability in environmental management. Key goals included expanding zero-waste practices, improving air quality management, preserving biodiversity, and strengthening regional clean air centers. The plan also emphasized controlling greenhouse gas emissions and preparing climate change action plans for seven regions (Presidency of Strategy and Budget, 2019: 157–170).

The Twelfth Development Plan (2024–2028), currently in effect, holds strategic importance for achieving Türkiye's sustainable development goals. The plan prioritizes disaster-resilient living spaces and a sustainable environment alongside economic and social development. It focuses on five main pillars: green and digital transformation with competitive production, skilled workforce, strong family structure, healthy society, and justice-based democratic governance (Presidency of Strategy and Budget, 2023: 42–251).

Türkiye's development plans have played a critical role in shaping environmental policies and defining sustainable development goals. These plans present strategic approaches aimed at balancing green economic growth with environmental sustainability.

As the impacts of climate change become increasingly evident worldwide, the significance of transitioning to a green economy has grown. With the European Union and other developed countries emphasizing climate change in their economic policies, green transformation has also become imperative for Türkiye. In this context, Türkiye has taken and continues to take significant steps toward achieving environmental and economic sustainability goals.

Türkiye's first major initiative toward sustainable environmental policies was the enactment of the Environmental Law No. 2872 in 1983. To implement this law, the Environmental Directorate General was established under the Prime Ministry in 1984. As environmental issues and nature conservation became increasingly critical, the Environmental Directorate General was upgraded to the Environmental Undersecretariat in 1989, and by 1991, it was decided to establish an independent Ministry of Environment with an expanded scope of responsibilities (Şengün, 2015: 114).

The National Climate Change Strategy adopted in 2010 and the Climate Change Action Plan (CCAP) covering the 2011–2023 period marked a turning point in Türkiye's fight against climate change. Under the CCAP, a total of 541 actions were identified across various sectors, including energy, industry, transportation, agriculture, construction, and forestry. These actions focus on reducing greenhouse gas emissions and preparing for risks associated with climate change (Presidency of Communications, 2021: 77).

To address the regional impacts of climate change, the Ministry of Environment, Urbanization, and Climate Change prepared Regional Climate Change Action Plans (RCCAPs). These plans, specifically tailored for Türkiye's seven regions, encompass comprehensive strategies. One notable goal outlined in these plans is to ensure that by 2053, all buildings in Türkiye can meet their energy needs through renewable energy sources (Ministry of Environment, Urbanization, and Climate Change, 2022).

The European Green Deal has also been a pivotal point for Türkiye, influencing policy shifts toward sustainability. In line with this, the Green Deal Action Plan was published by the Ministry of Trade. This plan is structured around nine key policy areas, including border carbon regulations,

green and circular economy, sustainable agriculture, clean energy, and green finance (Ministry of Trade, 2021: 9).

Furthermore, the New Economy Program (2021–2023) emphasized sustainable growth, high-value-added production, and digital transformation. As part of this program, action plans were developed to enhance R&D efforts, promote green production processes, and improve energy efficiency (Presidency of Strategy and Budget, 2020: 17–19).

3.2. Türkiye's Green Economic Growth Performance

Türkiye's performance in green economic growth has been shaped by its efforts to integrate sustainability into economic development. Over the years, the country has adopted various strategies to promote renewable energy, enhance energy efficiency, and encourage environmentally friendly technologies, demonstrating its commitment to achieving sustainability.

Table 1: Türkiye's Green Economic Growth Performance with Selected Indicators

Years	2017	2018	2019	2020	2021	2022
Environmental and Resource Productivity (Kilogramme)						
· GHG Productivity (Kilogramme)						
Production-based CO2 emissions (Tonnes, Millions)	378,63	374,70	366,42	366,19	400,79	374,82
CO2 emissions from air transport per unit of GDP (Kilogramme)	8,73	9,05	9,22	4,06	5,70	7,91
· Energy productivity (Tonnes of oil equivalent, Millions)						
· · Total energy supply (Tonnes of oil equivalent, Millions)	146,81	144,20	146,51	146,92	159,43	156,50
Renewable energy supply (Tonnes of oil equivalent, Thousands)	17.738.486	19.110.546	23.339.118	24.076.253	24.224.615	26.539.692
Renewable electricity generation (Percentage of electricity generation)	29,34	32,08	43,52	41,85	35,42	41,97
Socio-Economic Context (Years)						
· Social context (Years)						
Life expectancy at birth (Years)	77,04	77,45	77,74	76,53	75,72	77,59
Net migration (Persons)	7,94	2,22	-0,18	0,44	0,23	-3,46
Real GDP (US dollars, PPP converted, Millions)	2.246.367	2.314.054	2.332.995	2.376.385	2.648.229	2.794.767

· Economic context (US dollars per person, PPP converted)						
Real GDP per capita (US dollars per person, PPP converted)	27.970,25	28.425,66	28.251,52	28.499,06	31.471,34	32.887,38
Nominal exchange rate (National currency per US dollar)	3,65	4,83	5,67	7,01	8,85	16,55
Purchasing power parity (National currency per US dollar)	1,38	1,63	1,84	2,11	2,73	4,61
Economic Opportunities and Policy Responses (US dollars per litre, PPP converted)						
· Environmental taxes and transfers (US dollars per litre, PPP converted)						
Diesel tax rate (US dollars per litre, PPP converted)	1,29	0,97	0,93	0,96	0,36	0,48
Petrol tax rate (US dollars per litre, PPP converted)	1,71	1,36	1,25	1,19	0,42	0,57
· Technology and innovation: Patents (Inventions per 1 000 000 inhabitants)						
Development of environment-related technologies (Inventions per 1 000 000 inhabitants)	1,87	1,42	1,28	1,54	1,41	
· Technology and innovation: R&D (Percentage of government allocations for R&D)						
Renewable energy public RD&D budget (Percentage of public energy RD&D budget)	29,51	40,99	17,30	29,01	36,13	24,27
Environment related government R&D budget (Percentage of government allocations for R&D)	0,78	0,68	0,60	0,56	0,27	0,14

Source: (OECD Data, 2024). This table was created by the author using data from OECD Data.

Analyzing Türkiye's Green Economic Growth Performance (2017–2023)

The table provides various environmental, socio-economic, and policy-focused indicators based on OECD data from 2017 to 2023 to evaluate Türkiye's green economic growth performance. The analysis of Türkiye's green economic transformation and growth performance is supported by selected data published by the OECD.

Environmental and Resource Productivity

In the context of Production-Based CO2 Emissions, the trend between 2017 and 2019 shows a decline from 378.63 million tons to 366.42 million tons, indicating a downward trend in emissions. However, in 2021, CO2 emissions increased to 400.79 million tons, demonstrating heightened environmental pressure. Regarding Renewable Energy Supply, the data indicates a consistent rise from 17.7 million tonnes of oil equivalent in 2017 to 27.4 million tonnes in 2023, with particularly significant increases observed during the period of 2019–2023. This growth reflects Türkiye's strong investments in solar and wind energy.

Despite the notable increase in renewable energy capacity, the reduction in CO2 emissions remains limited. A more aggressive shift from fossil fuels to renewable energy is essential to achieve sustainable reductions in CO2 emissions. Furthermore, the share of renewable energy within the total energy supply needs to be significantly increased to align with environmental sustainability goals.

In terms of Renewable Electricity Generation, the share of renewable energy in electricity production increased significantly, rising from 29.34% in 2017 to 41.73% in 2023. This growth highlights the expansion of renewable energy investments and the promotion of energy efficiency targets. However, the fluctuations over the years underline the importance of ensuring a more stable integration of renewable resources into the energy system. Additionally, while Türkiye has made progress in transitioning to renewable energy and environmentally friendly technologies, economic and environmental challenges persist. Notably, the increase in CO2 emissions underscores the need for stronger policy support to achieve environmental sustainability in the economy.

Socio-Economic Context

In the socio-economic context, Real GDP Per Capita demonstrated a steady increase between 2017 and 2023, reflecting sustained economic growth. However, this economic growth also emphasizes the necessity of addressing its environmental costs. Regarding the Nominal Exchange Rate, the USD/TL exchange rate rose sharply from 3.65 in 2017 to 23.79 in 2023, indicating economic instability and high inflation in Türkiye. While economic growth is evident, such significant fluctuations in exchange rates highlight macroeconomic challenges that need to be addressed.

Economic Opportunities and Policy Responses

In the context of the Renewable Energy Public RD&D Budget, its share rose from 29.51% in 2017 to 30.33% in 2023, indicating progress in government funding for renewable energy research and development. However, the budget share dropped to 17.30% in 2020, revealing inconsistencies in resource allocation. Regarding Petrol and Diesel Tax Rates, a decline was observed compared to 2017 levels, suggesting insufficient incentives to promote environmentally friendly fuel alternatives.

Energy Trends in Türkiye

The data on Total Energy Supply reveals an increase from 146.81 million tonnes of oil equivalent in 2017 to 158.09 million tonnes in 2023, despite some fluctuations over the years. This increase reflects the growing energy demand driven by economic expansion in Türkiye. From a green economic growth perspective, it is crucial to develop policies that address the carbon impact of rising energy consumption while supporting sustainable growth.

In terms of Energy Productivity, levels remained relatively stable between 2017 and 2023, with no significant decline in total energy supply. The limited progress in energy productivity highlights the dominance of energy-intensive sectors in the economy. Enhancing energy productivity will require greater technological advancements and policy support. Transforming energy-intensive industries will be critical to achieving meaningful energy efficiency improvements.

Despite GDP growth, the relatively limited increase in energy supply and CO2 emissions, coupled with the rising share of renewable energy in total energy supply and electricity generation, indicates promising progress in Türkiye's green transition. These trends suggest that Türkiye is making strides toward sustainable green economic growth, but significant challenges remain.

4. CONCLUSION AND RECOMMENDATIONS

Türkiye has made notable progress in formulating and implementing policies to address climate change, drive green economic transformation, and achieve sustainable development goals at both national and international levels. Through robust collaborations, Türkiye is steadily advancing toward a low-carbon economy, increasing its reliance on renewable energy, and promoting environmentally friendly development strategies. The country's green economic growth policies reflect a comprehensive approach that

not only prioritizes environmental sustainability but also aims to enhance economic and social well-being.

In its transition toward green transformation, Türkiye emphasizes sustainable development, energy efficiency, green financing, and circular economy principles. Region-specific and sectoral strategies play an instrumental role in the nation's shift to a low-carbon economy. However, the success of this transformation depends heavily on the adoption of actionable policies and alignment with international standards and best practices.

Türkiye's strengths position it as a key player in global green economic growth. Its swift adoption of renewable energy policies, coupled with its advantageous geographical location for expanding wind and solar energy capacities, underscores its potential. Continued investment in green economic transformation and energy efficiency will enable Türkiye to further solidify its role in the global green economy. While the country has exhibited robust economic growth, it remains essential to implement corrective and supportive policies to strengthen its green economic growth performance.

Improving energy efficiency remains a pressing priority, particularly in energy-intensive sectors. Türkiye's dependency on fossil fuels continues to pose challenges, and current reductions in CO2 emissions are insufficient to signify a complete transition toward renewable energy sources. Accelerating the deployment of renewable energy and ensuring sustained investments in this area are critical to achieving significant environmental and economic outcomes.

This analysis underscores the progress Türkiye has made in its energy policies while highlighting the need for more comprehensive, integrated strategies to reach sustainability objectives. Future policies should focus on fostering energy efficiency, increasing renewable energy adoption, and reducing dependence on fossil fuels. These measures will not only strengthen Türkiye's transition to a sustainable economy but also contribute to its resilience and competitiveness on the global stage.

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