

# ***The Transformation of Economic Growth Pattern and Sustainable Development***

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**Abstract:** The research background of this paper is the limitations of traditional economic growth models and emphasizes the necessity of transitioning towards sustainable development. The main research theme is to explore the differences between traditional economic growth models and sustainable development models through comparing and analyzing their advantages, disadvantages, and impacts. The research methodology mainly relies on literature review and comparative analysis to support the arguments and conclusions. This paper findings indicate that traditional economic growth models focus on increasing national income and GDP but neglect the issues of resource consumption and environmental pollution. Sustainable development models emphasize the efficient use of resources and environmental protection by reducing reliance on fossil fuels, improving energy efficiency, and preserving the environment. The research conclusion is that the transformation towards sustainable development is a necessary measure to address the limitations of traditional economic growth, and it requires collaborative efforts from governments, businesses, academia, and society to overcome challenges and seize opportunities for sustainable development.

**Keywords:** transform the economic growth model, sustainable development, green economic

## **1. Introduction**

The traditional economic growth is measured by the growth of national income and Gross Domestic Product it explains the development of national income or output by finding the conditions of achieving stable economic growth and the factors affecting economic growth. But the economic growth under this calculation system is not good for development in the long run. If a farmer in the forest sells the entire amount of the forest and earns money, then use these money to build a house. For the traditional economic growth pattern, the farmer not only produced wood product, but also invested in building a house. Both have boosted GDP growth. However, the economic has only grown in the short term, large areas of the forest have now disappeared, and the farmer have lost the land resources. The national income calculation system and GDP fail to account for the consumption or depletion of natural resources entirely. This oversight leads people to unwittingly believe in the limitless and never-ending nature of these resources, whereas the truth is quite contrary [1].

the traditional economic growth model led to a debate between the limits economic growth theory and the infinite economic growth theory, the traditional economic pattern characterized by high speed, high pollution, and high consumption. To overcome the shortcomings of this traditional model,

numerous scholars have engaged in fruitful discussions on future economic growth models. One such model is the theory of balanced growth. The environmental pollution caused by traditional economic growth methods may lead to the collapse of human society. There are three options for economic growth: unrestricted growth, self-imposed limits, and environmental limits. However, in reality, only the latter two options are effective [2].

Traditional economic growth is mostly intensive growth, its basic feature always rely on putting more input of production factors to enlarge the scale of production, and attempt to achieve the economic growth. if the economy achieves economic growth through this approach, there is a high level of consumption, elevated costs, challenges in enhancing product quality, and limited economic benefits.

## 2. Research Gap

The research gap in this area pertains to the need for a better understanding of the pivotal role that sustainability and quality play in economic growth. While past instances have shown that nations solely prioritizing input-driven growth may experience rapid short-term expansion, long-term economic development depends on sustainable and productive growth. This emphasizes the necessity for further investigation into the factors and approaches that contribute to attaining sustainable and high-quality economic growth, taking into account both historical and contemporary contexts.

## 3. Green Economic Pattern

Renewable energy sources have several economic advantages, including decrease dependence on the use of fossil fuels, make the greenhouse gas emissions be reduced, and improved energy security. Besides, the utilization of renewable energy sources can play a significant role in fostering both social and economic development. Especially in underserved rural areas with limited access to centralized energy systems, renewable energy can be particularly beneficial. These regions, often lacking large-scale infrastructure, can greatly benefit from the provision of modern energy sources such as improved lighting, heating, and cooling. This, in turn, can lead to improved education and increased school attendance rates. The renewable energy industry faces several challenges in terms of cost and scalability. One challenge is the high upfront capital costs of renewable energy technologies, which can make them less competitive than traditional fossil fuel-based energy sources.

Additionally, as renewable energy continues to rapidly expand, it can amplify the challenges associated with market failures and imperfections. Factors such as price volatility and declining average prices can discourage potential investors or necessitate a higher level of risk for investments compared to traditional markets. This places additional pressure on the reserve margin and increases the likelihood of scarcity events occurring more frequently. Finally, the scalability of renewable energy technologies is limited by the availability of natural resources, such as wind and solar radiation, which can vary significantly over time and across regions [3].

Low carbon refers to a reduction in the number of carbon dioxide and other greenhouse gas emissions that are released into the atmosphere. The advantages of low carbon include mitigating climate change, reducing air pollution, improving public health, and promoting energy security. By transitioning to a low carbon economy, we can reduce our dependence on fossil fuels, which are finite resources and subject to price volatility. Low carbon technologies, such as renewable energy sources like solar and wind power, can also create new jobs and stimulate economic growth. Additionally, low carbon practices can lead to cost savings for businesses and households through energy efficiency measures and reduced energy consumption [4].

the recycling economy is a fundamental means of environmental protection and reducing pollution, and it is an essential way to achieve sustainable development. By following the principles of "Reduce,

Reuse, Recycle," The concept of a recycling economy can revolutionize the entire economic system by minimizing or eliminating waste in the production and consumption processes. This effectively resolves the inherent conflicts between environmental preservation and economic development, achieving a harmonious balance between the two. The recycling economy serves as a prime example of sustainable development, as it not only utilizes waste but also protects the environment. Moreover, it can serve as a crucial component of the economic cycle and a catalyst for new economic growth opportunities. Therefore, the recycling economy can contribute to economic, social, and ecological sustainability by promoting resource efficiency, reducing waste and pollution, and creating new economic opportunities [5].

#### 4. The Importance of Sustainability Development

Due to the rapid development of industrialization and urbanization, most countries are facing serious environmental pollution problems. A large number of factories continue to discharge harmful substances, which leads to severe haze weather, which has a serious impact on people's health and quality of life. Environmental pollution also destroys the balance and stability of the ecosystem. Soil pollution leads to crop yield reduction and ecosystem degradation, thus greatly reducing agricultural output. Water pollution causes damage to water ecosystems, affects the survival of fish and other aquatic life, and reduces the production of fisheries

A striking practical example is social inequality in the United States. While the United States boasts significant wealth, it also grapples with profound social disparities. Over the past few decades, the divide between the affluent and the underprivileged in the country has significantly deepened. The top 1% of the population owns most of the wealth, while the income of the middle class and the bottom has grown relatively slowly. This unequal distribution leads to social division and instability. Social inequality can also hinder sustainable economic growth. When those at the bottom do not have access to education and training opportunities, their creativity and potential cannot be fully realized. This will limit the innovation and competitiveness of the economy and hinder the sustainable development of the economy.

Many parts of the world are facing water shortages. Climate change, over-pumping of groundwater, pollution and unsustainable business activities are all contributing to this problem. This poses huge challenges to people's lives, agriculture and ecosystems.

In 2015, all United Nations member states unanimously adopted the Sustainable Development Goals (SDGs), comprising 17 objectives. These goals serve as a collective effort to tackle pressing global issues, including poverty, inequality, climate change, environmental degradation, and peace and justice. By outlining a comprehensive roadmap for action, the SDGs aim to create a more sustainable future by 2030. They encompass a wide range of ambitions, such as eradicating poverty, ensuring inclusive and equitable education, promoting gender equality, reducing inequalities, and combating climate change. Each goal is accompanied by specific targets and indicators, allowing for measurable progress. There is a close correlation between economic growth and sustainable development. Traditionally, economic growth is often seen as a key indicator of a country's prosperity and development, and it is usually measured as total growth in domestic production. Over time, however, there has been a growing awareness that the pursuit of economic growth alone can have negative environmental and social impacts that threaten future sustainability [6].

Economic growth is usually accompanied by a large amount of resource consumption and environmental damage. Sustainable development requires sustainable practices in resource use and environmental protection in order to reduce dependence on natural resources and reduce environmental pollution.

The concept of sustainable development emphasizes the balance between economic, social and environmental aspects. It seeks to meet the needs of the present without compromising the ability of

future generations to meet their needs. Therefore, economic growth must be combined with environmental protection, social justice and resource management to achieve sustainable development.

## 5. The Challenge of Change

The long-term economic development performance of a country or region depends not only on the speed of economic growth in a certain period of time, but more importantly on the sustainability and quality of economic growth. The precedent in the history of world economic development shows that countries that rely solely on input of production factors to achieve economic expansion and have no substantial growth in productivity, may achieve rapid growth in a certain period of time, but in the end, it has proved to be unsustainable [7].

There will be some difficulties in the transformation of economic growth mode. Some stakeholders may resist a shift in the economic growth model because they may have benefited from the current model of economic growth. For example, the traditional energy industry might resist switching to renewable because of the impact this could have on its business productions. This stakeholder resistance can lead to challenges in policy development and implementation.

Transforming economic growth patterns also require new technologies and knowledge to achieve sustainable development goals. However, these new technologies and knowledge may not be mature or widespread enough, making the transition more difficult. And People's cultural and social attitudes need to change to accept and support the concept of sustainable development. This change in cultural and social attitudes may take time and education for people to realize the importance of sustainable development. And this kind of transform will likely require significant amounts of capital and investment to support new sustainable development projects and industries. However, insufficient funding and investment can be an obstacle to change, especially for developing countries.

The transformation also requires appropriate policy and legal frameworks to support and promote sustainable development. Sometimes, however, policy and legal frameworks may be inadequate or lacking in enforcement, making the transition difficult to implement.

Last but not least, A shift in economic growth patterns need a change in people's cultural and social attitudes to accept and support the idea of sustainable development. This change in cultural and social attitudes may take time and education for people to realize the importance of sustainable development.

Overcoming these obstacles requires the cooperation and efforts of government, business, academia and all sectors of society. Governments can develop policies and legal frameworks that support sustainable development and provide financial and investment support. Companies can adopt sustainable business models and innovation to drive the transformation of economic growth models. Academia can provide technical and knowledge support to drive innovation and research and development. All sectors of society can promote cultural and social change through education and publicity. Work together to pursue the transformation of economic growth patterns.

## 6. The Opportunity of Change

The transition to a green economy brings many opportunities. This transition can help reduce over-exploitation and pollution of natural resources and reduce environmental risks. It promotes energy conservation and resource efficiency. By adopting clean energy, promoting circular economy and improving the production process, we can reduce the consumption of energy and resources, reduce production costs and improve the competitiveness of enterprises. By promoting sustainable development and environmental protection, we can reduce the occurrence of environmental problems such as climate change, air and water pollution, and protect the stability and sustainability of ecosystems. It also can promote the development of emerging industries and promote economic

growth. The development of renewable energy, clean technology, environmental protection products and other fields will drive the development of related industrial chains, increase investment and consumption demand, and promote economic vitality.

Furthermore, the changing in the mode of economic growth will promote the development of renewable energy, energy efficiency, sustainable transportation, environmental protection and other fields, thus creating a large number of jobs. For example, the renewable energy industry requires a large number of engineers, technicians, and operations personnel, this driving employment growth.

The development of green economy requires a large number of technical and human resources, for example, the renewable energy industry, environmental protection technology and service fields need a large number of professionals and skilled workers, this brings new job opportunities. For example, With the increasing demand for renewable energy, the renewable energy industry such as solar, wind, water energy has developed rapidly. These industries involve design, manufacturing, installation, operation and management, providing a large number of employment opportunities. Sustainable construction is an important area of the green economy, requiring architects, designers, engineers, construction personnel and other professionals, so the development of sustainable construction industry has brought new job opportunities in the construction industry. The implementation of circular economy also provides many employment opportunities, including waste recycle workers, waste treatment workers, processing and utilization of renewable resources. The development of green economy requires a large number of environmental services, such as environmental monitoring, environmental assessment, environmental consultation and environmental governance. These environmental service industries provide employment opportunities for many professionals. The development of green economy also involves agriculture and rural development, including organic agriculture, ecological agriculture, rural tourism, etc. These areas provide new employment opportunities for farmers and rural residents.

And it can help enterprises enhance brand value and image. Consumers are increasingly concerned about the environment and sustainability and are choosing environmentally friendly products and services. If enterprises can actively participate in the green economy and provide environmentally friendly products and services, it will increase consumer recognition and loyalty. Investors will also become increasingly aware of the potential and returns of the green economy, so investing in green industries has become a trend. This provides financial support and market impetus for the development of green economy [8-10].

## 7. Comparison

- the way of resources utilization: The traditional economic growth mode usually obtains and utilizes resources in the way of high energy consumption and high emission, which causes serious pollution and damage to the environment. The green economy advocates the way to save resources and use resources efficiently to reduce the environmental burden.
- Environmental impact: Traditional economic growth models often ignore the impact of the environment, resulting in air pollution, soil erosion, biodiversity loss and other problems. The green economy focuses on environmental protection and achieves sustainable development by reducing pollution and protecting the ecosystem.
- Economic structure: The traditional economic growth model is dominated by heavy industry and resource development, and economic growth mainly relies on expanding scale and increasing investment. The green economy advocates the development of clean energy, environmental protection industry and sustainable consumption and other fields to achieve the transformation and upgrading of economic structure.



- Long-term benefits: Traditional economic growth models tend to pursue short-term economic benefits, while ignoring long-term sustainable development. Green economy focuses on long-term benefits, and achieves long-term economic stability and sustainable development through environmental protection and sustainable use of resources.

## 8. Conclusion

In conclusion, the traditional economic growth model has led to environmental degradation, resource depletion, and unstable economic structure. In contrast, the green economy offers a more sustainable and balanced approach to economic development. It promotes renewable energy, low-carbon and recycling, which not only reduce environmental impact but also create new job opportunities and economic growth. The transition to a green economy faces challenges such as stakeholder resistance, lack of technology and funding, and the need for policy support. However, it also brings opportunities for resource efficiency, environmental protection, and the development of emerging industries. The shift towards a green economy requires cooperation and efforts from governments, businesses, academia, and society as a whole. By embracing sustainable development, we can achieve economic prosperity, social equity, and environmental protection for present and future generations.

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