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SUSTAINABILITY IN A GREEN ECONOMY: A LITERATURE REVIEW OF STRATEGIES AND IMPLEMENTATION

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Abstract

The green economy aims to harmonise economic growth with environmental protection, by adopting environmentally friendly and sustainable approaches. The study found that key strategies that support a green economy include the use of renewable energy, improved energy efficiency, better waste management and sustainable agricultural practices. In addition, government regulatory support and incentives, as well as the role of technology and innovation, are critical in overcoming implementation challenges. While green economy implementation faces barriers such as high initial costs and resistance from some stakeholders, the long-term benefits are far more significant. These benefits include job creation, improved quality of life, and climate change mitigation. Therefore, deep collaboration between the government, private sector and communities is required to achieve comprehensive sustainability. The research concludes that with an integrated and participatory approach, the transition to a green economy can be successfully realised, making sustainable development the foundation of future economic growth.

Keywords: Sustainability, Green Economy, Strategy, Implementation.

Introduction

In recent decades, the world has witnessed significant impacts from climate change and environmental degradation due to unsustainable economic activities. Rising global temperatures, air and water pollution, and declining biodiversity are some of the environmental challenges that urgently need to be addressed. This environmental crisis calls for fundamental changes in the way we produce and consume goods and services (Shah & Das, 2024) .

Environmental crises, including air pollution, climate change and ecosystem degradation, have a significant impact on human health. Air pollution, for example, has been shown to cause various respiratory diseases such as asthma, bronchitis and chronic obstructive pulmonary disease (COPD). In addition, long-term exposure to pollutant particles can increase the risk of cardiovascular diseases, including heart attack and stroke. Children, the elderly, and individuals with pre-existing health conditions are more susceptible to the adverse effects of air pollution. In cities with high pollution levels, premature mortality and chronic disease rates tend to increase dramatically, demonstrating the urgency to address this issue (Vargas-Hernández, 2022) .

Climate change also worsens human health by increasing the frequency and intensity of natural disasters such as floods, heat waves and storms. Extreme heat waves can cause heat stroke and dehydration, especially among the elderly and those with chronic health conditions. In addition, changes in rainfall and temperature patterns can affect the distribution of infectious diseases such as malaria, dengue fever, and waterborne diseases such as cholera. Population displacement due to natural disasters can also cause humanitarian crises, increasing the risk of malnutrition, infectious diseases and mental health problems (Castellet-Viciano et al., 2023) . Therefore, addressing environmental crises is not only important for the preservation of ecosystems but also crucial for maintaining and improving human health around the world.

Green economy has emerged as an alternative paradigm that prioritises ecological sustainability without neglecting economic growth and social justice. The concept emphasises the efficient use of natural resources, the reduction of carbon emissions, and the overall improvement of the quality of human life. However, the transition to a green economy demands the implementation of appropriate strategies and policies as well as cross-sector collaboration (Martin, 2024) .

So far, various strategies have been proposed and implemented to facilitate this transition, including the use of renewable energy, sustainable agricultural practices, effective waste management, and environmentally considerate urban design. However, the implementation of these strategies still faces various challenges, including technological gaps, funding limitations, and regulatory barriers (Schumacher & Green, 2022) .

A comprehensive literature review is needed to identify the most effective strategies and key challenges in green economy implementation. By examining various policies and practices that have been implemented in different countries and sectors, this research aims to provide deeper insights into how green economy approaches can be effectively integrated to achieve long-term sustainability.

Research Methods

The study in this research uses the literature method. The literature research method is an approach used to collect, analyse, and interpret information obtained from various existing sources, such as books, scientific journals, research reports, articles, and other academic sources. This method does not involve experimentation or primary data collection, but rather focuses on critically reviewing and synthesising published knowledge in a particular field (Firman ;, 2018) (Suyitno, 2021) . Literature research is often used to summarise previous findings, identify trends or patterns, discover gaps in existing knowledge, and establish a strong theoretical basis for further research. This process usually begins with a systematic literature search, followed by

evaluation and selection of relevant sources and in-depth analysis to produce meaningful and reliable conclusions (Jelahut ., 2022)

Results and Discussion

Green Economy and its Contribution to Sustainability

Green economy is a concept of economic development that aims to improve human well-being and social equality, while reducing environmental risks and natural resource scarcity. It emphasises the sustainable use of natural resources, energy efficiency, and the reduction of carbon emissions and waste. It also encourages innovation in environmentally friendly technologies and supports ecologically responsible business practices. By focusing on inclusive and long-term development, the concept seeks to change the traditional economic paradigm that often ignores environmental impacts in favour of financial gain (Haar, 2024) .

The green economy's main contribution to sustainability lies in its ability to reduce the carbon footprint and other negative impacts on the environment. For example, by adopting renewable energy sources such as solar, wind and biomass power, the green economy can help lower greenhouse gas emissions that contribute to global warming and climate change. In addition, the use of energy efficiency technologies in industrial processes, buildings and transport can significantly reduce energy and natural resource consumption. This not only reduces operating costs but also reduces pressure on the environment, ensuring that natural resources remain available for future generations (Iman, 2023) .

In addition to reducing negative environmental impacts, the green economy also plays an important role in creating more sustainable and inclusive employment. Sectors such as renewable energy, organic agriculture, waste management and nature conservation offer diverse new employment opportunities. Jobs in these sectors tend to be more secure in the long term and provide more equitable social and economic benefits compared to jobs in traditional industrial sectors that may be vulnerable to market fluctuations and environmental policies. By supporting education and training in green skills, the green economy can upskill the workforce and improve overall economic propectivity (Zhang & Zhao, 2023) .

Adoption of a green economy can also strengthen the resilience of economies and societies to the impacts of climate change and environmental disasters. Investments in green infrastructure, such as more efficient water management systems, sustainable cities and climate-adaptive agricultural solutions, can help reduce vulnerability to natural disasters. For example, environmentally friendly agricultural strategies can improve food security by preserving soil fertility and biodiversity. Thus, a green economy not only contributes to environmental stewardship but also supports social and economic stability, ensuring that societies can develop sustainably into the future (Hernández-Chover et al., 2023) .

Strategies Applied in the Green Economy

One of the key strategies in the implementation of a green economy is the shift from the use of fossil fuels to renewable energy sources such as solar, wind, hydro and biomass. Renewable energy not only reduces carbon emissions that contribute to climate change, but also offers energy solutions that are more sustainable and less vulnerable to fluctuations in global energy market prices. Investments in renewable energy infrastructure, such as solar and wind power plants, as well as incentives for households and businesses that adopt these technologies, are important steps in this strategy (Zhang & Zhao, 2023) .

Another crucial strategy in the green economy is the improvement of energy efficiency and waste minimisation in all sectors of the economy. This can include the adoption of more efficient technologies in industrial production processes, the use of energy-efficient appliances in homes and offices, and better waste management through recycling and composting. Policies to encourage more sustainable product design, such as the use of materials that are more recyclable and have a longer lifespan, are also part of this strategy. By reducing the amount of waste and utilising natural resources more efficiently, the green economy helps reduce pressure on the environment (Haar, 2024) .

Developing green infrastructure is another vital strategy in the transition to a green economy. This includes the construction of energy-efficient buildings, the implementation of environmentally friendly transport systems such as electric vehicles and public transport, and the development of urban green spaces that can improve air quality and provide habitats for biodiversity. Green infrastructure projects not only reduce environmental impacts but also improve people's quality of life, for example by providing better access to sustainable transport and healthy recreational spaces (Sheng et al., 2024) .

Preparing the workforce for careers in green sectors is another important aspect of a green economy strategy. This involves developing education and training programmes that focus on technical skills and knowledge of sustainable practices, such as installation and maintenance of renewable energy technologies, organic agriculture, and environmental management and conservation. By upskilling the workforce in these areas, the green economy opens up new job opportunities that are more stable and sustainable, and allows businesses to better innovate and adapt to evolving market demands (Schnebel, 2021) .

Government policies play an important role in encouraging the adoption of a green economy. This can include setting strict regulations on pollution and carbon emissions, providing tax incentives for companies that implement clean technologies, and funding for research and development in renewable energy and other green technologies. Governments can also facilitate partnerships between the private sector,

academia and non-governmental organisations to support innovation and the wider adoption of sustainable praxis (Ozili, 2023) . These policies not only encourage companies to adopt more environmentally friendly practices but also provide a strong signal to the market that a green economy direction is a profitable and viable option.

Implementation of Green Strategies in Various Economic Sectors

The implementation of green strategies in various sectors of the economy has become a global urgency amid growing awareness of climate change and environmental sustainability. Green strategies encompass a wide range of actions and policies that focus on reducing environmental impacts and improving the efficiency and sustainability of natural resources. In the energy sector, the adoption of renewable energy such as solar, wind and biomass is key. Governments and energy companies are encouraging the transition from fossil fuels to more environmentally friendly energy sources to reduce carbon emissions and pollution (Kadioglu & Gurbuz ., 2024)

In the agriculture sector, green strategies involve sustainable farming practices that are more efficient in the use of water and soil, and reduce the use of environmentally harmful chemical pesticides and fertilisers. Sensor- and data-driven agricultural technologies, such as precision irrigation and crop health monitoring, also play an important role in optimising agricultural production while maintaining ecosystem balance. The establishment of organic farms and the extensification of protected forests also support these efforts by maintaining biodiversity and reducing the greenhouse effect (Striani ., 2020)

In the manufacturing industry, the implementation of green strategies is geared towards energy efficiency and better waste management. Initiation of production processes using recycled and eco-friendly materials, and reduction of industrial emissions are vital measures. The concept of circular economy, which suggests recycling and reuse of materials, is being encouraged for industries to reduce their carbon footprint. The implementation of green certifications on manufactured products is also increasing consumer awareness of the importance of sustainability (Wibowo, 2023) .

The transport sector is no less important in the implementation of green strategies. Investments in public transport infrastructure, such as electric trains and buses, also encourage a reduction in the use of private vehicles that cause high emissions. In addition, the promotion of the use of electric and hybrid vehicles, as well as the development of an extensive charging network, is increasing the adoption of green vehicles. Regulations and tax incentives for the purchase of low-emission vehicles also support this shift (Mostafazadeh et al., 2021) .

Finally, the financial sector also has a role to play in encouraging sustainable business practices. Green investments and sustainable financial products, such as green bonds, are expected to provide the necessary funds to implement environmentally

friendly projects. projects. Banks and other financial institutions are beginning to assess climate risk in their investment portfolios and encourage companies to adopt more sustainable business practices. In conclusion, the implementation of green strategies in various sectors of the economy requires a joint commitment from government, industry and society to achieve environmental and economic sustainability in the future.

As such, the implementation of green strategies across various sectors of the economy is a crucial step towards meeting the challenges of climate change and ensuring environmental sustainability. Each sector, from energy, agriculture, manufacturing, transport, to finance, has its own role and responsibility in reducing negative impacts on the environment. A transition towards environmentally friendly practices, the use of sustainable technologies, and collaboration between government, industry, and society are necessary to create a greener economy. With an integrated and inclusive approach, we can achieve sustainability goals that not only benefit the environment but also support long-term economic growth.

Conclusion

Sustainability in the green economy is a concept that integrates economic growth with environmental protection. Based on literature studies, various strategies have been identified to support the implementation of a green economy, such as the use of renewable energy sources, improved energy efficiency, better waste management, and the adoption of sustainable agricultural practices. In addition, the importance of supportive regulations and incentives from the government were also emphasised in the literature as key factors to encourage companies and individuals to adopt green practices. Support from technology and innovation is also seen as an important element in overcoming the challenges and hurdles in implementing a green economy.

Despite the many challenges faced in implementing a green economy, such as high initial costs and resistance from various stakeholders, the literature shows that the long-term benefits of a green economy are far greater, including the creation of new jobs, improved quality of life, and climate change mitigation. Therefore, close co-operation between the government, private sector, and society is required to achieve sustainability goals. With a holistic and inclusive approach, the transition to a green economy can be realised, making sustainable development the basis for future economic growth.

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