

GREEN GROWTH: INTERNATIONAL EXPERIENCE AND LESSONS FOR VIETNAM

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Abstract:

Today, the international community commonly recognizes the model of progress towards sustainable development as green growth. Green growth refers to the restructuring of economic activity in order to promote economic growth that is in line with both environmental sustainability and social fairness. Green growth is recognized as an unavoidable pattern in development programs in numerous countries globally. Due to the intricate nature of climate change and the potential exhaustion of natural resources, the majority of countries worldwide, including Vietnam, consider green economic development to be a crucial component of their economic development strategy. A green economy is the seamless integration of environmentally-friendly economic growth and sustainable development. The paper examines the status of green growth in Vietnam and provides insights into international practices of green economic development. As a result, the State regulatory bodies in Vietnam learned valuable lessons in implementing green economic growth.

Keywords: green growth, sustainable development, economic measures

1. Introduction

Many governments throughout the world have selected green growth as the central emphasis of their development programs in order to achieve sustainable development goals. Vietnam's Government has enacted the Green Growth Strategy for the period of 2011-2020, along with a long-term vision for 2050. The objective of these initiatives is to decrease the release of greenhouse gases, promote environmentally-friendly production and consumption practices, and shift towards sustainable development by altering growth patterns. Vietnam can benefit from studying the experiences of leading nations in advancing green growth. Vietnam has always encountered numerous environmental contamination issues. Aside from natural calamities and climate fluctuations, the epidemic has profoundly affected the economic and social landscape of the nation. In order to fulfill the requirements of sustainable development, the only appropriate and enduring choice is to pursue a green

transition and green growth. Hence, a comprehensive understanding of the significance of green growth as the primary catalyst for sustainable development and as a potent instrument for the Government to efficiently manage both domestic and international resources, in close alignment with the objectives of sustainable socio-economic development, will facilitate the advancement of economic restructuring through innovative growth models. This, in turn, will enable Vietnam to achieve its goals of economic prosperity, environmental sustainability, and social justice.

1. Green growth

Green growth is a concept that has various definitions. According to scientific studies, the fundamental purpose of green growth may be summarized as attaining economic expansion while also protecting the environment, essentially promoting ecologically friendly development.

The Organization for Economic Cooperation and Development (OECD) defines green growth as the promotion of economic development while ensuring that natural resources can sustainably fulfill future human resource and habitat needs. Green growth is inherently stimulating innovation, investment, and competition, leading to new economic opportunities and promoting the greening and stabilization of the economy.

The United Nations Environment Programme (UNEP, 2012) proposes a novel strategy for economic development that has gained consensus among many nations, known as the establishment of a "green economy". The concept of the Green Economy refers to an economic system that prioritizes sustainability and environmental protection. Green growth, as defined by the World Bank (2012), is a model of growth that is characterized by its efficiency in utilizing natural resources, its cleanliness in minimizing environmental pollution, and its resilience in withstanding natural disasters.

According to [3], corporate green development encompasses not just direct environmental initiatives, but also broader efforts to support businesses in adopting environmentally-conscious decisions.

[9] categorizes GREEN GROWTH from a green business standpoint using the 4Rs: reduction, reuse, recycling, and recovery.

In Vietnam, the idea of green growth has been clearly defined and integrated into the Government's plan for sustainable development. This policy emphasizes the shift towards a low-carbon economy and the preservation and enhancement of natural resources as the primary focus of development. Green growth, as defined by the OECD (2011c), refers to the promotion of economic growth and development while ensuring that natural resources remain sufficient to meet the needs of both humans and habitats in the future. Green growth is inherently fueling innovation, investment, and competition to create new economic possibilities and promote the greening and stabilization of the economy.

In 2012, the Government implemented a green growth strategy aimed at transitioning growth patterns towards green growth. This involves developing a low-carbon economy and prioritizing the enrichment of natural capital as the main focus of sustainable economic development. Reducing emissions and increasing greenhouse gas absorption are now mandatory and significant indicators of economic and social progress.

From the standpoint of technology's role in economic growth, VICEM (2017) identifies two constraints on the Vietnamese economy: (1) the rate of improvement in overall labor productivity is still sluggish and heavily dependent on capital inputs, and (2) the contribution of total factor productivity (TFP) remains very low. The primary factors that affect the growth rate are primarily capital and the economy's contribution, which is currently relatively limited due to low levels of technical preparedness and innovation. Furthermore, the overall national investment in research and development and enterprise development is comparatively low in relation to both the area and the global scale.

Hence, regardless of the perspective from which green growth is considered, it entails firms implementing measures to enhance production efficiency while simultaneously minimizing the consumption of raw materials and resources, as well as mitigating the adverse environmental effects.

Green growth is a significant shift towards achieving the objective of minimizing adverse environmental effects through the utilization of advanced technology, along with eco-innovation, in order to promote high-quality, energy-efficient economic expansion. This is an unavoidable phenomenon that not only Vietnam, but countries worldwide are actively pursuing. Several nations are currently engaged in the process of innovation, and their approaches have yielded valuable insights for Vietnam's growth trajectory in the present circumstances.

3. International experience of green growth

The Green Growth Strategy was officially endorsed by the State Council of South Korea in September 2008. When discussing green growth, it is important to highlight Korea, a developed country that has implemented a unique development strategy that goes beyond relying just on resource and labor exploitation. In the 1970s, South Korea had a low per capita income of approximately \$100. However, through effective development strategies that focused on establishing a functional government institution and a transparent public administration system, South Korea has achieved significant success in its development process. However, the Korean economy not only achieves triumphs, but also encounters resource and environmental challenges during the transformation. The Korean economy is confronted with three challenges: (1) reliance on fossil fuels; (2) sluggish economic growth; and (3) climate change, which is part of the global sustainable development agenda involving numerous countries working towards the shared objective of reducing the environmental consequences of growth. South Korea has emerged as a frontrunner in developing a comprehensive policy framework that involves stakeholders to enhance the country's green growth model. More precisely, the green growth model was established at an early stage. Additional examples of financial organizations include governments and tax regimes. A financial support framework has been implemented, consisting of loan guarantees and tax rebates. Furthermore, within the realm of rapidly expanding and robust sectors that have environmental implications, South Korea is leading the way in establishing a business-friendly green growth initiative. This initiative allows companies to gradually transform their business models, develop environmentally-friendly technologies, adopt sustainable production practices, and foster the emergence of new industries that have a significant

impact on the economy. The three objectives they established comprise: The three main areas of focus are: (1) implementing green innovation in major industries, (2) undertaking industrial restructuring to promote the development of low-carbon practices, and (3) establishing green value chains. The source of this information is GGI (2015). The success of South Korea lies in its commitment to environmental stewardship, which has compelled the nation to increase awareness about its environmental challenges.

Specifically, the South Korean Government has implemented a range of measures, such as the "New Green Growth Agreement" stimulus package and the "Comprehensive Green Technology Research and Development Plan". The government also introduced the GREEN GROWTH framework law in January 2010. South Korea develops environmentally-friendly technologies such as new and renewable energy sources, low-carbon energy, advanced water management, LED technology applications, energy-efficient transportation systems, and high-tech green communities. The high-tech industry concentrates on sectors such as telecommunications integration, information technology, robotic applications, novel materials and nanotechnology, bio-pharmaceuticals, high technology medicine, and the high-value food business. Furthermore, the government has implemented initiatives to utilize biomass energy, establishing a prototype of "residential areas, educational institutions, and environmentally-friendly employment opportunities".

China, the greatest populous nation globally, has positioned its green growth ambitions as a primary driver of economic growth in recent years. China's energy policy focuses on several key aspects: emphasizing resource conservation and utilizing domestic resources, diversifying energy sources, fostering scientific and technological advancements in the energy sector, with a specific emphasis on environmental protection, and enhancing international collaboration for mutual benefit.

The Renewable Energy Act of China is regarded as the principal legislation governing the advancement of the renewable energy sector. The legislation has established various financial incentives, including a national fund dedicated to fostering the advancement of renewable energy, loans, tax benefits for renewable energy projects, and a mandate for grid operators to purchase resources from registered renewable energy producers. The convergence of investment and incentive policies has greatly aided significant progress in China's wind and solar development.

China is providing substantial subsidies to support the development of electric car manufacturers and battery makers. Beijing has contemplated implementing a schedule to prohibit vehicles powered by petrol, with the expectation that all vehicles, including passenger vehicles, will be exclusively electric by 2030.

According to the Chinese government, the new energy car market in the country is expected to reach 35 million units by 2025. Additionally, laws governing the use of new energy will start to be enforced from 2018. These restrictions mandate automobile manufacturers to annually sell a specific proportion of electric vehicles, either by producing them themselves or by purchasing "credits" from companies that manufacture electric vehicles.

China has established precise objectives to decrease carbon emissions, including a target of reducing NO emissions by 10% and increasing the capacity for fossil-fuel-free electricity generation. China has mostly utilized funds from public finances to support green

growth and reduce carbon emissions. China has made significant investments in enhancing energy efficiency through its "1000 Enterprises" initiative. This includes offering financial assistance to consumers who opt for energy-saving items and creating a specialized fund for the management of polluting trash.

Denmark has achieved economic growth and reduced its reliance on fossil fuels, therefore contributing to environmental preservation, thanks to its steadfast and adaptable energy strategy and its aggressive and inventive business community. In 1979, Denmark enacted the Heat and Natural Gas Supply Act, the Alternative Energy Subsidy Act, and concurrently advocated for energy conservation in families, fostering the advancement of environmentally sustainable solutions. Denmark's objective is to decrease its energy usage by 12% before 2020 and transition to a carbon-neutral economy by 2050. The implementation of the strategy involves the signing of the Energy Efficiency Agreement by the government and industry associations that represent 450 energy distribution businesses. Hence, energy businesses are obligated to conserve energy in the ultimate usage, adhering to sector-specific goals. Furthermore, the agreement has facilitated the production of about 1,200 DN (Decibel Noise) of environmentally friendly technologies. Denmark is presently executing its second energy agreement, aiming to achieve an extra \$2.7 billion in savings and augment its yearly investment in clean technology items by \$1.5 billion.

In 2021, the Danish government unveiled its "Energy Strategy 2050", which establishes a goal by 2050 to eliminate reliance on coal, oil, and gas, while also achieving a substantial reduction in greenhouse gas emissions. The strategy outlines a plan to decrease the energy industry's utilization of fossil fuels by 33% by 2020, in comparison to the levels observed in 2009. By 2023, the plan is to increase wind power capacity to 52% of total power generation capacity by constructing offshore wind turbines at Kriegers Flak Wind Farm, both on the coast and on the ground. Furthermore, the Strategy promotes the adoption of biomass power generation in urban areas, thereby enhancing the utilization of renewable energy and advancing energy efficiency.

To achieve efficient waste reduction goals, the Danish Government has put up the following proposed measures: (1) Enhanced incorporation of the circular economy into the European Union's eco-design regulations; (2) Obligatory utilization of environmentally-friendly labeled products for public cooking; (3) The utilization of the total cost of ownership in public procurement is obligatory; (4) Directives on decreasing the concentration of calcium in the drinking water supply; (5) Establishes a distinct framework for the preservation of the city's traditional stores.

To achieve this, the Danish Government has granted funding to facilitate the advancement of bio-gas production, infrastructure expansion, promotion of biogas utilization in industry, substitution of coal with biomass, exploration of additional offshore wind turbine locations, establishment of a 400 MW capacity to bolster the growth of small renewable energy technologies such as solar and wave energy, and financial support for projects demonstrating the efficacy of large thermal pumps for regional thermal power plants. Denmark's effective shift towards a society with little reliance on fossil fuels serves as a valuable example for several countries globally. This transition aids in the reduction of energy usage and promotes sustainable social development, assuring both economic progress and social well-being.

The Singaporean government has incorporated sustainable lifestyle as a key component of the 2021-2030 Green Plan, which aims to promote a low-emission strategy for economic development. This initiative is being implemented by five government agencies: the Ministry of Education, National Development, Environment and Sustainability, Transportation, and the Singapore Department of Commerce and Technology. The government has initiated the Green Singapore Plan 2030 in order to fulfill its pledge of achieving zero net emissions over the next ten years. The government of Singapore has implemented numerous green initiatives in the areas of building environment and information technology (IT) management, leveraging digital capabilities. These initiatives involve utilizing technology and data to promote sustainable objectives in the development, management, and operation of databases and IT infrastructure.

Due to its status as the financial hub of the area and the presence of numerous skyscrapers, the building management in Singapore has been leading the way in implementing its environmentally-friendly policy with the help of information technology. Both large firms and small and medium-sized enterprises (SMEs) in this sector have made substantial endeavors to achieve sustainability goals. Automation solutions, artificial intelligence (AI), the Internet of Things (IoT), and data analysis enable many buildings to implement monitoring systems, report emissions, and optimize resource utilization.

The building environmental management sector is a crucial component of Singapore's economy, contributing 10% to the national GDP and employing 30% of the workforce. The management and operation of buildings is a significant source of carbon emissions, accounting for about 20% of the nation's total carbon emissions, primarily due to building activities. Furthermore, the process of treating and producing clean water requires a significant amount of energy. Specifically, commercial buildings such as offices, hotels, and retail centers contribute approximately 55% of the overall water usage. Technologies enable the collecting of real-time data and automation of processes to maximize resources, enhance transparency, and save time and costs for businesses. Specifically, the incorporation of various digital technologies into building operations would enable building infrastructure management service providers and building owners/managers to effortlessly gather data and oversee performance via IoT sensor devices. Simultaneously, the use of AI and data analysis, along with the automation of manual business operations, enhances labor productivity and reduces expenses related to people, raw materials, and other utilities.

Therefore, the empirical evidence from many countries demonstrates that there are multiple strategies for enhancing green growth. These strategies may involve focusing on certain sectors of the economy or adopting an interdisciplinary strategy that encompasses resource efficiency, sustainable production, and consumption. The content of green growth primarily encompasses sustainable production and consumption, greenhouse gas emission reduction and climate change adaptation, greening business production through the development of green technology, fostering high-level industries, utilizing limited resources, implementing clean production measures, constructing sustainable infrastructure, and efficiently protecting, exploiting, and utilizing resources.

4. Lessons for Vietnam

The shift from a conventional economy to a sustainable green economy is the prevailing trajectory pursued by numerous countries worldwide. Vietnam is now establishing numerous objectives for the development of a sustainable economy, with a strong emphasis on attracting investments for projects that promote environmentally-friendly practices. In order to attract private investment in projects that are effective in terms of their impact on the environment, society, and governance, it is necessary to develop innovative ideas and solutions. The essay examines the green economic development practices of several nations, including Korea, China, Denmark, and Singapore. It then provides lessons for Vietnam's national plan on green growth and green economic development. Firstly, Vietnam should expedite the completion of its legislation regarding green growth and the establishment of a green economy. This should include a strong focus on enhancing the efficiency of implementing initiatives and policies related to green economic development. The Vietnamese Government may consult the South Korean Government's Framework Law on Green Growth. The execution of the National Strategy for Green Growth of Vietnam relies heavily on the enactment and enforcement of the appropriate legislation. This ensures that the development of the green economy is always accompanied by a sustainable and environmentally friendly approach. Given our previous deployments in Vietnam, it is imperative that we persist in constructing and expanding eco-industrial sites, cleaner production methods, and increasing investments in research and technology. The integration of production processes and resource sharing among firms in the eco-industrial park is what enables the enhancement of resource efficiency, waste reduction, and the optimization of raw material recycling in production. Advocating for urbanization that is intelligent, environmentally sustainable, and robust to climate change, while also prioritizing economic and ecological efficiency. This includes enabling the growth of public transportation, enhancing attractiveness and competitiveness, and promoting environmentally friendly practices that save travel time.

Furthermore, it is imperative for the government to provide additional resources towards energy development, while also implementing measures to curtail the reliance on fossil fuels. This may be achieved by transitioning to sustainable and eco-friendly sources of energy, as well as adopting energy-conservation regulations, all of which will contribute to mitigating environmental pollution. In order to achieve the objective of promoting sustainable economic growth, the government should prioritize three fundamental components: environmental preservation, carbon emissions reduction, and the advancement of renewable energy sources. Social companies are progressively striving to achieve economic, social, and environmental advantages, thereby satisfying numerous criteria for sustainable development that are crucial to the progress of a nation. National circumstances necessitate the adaptation of policies that foster green innovation. The main components of the green innovation policy consist of enhancing the local ability to assimilate foreign technology and adjust to market demands, as well as fostering greater competition in the energy industry.

Furthermore, drawing from the success of nations that have made remarkable strides in green growth and green economic development, it is imperative to engage in interaction and collaboration with the international community. Vietnam can leverage its international

relations to receive assistance in scientific and technological matters, as well as to attract investment for green growth initiatives such as the development of green industrial parks, automation, transportation infrastructure, and clean energy. This support will help address climate change issues and improve the overall quality of living environment for the people. Aside from constructing legal systems and providing support for policies and institutional frameworks, it is imperative to implement synchronous solutions. These solutions should encompass awareness-raising communications, altering people's attitudes, prioritizing consumer-oriented approaches, promoting sustainable green production, and formulating targeted programs and action plans for green growth and sustainable development.

In addition, Vietnam should expedite its progress on implementing a carbon price policy in response to the growing green economy movement. Due to Vietnam's status as a major exporter, it serves as a primary market for a wide range of products and goods to industrialized nations. Therefore, if the United States, Europe, or other developed nations have successfully offset their carbon emissions and Vietnam has not, it would be a disadvantage for Vietnam. In Vietnam, the concept of carbon tax is relatively recent and serves as a significant instrument in promoting the circular economy. Implementing carbon taxes is a highly effective measure for lowering carbon dioxide emissions within each individual country. Simultaneously, the implementation of carbon taxes leads to a rise in state budget income, which can be utilized by the government to reinvest in safeguarding and enhancing environmental quality, so ensuring the achievement of green and low-carbon growth objectives.

5. Conclusion

Vietnam, given its potential and economic position in the global supply chain, has a significant opportunity for green growth. This opportunity will allow Vietnam to progress, catch up, advance, lead, and drive economic, social, and environmental development. Based on global expertise, Vietnam should recognize green growth as a crucial strategy for enhancing the restructuring of its economy by innovating its growth model, enhancing its competitiveness and ability to withstand external disruptions, and directly contributing to the reduction of greenhouse gas emissions towards achieving a carbon-neutral economy in the future. Green growth should be prioritized the needs and well-being of humans, relying on up-to-date institutions and governance, cutting-edge science and technology, highly skilled workforce, and investments in advanced technology, digital transformation, and sustainable infrastructure. Additionally, it should encourage increased involvement of private investments in driving the transition towards sustainability. To enhance Vietnam's green growth policy in the future, it is important to focus on several key areas. Firstly, there should be a shift in the growth model from focusing on quantity to focusing on quality. Secondly, there should be efforts to promote the use of environmentally friendly technologies by implementing mechanisms that encourage their adoption. Thirdly, it is crucial to establish a market for green public procurement and develop a green value chain. Lastly, mobilizing both domestic and foreign resources and implementing financial mechanisms that promote green growth should be prioritized.

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