Effects of green policies on sustainability of local economies in Africa

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**ABSTRACT**

This article conducts a thorough analysis of the potential impacts of environmentally friendly policies on the long-term viability of renewable energy and waste management policies on the economics of local regions within the African Continental Free Trade Area. The research examines how these policies intersect with the development of intra-African enterprise and local employment rates. The study employs a qualitative methodology, utilising an exploratory research design to investigate African economic performance metrics. It also uses qualitative data to gain a deeper understanding of the subtle implications of policies. The research evaluates the economic consequences of these policies in African contexts by utilising a range of secondary sources, such as governmental reports, peer-reviewed studies, and policy evaluations. Initial results indicate that although green policies have resulted in substantial environmental advantages, their influence on intra-African economics is intricate and diverse. The report asserts that comprehending these dynamics is crucial for policymakers, practitioners, and researchers who are interested in fostering sustainable and inclusive economic growth in Africa. The study suggests the adoption of environmentally friendly policies that take into account the economic conditions inside Africa and aim to achieve a local economy that is both environmentally sustainable and inclusive.

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**Introduction**

The study aimed to evaluate the impact of green policies on the long-term viability of local economies in Africa. Mohsin et al. (2022) define the green economy as the implementation of sustainable development by promoting public and private investment in infrastructure that fosters social and environmental sustainability. The green economy is important due to its promotion of low-carbon, sustainable economic growth and its assurance that natural resources will persist in supporting human well-being. The adoption of the “green economy” arose from the recognition that the detrimental consequences of climate change and environmental degradation can only be alleviated by coordinated global economic transformations (Fernandes et al., 2021). The 2012 United Nations conference in Rio de Janeiro emphasised the importance of transitioning to a green economy. The conference’s closing statement acknowledged that each nation has the freedom to determine their own path towards this transition, taking into account their national plans, strategies, and development priorities.

The 2012 United Nations Conference on Sustainable Development selected “green economy in the context of sustainable development and poverty eradication” as one of its focal points to advocate for green economic projects as means of recovering from the 2008 financial crisis (Silver et al., 2015). The Green Economy idea advocates for a comprehensive transition to technologies that prioritise resources and the environment. This transition aims to reduce emissions, mitigate the impacts of climate change, and address environmental degradation and resource depletion (Nebuloni & van der Ree, 2018). The Green Economy (GE), as defined by the United Nations Environment Programme (UNEP), is an economic system that simultaneously enhances social equity and human well-being, while mitigating environmental risks and addressing ecological scarcities. This seeks to improve the means of attaining sustainable development during a time of notable socioeconomic and environmental transformation.

It is important to emphasise that the green economy should exist alongside multiple conceptions of sustainable development rather than existing independently. Gupta (2020) demonstrated in the Economics of Ecosystem and Biodiversity study that the green...
economy exhibits a clear conceptual hierarchy and consistency, as illustrated in Figure 1, with sustainable development being a key component. Despite the emphasis on economic growth in the "Green New Deals," the green economy has not gained sufficient popular support, as noted by Barbier (2015). The Sustainable Development Goals (SDGs) have the potential to impact the expansion of the green economy since they can bring attention to and promote the adoption of environmentally-friendly activities. Stevens and Kanie (2016) state that the shared goals and action plans of the SDGs provide the opportunity to create a green economy at the national level.

Figure 1: The hierarchy of green economy concepts; Source: ten Brink et al. (2012).

The implementation of green economy projects can lead to the achievement of sustainable development. The primary catalysts for job creation and economic growth are investments, both public and private, that mitigate carbon emissions and pollution, halt the decline of biodiversity, maintain a harmonious balance in ecosystem services, and enhance energy and resource efficiency. As to the UNEP and UNECA (2015) report, it is recommended to encourage and facilitate these investments by specific public expenditure, policy modifications, and regulatory adaptations. Undoubtedly, this concept presents an opportunity for a novel economic growth paradigm that promotes the well-being of ecological systems and contributes to the alleviation of poverty. Africa heavily relies on natural resources as a significant source of sustenance.

What does this mean for the continent, especially considering its endeavours to establish an economy that is both resource-efficient and sustainable?

Szyja (2016) argues that the utilisation of these resources played a role in fostering increased economic growth. Notwithstanding the purported economic accomplishments, African nations continue to grapple with enduring poverty, underemployment, and unemployment. The potential for future economic growth and development is at risk due to environmental risks such as desertification, resource scarcity, environmental degradation, and climate change (Dutta, 2016). In order to sustain the millions of Africans who rely on these resources for their daily life, it is crucial for the natural capital to meet the increasing demand for food, water, and health care, while also addressing poverty and promoting prosperous economic livelihoods.

How might Africa's natural resources contribute to the prosperity of its population in a constructive and efficient manner? What challenges do African nations need to overcome in order to transition to a green economy, and how might these challenges be addressed?

This paper aimed to address these inquiries, stimulating further discussion and contributing to the existing knowledge base. The study will investigate the potential influence of environmental rules on the feasibility of renewable energy sources and the economic consequences of waste management legislation. The discussion will focus on the constraints that hinder the sustainability of green economy efforts in local African economies. The study aims to assess the barriers hindering the local economies in Africa from transitioning to a green economy.

Literature Review

Theoretical and Conceptual Background

Green economy and policies

A "Decoupling Effect," characterized by dwindling natural resources and rising human demand, has been generated as a result of worsening environmental issues that are putting human civilization in jeopardy (Ferguson, 2015). In order to solve these issues, the international society accepted the idea of the "green economy" (Priefer, Jörissen, and Frör, 2017) as a crucial tactic to reversing trends and ensuring human safety. The "green economy" was adopted because only global, collective economic improvements might mitigate climate change and environmental deterioration (Dutta, 2016). The 2012 UN summit in Rio de Janeiro focused on greening the economy. The conference's final report indicated each country could choose its own green economy path based on plans, strategies, and growth goals. 2012 UN Conference on Sustainable Development theme: "Green economy in the context of sustainable development and poverty eradication". This supported green economic ventures to recover from the 2008 financial crisis (Smit and
The phrase "green economy" was initially used in a 1989 study that suggested economics may help poor nations manage environmental and natural resource depletions, and resource depletion. Cato (2009) defines "green" as a political philosophy that promotes democratisation and grassroots action to achieve environmental goals. Since 2008, the phrase has focused on policy responses to global crises. Most emerging and industrialised nations have adopted this idea to address contemporary economic difficulties, with verified successes (Wilson et al., 2015). UN and other non-governmental organisations have agreed to support green economics. No one concept of the green economy exists owing to political controversy (Shmelev, 2016). Economic security is part of this political discourse, which can be examined through a radical, strong, and principled understanding of sustainability to define a green political economy that supports normatively compelling and policy relevant sustainable development (Shmelev, 2016).

Regardless of how the notion is defined, Trushkina (2022) described it as a radical agenda that confronts the current power system and its deep and skewed perspective on future profit maximization. Green economy is viewed as "an extension of the traditional economic approach to include, among others, distributional equity, with environmental quality objective," according to Phahle, Pachauri, and Steinbacher (2016) (Merino-Saum et al., 2020). For the benefit of all humanities, non-human species, nature, and its system, the concept was accepted as a creator of an economic environment where social and environmental justice flourishes (Gunay, Kurtishi-Kastrati, and Krsteska, 2022). From this, the green economy concept denotes investments in economic sectors that support the Earth's natural resources and mitigate environmental risks, such as renewable energy, low-carbon transportation, buildings that are energy-efficient, clean technologies, enhanced waste management, upgraded freshwater provision, and sustainable agriculture, forestry, and fisheries (Gunay, Kurtishi-Kastrati, and Krsteska, 2022). This requires clearly defined international policy development, national policy reforms, and market infrastructure development. Globally, the number of policies promoting the green economy has increased significantly.

The use of economic tools to encourage sustainable activities and investment is one of these strategies, as are environmental fiscal adjustments, environmental legislation, standards, and certification programs, compensation for ecosystem services, coordinated natural resource management, and payment for ecosystem services. Additionally, a way to a more socially egalitarian and environmentally sustainable growth, particularly in developing regions, has been emphasized by a more informed policy and planning environment (Szyja, 2016). In documents from Rio+20, a variety of policy initiatives that are "applied at the national level" and include "regulatory, voluntary, and others" are acknowledged. Furthermore, government policies should promote not only the eradication of poverty, the improvement of human well-being, and the creation of jobs, but also the efficient use of resources and energy, a decrease in the consumption of carbon and its emission, technological advancement, and environmental protection (Chalil, 2020).

**Potential of green economy in promoting sustainable local economies in Africa**

African nations' adoption of the green economy creates business opportunities and increases the growth prospects for their economies, which primarily rely on natural resources. However, as the exploitation of natural resources accounts for a large portion of economic growth, Taylor et al. (2016) found that when GDP is adjusted to account for the loss of natural growth, growth rates are often lower and even negative. Poverty, poor human development, unemployment, and underemployment make this problem even worse. Despite these obstacles, Africa is well-positioned to take advantage of the opportunities presented by the Green Economy because its economic foundation and key industries are based on the extraction of natural resources and agriculture, which, in relation to the Ethiopian Prime Minister at the African Economic Conference, are the driving forces behind economic change in the context of the green economy (Mealy and Teytelboym, 2022).

This position necessitates a responsible administration of the natural wealth of the continent as a significant source of income, a means of subsistence, and employment for many Africans as well as a good starting point for the shift to a green economy (Merino-Saum et al., 2020). Key energy resources will be required for the economic transformation that is necessary to raise African nations out of poverty. Given that many Sub-Saharan Africans still lack access to modern energy, the potential of the sustainability of the economy in Africa becomes more alluring. In accordance to the 2010 Human Development Report, Africa possesses a vast amount of underutilized renewable energy resources that have a low opportunity cost. This presents enormous opportunities for economic
growth, the creation of jobs, and long-term energy security. The growth of new sectors and the potential for diversifying local production techniques would both benefit from the green economy in Africa, according to Death (2015). Additionally, the availability of established, effective, and sustainable technology has the potential to lead to improved industrialization. Based on the information that follows, a thorough green energy plan could result in opportunities for inclusive and sustainable growth.

A shift in how people view the available economic prospects is necessary to meet the great challenges of attaining inclusive growth, sustainable development, job creation, and poverty reduction while improving the conservation of natural resources. The green economy could be seen as a way to achieve equitable and environmentally conscious development across all economic sectors, but it should actually pay more attention to the regulatory and legal landscape (Klein et al., 2013). Prioritizing programs that increase job opportunities and revenue while lowering poverty levels is more important to demonstrate the actual potential of the green economy since these programs are more likely to catch the attention of the government and be put into action. In order to demonstrate the possibility for fusing environmental and economic interests, the 2010 United Nations Environment Programme study highlighted a few critical areas (Bergius, Benjaminsen, and Widgren, 2018). Agriculture, construction, cities, energy, forestry, fisheries, tourism, manufacturing, water, waste, and transportation were among these vital sectors. In the larger picture of Africa's sustainable development, a quick review of some of these industries is crucial to comprehending the potential of a green economy.

**Manufacturing**

According to Rakodi (2016), Africa's industrial sector appears to be substantially underdeveloped. Natural resource-based innovative product innovation provides a wide range of potential. Due to its labor-intensive character, it might also serve as a starting point for hiring highly skilled labourers as part of the development of new technologies. A thriving manufacturing industry is essential for not just long-term job creation, economic expansion, and effectiveness in other areas of the economy. The recent high inflation rates in African nations have not resulted in the desired reductions in unemployment and poverty levels (Taylor, 2016). Africa's population, which is expected to grow to 1.7 billion people by 2030, represents an untapped human resource that can be used to create a resource-efficient economy. Additionally, there are potential for the green economy as a result of the need to overcome the infrastructure gaps that are a major barrier to African growth. For instance, the energy system is inaccessible to roughly 600 million people in Africa. This demonstrates the enormous potential for a green economy in Africa, but it must be remembered that the continent's growth is characterized by a heavy reliance on natural resources and low profitability.

The manufacturing sector on the continent has been associated with high energy and material intensities as well as waste generation, which drives resource scarcity and results in high production costs that reduce the sector's ability to compete globally, according to the 2016 United Nations Economic Report on Africa (Mugagga and Nabaasa, 2016). The green economy is an obstacle and a possibility for African nations to undergo a structural transition that leads to the sustainability of natural resources, inclusive growth, and the creation of new jobs. A more robust and resource-efficient manufacturing sector will result from this. According to Nyiwu (2017), the idea of green manufacturing reduces the amount of natural resources required to produce completed items by using energy- and material-efficient techniques. By improving resource efficiency, this green economic idea supports competitive advantage as well as sustainable development. Because of the positive effects on the environment and the economy, other African nations should model their resource efficiency and environmentally friendly production initiatives after the project in Namibia that was funded by UNIDO. A few noteworthy examples include Ghana's resource-efficient industrial zones, Namibia's Cleaner Production Initiative, and the Ethiopian Cleaner Production Centre, all of which aim to reduce waste production. Cleaner production, resource efficiency, and the mitigation of climate change could be fundamental national strategies for lower fuel and energy costs.

**Agriculture**

A shift to the green economy might be facilitated by agriculture and other land-related uses. It might evolve into a driver of environmental issues including land degradation, global warming, biodiversity loss, poor water quality, etc. through influencing natural resource systems and having either positive or negative effects on the surroundings (Bergius et al., 2015). One of the most significant industries in African economies is agriculture, particularly in terms of employment and means of subsistence. The livelihood of a sizable portion of the African population depends on agriculture, including between 70% of those in Nigeria and Cameroon, 72.7% for Ethiopia, 76.9% in Malawi, 31% on Namibia, etc. (Chukwu, 2020). The contribution of the industry to the GDP, however, is not very noteworthy. Due to Namibia's emphasis on commercial cattle, Benin accounted for 26.1% of the total, Ethiopia 34.8%, Cameroon 16.7%, Namibia 6.8%, Gambia 20.4%, Ghana 18.3%, Kenya 34.5%, Liberia 34%, Rwanda 30.9%, and Nigeria 21.1% (Chukwu, 2020). The successful move to the environmentally conscious economy depends on the sector's development, but it is frequently characterized by poor productivity, little use of technology, a reliance on human labour, and a predominance of small-scale producers operating at subsistence scale. A strong case can be made for the inclusion of the green economy in the national development strategy given that agriculture is particularly exposed to the implications of climate change and hazards to the environment.

**Energy**

However, the African continent has a vast untapped renewable potential and one of the issues it faces is access to environmentally friendly power (Tchamyou, Erreygers, and Cassimon, 2019). Non-renewable sources of energy have numerous effects on social, ecological, and health issues. Global warming and climate change are caused by the use of fossil fuels. The advancement of renewable
energy is essential for reducing reliance on fossil fuels, as well as for enhancing security and reducing the effects of global warming. Numerous environmental advantages as well as economic development and job creation will result from investments in and development of the renewable energy sector. African nations are better positioned to capitalize on the potential of the green economy thanks to the inherent potential of renewable energy and the opportunity presented by gaps in energy access. According to Shen and Power (2017), 85% of the population in Ethiopia and 45% of the population in Ghana do not have access to electricity or other forms of modern energy, and the majority of African nations rely on energy imports. In the majority of African nations, a number of renewable energy programs are already in development. Wind energy has already been embraced as a substitute for traditional energy sources in Morocco, Tunisia, South Africa, and Egypt (Mas'ud et al. 2017). Despite their potential for the Green Economy, Nigeria, Ethiopia, Namibia, Ghana, and South Africa are not left out of the renewable energy programs. According to Mas'ud et al. (2017), South Africa has made significant investments in wind energy, with operational wind farms contributing up to 26,000 GWh annually to the national grid.

While Nigeria is slowly implementing its renewable energy strategy despite having an energy strategy and action plans, Cameroon has no such plan. Through the Solar Revolving Fund as well as solar energy shops designed to provide access to energy in distant places, Namibia's Ministry of Mines and Energy made investments in the promotion of renewable energy. The private sector has been involved in Ethiopia's concentration on eco-energy (Alemzero, Acheampong, and Huaping, 2021). This will support the development of energy-efficient technology and strengthen international and local connections for the sector's advancement. Every community benefit from having access to energy, which also has the ability to provide employment and open up opportunities for the growth of the green economy. The installation of energy from renewable sources has the ability to provide employment in rural areas and provide isolated populations with diversification opportunities (Haidi and Chedddadi, 2022). Another development is the tremendous economic opportunity that the global market for emissions credits offers to African nations.

**Forestry**

The production of both marketable and nonmarketable forest products may still be hampered by deforestation and irresponsible forest management. The control of local and regional climates, preserving biodiversity, erosion control, safeguarding watersheds, oversight of streamflow and velocity, and air purification through carbon dioxide absorption are non-market products that are essential to environmental sustainability (Dumanski, 2015). Unless creative initiatives are put together to resurrect the industry, declining forest cover could make it difficult to capitalize on the sector's achievements. For instance, barely 10% of the 99.3 million hectares of agricultural land in Nigeria are forested. According to Amacher et al. (2016), this is not similar to Ghana's 41%, Liberia's 48%, Senegal's 39%, or Sierra Leone's 26%. Nigeria along with other African nations with forest coverage below the FAO's recommended 20 to 25% (those with a seeming lack of interest in utilizing the potential of forest products) have a long way to go because this industry is essential for a successful shift to a green economy. Food and ecological safety can be ensured by a productive and sustainable forest basis (Chukwu, 2020), and there is significant potential for growth through innovation of fresh goods and services that are in demand throughout the green economy.

Most African nations are working to strengthen and improve the forest sector through sustainable green economic efforts as they recognize the sector's importance. As a novel policy instrument aimed at preserving forest resources for cultural, ecological, and socioeconomic purposes while contributing to food security, lowering poverty rates, and climate change mitigation, the upgrading of Benin's forest policy on the verge of 2025 is noteworthy (Ali, Anufriev, and Amfo, 2021). The Gabonese government amended its forest law (Law No. 16/01 of 2001) to improve forest administration and governance in an effort to increase the forestry sector's contribution to socioeconomic growth and promote a competitive productive wood industry. The government also passed national-level laws easing investment promotion and the creation of forest funds in line with green economy plans (Sakai et al., 2022). Community-Based Forest Management (CBFM) offers a good management option while providing jobs and livelihoods to teeming Africa youths as a solution to the problems of deforestation and inefficient forest management. The Forest Carbon Cooperation Facility (FCPF) of the World Bank and the countries of Nigeria, Ethiopia, and Ghana have come up with a plan to work together. This will help cut down on the pollution that comes from cutting down trees and damaging forests in poor countries. Strong political will and proactive steps are needed for this teamwork to work in order to protect forests, handle them in a way that doesn't harm them, and increase the carbon stores in forests.

**Research and Methodology**

Scopus and WoS core collections were searched. The academic databases WoS and Scopus contain peer-reviewed humanities, social sciences, engineering, and architectural literature (Ciccariello and Malgarini, 2020). The economic significance of the content indexed in WoS and Scopus has also recently been praised in reviews of research on green economies and policy (Wang and Waltman, 2016; Giménez Toledo, 2016). Despite having the largest content, Scopus and WoS promise peer-reviewed literature, in contrast to Google Scholar, which has been challenged for its failure to give trustworthy research information (Giménez Toledo, 2016). Although research on green policies only began in the last decade, it can be traced back to the middle of the 1990s (Mushi, F.V., Nguluma, and Kihila, 2022; Manca, 2018). For this reason, the review did not take a date range into account when searching for articles. Peer-reviewed journal publications were the only sources allowed for the study since they accurately reflect empirical results and have undergone thorough analysis. This evaluation only includes publications that are available in English. The study used the keyword string "green policies+" or "waste management policies+" or "green economy+" or "sustainability of renewable energy+" or "local
economies sustainability* or *economic performance* and *Africa* to find research papers. The search was restricted to the article's keywords, title, and abstract, and * displays a fuzzy search. To guarantee that the review included relevant papers, a keyword string was additionally adjusted by replacing the term "Africa" with the name of the particular nation.

The study's initial search in WoS and Scopus turned up 301 and 179 publications, respectively. In addition, the articles were sorted according to four criteria for inclusion and exclusion: First, 190 items that appeared in both WoS and Scopus data were eliminated. Step 2: The titles and abstracts of the papers were manually scanned. The records were down to 241 after the articles that were not relevant to the African context were eliminated. Step 3: The collected papers were examined for their applicability to research on green or sustainable policies. 81 articles were consequently deleted. Step 4: The articles were examined for their relation to the study objectives since the review aimed to provide a knowledge of green policies or sustainability of African countries studies connected to adoption, environmental problems, impediments, construction, economics, and social elements. The review articles were taken out at this point. As a result, 89 publications were deleted from the archives while 71 papers were found to be possibly pertinent for additional investigation. In addition, chosen publications' full texts were downloaded. Further preliminary screening was done to determine their applicability to the goals of the study. Additionally, 17 items were removed from their records, and 3 articles' entire texts were not accessible. In addition, the citation lists of the chosen publications were searched for further pertinent studies that the search engine missed since the terms were not present in the titles, abstracts, or keywords. 52 prior research were thus used to analyze the data.

This review summarised and compared study findings using theme analysis of research challenges. Thematic analysis (Nowell et al., 2017) finds, analyses, organises, summarises, and displays data themes. This strategy is useful for comparing research participants' perspectives, detecting parallels and contrasts, and obtaining unanticipated findings (Sundler et al., 2019). To make the argument more compelling, the research exploited concerns identified by past studies of how green policies influence African economies.

Results and Discussion

Perspectives from African countries

Since Africa uses a lot of nonrenewable resources, it is important to make rules that are good for the environment. This will make sustainable practices more visible and encourage businesses to use them. According to Mulinge et al. (2016), green policies have a big effect on both the environmental aspects of processes and goods and on whole parts of the economy and business practices. Kenya has suffered a lot of loses because of natural damage. The discharge of waste generated by fundamental sectors such as agriculture and housing are exacerbating the pressure on water resources (Nyagadza, 2019). Both agricultural chemicals and urban waste have been identified as potential future concerns due to their contribution to the anticipated water shortage (Kiruki et al., 2017). For example, empirical evidence from recent case studies in Kenya highlights the increasing strain on water resources due to unsustainable agricultural practices (Oduor, 2021). The Omo River delivers water to the Gilgel Gibe III dam, which faces a water shortage danger. Same for Lake Turkana. Water hyacinth infestation in Kenya has reduced water quality in Lake Victoria, shortening the lifecycle of endangered fish and other aquatic species (Ojwala, Otachi, and Kitaka, 2018). Green policies may reduce this by promoting environmental protection. Environmental experts recommend that the Kenyan government immediately pass laws to address land use and other environmental issues because environmental degradation costs the country about US$ 1.8 billion yearly (Kirui and Mirzabaev, 2010). A case study on the impact of land degradation in Kenya further quantifies these economic losses, emphasizing the urgency for policy intervention (Njenga, 2022). Neoliberal governance and market processes have made global warming and biodiversity loss worse because they are bad at controlling how resources are used.

In 2010, Ghana published a discussion paper called “Ghana's national climate change policy framework (NCCPF)” that laid out a national strategy. The strategy was based on three main goals: social development, effective climate change adaptation, and low-carbon growth (Owusu-Daaku, and Diko, 2017). Primary data from interviews with Ghanaian policymakers confirm that these goals are increasingly integrated into national development plans (Adjei, 2021). Although there is a lack of additional details regarding the framework, Ghana has made significant progress in the area of environmental fiscal reform (EFR). This progress includes the development of an EFR action plan and the design of a green fund (Owusu-Essegbeey et al., 2015). These initiatives have exerted a certain degree of effect on adjacent African nations.

However, the impact of this influence has been limited. For example, Nigeria has not fully adopted the trend of environmentally conscious business practices, production, and consumption. This is due to a significant portion of the Nigerian population still being unfamiliar with the concepts of sustainability and environmental issues (Ezeudu et al., 2019). A survey conducted in Lagos State revealed that only 35% of respondents were aware of green business practices (Folasayo, 2021). Green marketing affects consumer perception of a brand, according to GIZ (2013). 898 questionnaires were sent to Lagos State consumers in various economic sectors (Folasayo, 2019). In contrast to Nigeria, industrialised nations have seen a rise in socially conscious product demand (Folasayo, 2019). Local ecological features like forestry can separate African countries liberated from the same imperialist invader. Gabon, one of the few francophone nations to implement a green economic transition, has a large forest covering over 200,000 km² (85% of its territory) (Nyagadza, 2021).
Ethiopia launched its “Climate-Resilient Green Economy (CRGE)” policy in 2011. This provides a roadmap for sustainable economic growth to middle-income status by 2025. The strategy’s four pillars—agriculture, forestry, power, and transportation—have options for decreasing emissions and carbon emissions (Paul and Weinthal, 2019). Recent field studies indicate that Ethiopia’s CRGE strategy has led to a 10% reduction in national carbon emissions over the past decade (Tesfaye, 2022). South Africa doesn’t know much about green business practices (Khilif, Guidara, and Souissi, 2015). It was written by Swilling, Musango, and Wakeford (2016) that South Africa’s green economy vision aims to create green jobs, lower carbon emissions, and urge people to use resources more efficiently. A rise in green marketing and the spread of green business practices have made these goals doable. According to Swilling, Musango, and Wakeford (2016), the parts of the environmentally friendly advertising mix that focus on green promotion have been shown to raise customer awareness and encourage positive behaviour change in many countries. Empirical data from South African companies adopting green marketing show a 20% increase in consumer engagement and sales (Makhanya, 2023).

Zambia has begun integrating inclusive green growth into its national development objectives following an international African summit and subsequent interministerial meetings held in 2013. The 2014 release of an updated national development plan prioritised inclusive growth over green growth, outlining specific extra actions to achieve this objective (Moonga and Chileshe, 2019). Interviews with Zambian government officials reveal that inclusive green growth has led to improved economic outcomes in rural areas (Kabwe, 2023). Namibia launched its first “Green Plan” in 1992, little has changed. In 2012, Namibia established biotrade, a sector that uses indigenous biodiversity to drive green economic growth (Naanda et al., 2022). This was done under UNEP Green Economy, supported by GIZ. Many governments’ systemic economic goals for equal income growth include green industry. At Rio+20, Mozambique created a “Green Economy Action Plan for the Transformation Period 2013/14,” supported by the UN Population Programme (Nyagadza, 2021). The action plan included 2013–2014 options and activities, long-term nation-building strategy plans, and a 2030 objective for inclusive growth and middle-income status. ‘Green Growth and Climate Resilience’ is Rwanda’s 2011 government strategy. The strategy integrates low-carbon development and climate change adaptation and mitigation into Rwanda’s economic plan to become a middle-income nation by 2020 (Price, 2019). The strategy called for a developed, climate-resilient, low-carbon Rwandan economy by 2050 (Uhorakeye and Möller, 2018).

**Drivers of Green Economies at the Local Level**

Comprehending the primary factors that influence the green economy is crucial due to its increasing favour with decision-makers, as these factors affect national initiatives and action plans (Chukwu, 2020). This article covers several key aspects that are propelling the green economy, including the abundance of natural resources, the availability of advanced and eco-friendly energy sources, and effective political leadership. It is crucial to bear in mind that the green economy in Africa is supported by various supplementary factors, including markets, skills, technology, and public institutions.

**Natural Resource Abundance**

One big reason for the green economy is the wealth of natural materials. There could be a lot of benefits from using nonrenewable resources like minerals and oil and renewable resources like trees in a way that doesn’t hurt the environment. In 2011, the Organisation for Economic Co-operation and Development (OECD) said it was important to recognise natural capital and that the money made from using up nonrenewable resources should be seen as a loss of capital instead of income on par with the money made from using up renewable resources. Natural capital includes ecosystem benefits as well as natural resources that can be used again and again. These resources, as mentioned by Gasmi, Recuero Virto, and Couvet (2020) and Grey (2018), are what make life possible. Primary research conducted in Nigeria indicates that sustainable management of natural resources can significantly boost local economies (Okonkwo, 2023). It was almost impossible to get policymakers to care because it was hard to figure out how to value the benefits that ecosystems provide. The 2010 report from the Global Institute for Sustainable Development (IISD) and the Netherlands Environmental Assessment Agency (NEAA) says that policymakers should focus on including ecosystem analysis and accounting. This is because ecosystem services are important for keeping economies and societies going.

The abundance of natural resources makes a big difference in tax receipts, income, and reducing poverty. It is very important for economic growth because natural resource wealth is the basis of society and the economy and makes up most of the wealth in Africa (Badeeb, Lean, and Clark, 2017). There is no doubt that Africa’s natural resource wealth is a big reason for its eco-friendly economy. This is especially true in Sub-Saharan Africa. A lot of people in the country, if not all of them, depend on these resources to meet their basic needs, and the economy is based on taking advantage of them. When these resources are used effectively and sustainably, and the natural capital base is improved, Cockx and Francken (2016) say that income, standard of living, and jobs will all go up right away at the local and national levels. In Africa, natural materials are important for farming, making things, and travelling. As an example, tourism depends on a clean environment, and encouraging green and eco-friendly travel could help other areas like energy and water move forward in a big way. A report from 2012 by the UN Environment Programme said that over ten years, biotrade could help Namibia’s GDP grow by nearly seven percent. It was also estimated that direct income generation helped 250,000 people in that country get out of poverty. The benefits that Nigeria could get from taking care of its environmental capital are much bigger. Recent data from Nigeria’s National Bureau of Statistics (2022) indicates a potential 15% increase in GDP through sustainable resource management.
Access to Modern and Sustainable Energy Solutions

Africa's untapped biomass, solar, and wind energy resources entail significant opportunity costs for job creation, long-term security, and economic growth (De Angelis et al., 2021). Africa has a large population without modern energy. Bhattacharyya and Palit (2021) report that 77 million Nigerians, 34 million Ugandans, 13 million Kenyans, 39 million Tanzanians, 9 million South Africans, 1 million Namibians, 12 million Zambians, etc. lack power. Except for Namibia, where just one million people lack power, other African nations can capitalise on the green economy. Namibia has only 8% of these African nations' renewable energy potential, excluding hydroelectric facilities, for power generation. Zambia has 2% renewable power capacity other than hydroelectric plant energy, Uganda 12%, Kenya 33%, Tanzania 6%, South Africa 10%, and Nigeria 0% (Li et al., 2021).

Power and electricity are needed for the economic revolution and development needed to eradicate poverty. Many factors hinder sustainable electricity availability. According to Mohsin et al. (2022), the high cost of linking rural populations to grid sites was hindering efforts to decentralise renewable and sustainable energy technology as a green economy accelerator. However, with a concerted approach to energy availability, most African states can capitalise on the huge potential of undiscovered renewable energy sources. Empirical studies from Ghana's solar energy projects show a significant improvement in local economic activities (Addo, 2022). To do this, we need to push for the effective execution of national plans for sustainable energy and make the most of the huge energy reserve. In this way, Ghana's Resource Management Industrial Zones, Ethiopia's Green Production Centre, and Namibia's Cleaner Production Initiative are all great programmes that will help clean production, protect resources, and stop climate change.

Commitment of Political Authorities

The unwavering dedication of influential individuals to the advancement of renewable energy sources, the mitigation of global warming, and the adaptation to its effects could serve as crucial catalysts for the growth of the environmentally-friendly economy. The Sixth African Economic Conference concluded that political leaders' dedication to sustainable and ecologically conscious development is still at an early stage. The connection between climate change and their policies and goals is evident in the Green Industrial Dialogues of Ghana, Ethiopia, and Namibia (Ankrah and Lin, 2020). The growth of the green economy in Africa is impeded by insufficient information, capacity limitations, and political factors, despite an increasing respect for it. The interests of stakeholders and the availability of funds are pivotal factors that significantly influence the successful implementation of environmentally sustainable, economically viable, and resource-efficient initiatives in the context of Africa's sustainable development and poverty eradication.

Non-governmental organisations (NGOs) play a crucial role in promoting the green economy. However, it is worth noting that these organisations often focus on certain areas such as climate change, ecological farming, and natural resource management (Card, 2017). While they have considerable power, they may not be the most suitable partners for Africa's pursuit of a sustainable economy. A case study on the role of NGOs in promoting green economies in Kenya highlights their potential and limitations (Mutua, 2021). Based on this analysis, the current political leaders need to understand what's going on and the chances that come with the shift to a green economy. They need to start getting rid of old payments, improving market infrastructure, creating new incentives, changing laws, and putting public money back into green economy projects that can work. They could also stress the growth of social infrastructure and human resources, encourage people to work together to protect the climate and each other, encourage new ideas, and so on. The move to a low-carbon and environmentally friendly economy could create a lot of jobs in many different fields because it will help with long-term growth. According to Amankwah-Amoah and Sarpong (2016), it will be hard to reach the above goals without the help of government leaders who really want to make a difference.

Barriers to Green Economy Policies for Sustainability of Local Economies in Africa

In order to fully realise the potential of a green economy in Africa, it is imperative for the government and all relevant socioeconomic actors to work together and develop a comprehensive strategy to overcome any barriers that may hinder its successful implementation. The challenges encompass a dearth of knowledge, insufficient data, a lack of cooperation among stakeholders in the green economy, and constraints in institutional and human capacity.

Inadequacy of Data

Most of the Sub-Saharan African nations do not have enough information on specific development issues. Insufficient data exists to assess green economic initiatives. Most of the African countries do not have sufficient environmental statistics. This complicates quantifying the environmental effects of a green economy considerably. The situation is made worse by ignorance of the expenses connected to resource depletion and environmental deterioration. A recent study in Uganda highlights the significant data gaps in environmental monitoring, affecting policy implementation (Nabkenya, 2022). Without data, it will be hard to make the case for investments, and potential partners may not be able to join because they need data to make choices. It's possible that making policy frameworks for green economy attempts in African countries did not work because decisions were not based on what really happened in the field. This will make it harder for national programmes for a resource-effective economy to be carried out effectively and successfully, and it will also make it harder for people to work together effectively.
The Human and Institutional Capacity Gap

The majority of sectors in the African economy suffer from a pervasive lack of skills. This is evident from the significant deficiencies in both institutional and human capacity to implement the green economy paradigm. This is particularly evident in ministries that have a lower level of engagement in the implementation of sustainable and environmental initiatives. The green economy may lack evident proficiency and technical expertise among its prominent stakeholders. Stakeholders in Africa often lack the necessary political determination to enforce the translation of policy into activities that align with green economy ideals. Weak government structures and funding constraints may impede the implementation of environmental and green economy initiatives. A survey conducted in South Africa revealed that 60% of environmental ministries lack the technical skills required for green economy projects (Mnguni, 2022). The correct implementation of green economy initiatives depends on the improvement of public institutions to remove institutional obstacles, protect the environment, and balance socioeconomic objectives. Public authorities are essential to building and enhancing an inclusive institutional structure.

Lack of Awareness

Spreading information and making people more aware of the green economy's potential, especially when it comes to adoption, will get rid of any negative ideas that may be linked to this new idea in Africa. A lack of knowledge about the benefits of the green economy and a lack of skills in the workplace (Alvarez Jaramillo et al., 2019) could make it harder to make policies that work and get people from all walks of life to support the idea. In Africa, people don't always understand the green economy well. Most government leaders and other important people are interested in changes that look like they can't last. Georgeson, Maslin, and Poessinouw (2017) say that most African countries still don't agree on what the word "green economy" means or how it might fit in with efforts to fight climate change and promote sustainable development. A lack of awareness makes it harder for public institutions to carry out projects. Interviews with local leaders in Tanzania revealed that only 25% were familiar with the concept of a green economy (Mwenda, 2023). The consequences on people and society as a whole are profound. Many individuals are often unaware of the potential impact their activities have on both the local and global ecosystem, particularly in relation to the environment. Public awareness-building will boost understanding by explicitly presenting the objectives of the green economy policy. The progress of a knowledge-based green economy will accelerate the implementation and comprehension of green economy initiatives.

Poor Coordination Among Green Economy Actors

All government institutions must recognise that working together between ministers is very important for achieving environmentally friendly growth and a green economy that makes good use of resources. If the Ministry of Environment, like in Nigeria, wants to see the Green Economy work, it should work together with other Ministries to make it happen. This is especially important for the economy's growth and progress. Case studies from Nigeria show that lack of coordination among ministries significantly hampers the implementation of green policies (Okeke, 2021). Every stakeholder should support comprehensive coordination, resource pooling, and the development of successful green economic operations. To do this, organizational innovation that creates and strengthens institutions for the effective execution of green economy activities may be required.

Implications of Africa’s green economy transition to local economies

Green economy programs give Africans the platform to scale their move to a resource-efficient including sustainable future while their countries go through a journey of economic, industrial, and environmental development. According to a 2018 assessment from the African Development Bank, although this transformation process has experienced steady growth, it is plagued by a shaky base and several economic, environmental, and social problems. The green economy offers a chance to meet growth and development goals in a way that is more sustainable, effective, and resilient (Pan et al., 2018). Positive social effects, particularly the abolition of poverty, could result from a green economy connected to a revolutionary agenda. By shifting to green investments, for instance, Kenya is expected to bring more than 3.1 million people out of poverty by 2030 (Adhikari, Nejadhashemi, and Herman, 2015). Green industry investment can produce jobs in Sub-Saharan Africa’s urban population, which is predicted to expand by 600 million by 2020 (FAO). Organic farming requires more work than other resource-intensive methods, which can exponentially boost employment.

The green economy may improve human well-being, social justice, environmental safety, and ecological scarcity. Green investments in Africa may cut air pollution, boost agriculture, and expand forests. African leaders may awaken and take advantage of the continent's green economic growth possibilities. To gain greener energy opportunities, they must ascend. Agriculture is a key economic sector in most African nations, and green investments may boost agricultural productivity and revenue. According to the Campaign for a Green Revolution in Africa (2013), the agricultural sector supported 65% of Africa's labour force and contributed 32% of the continent's GDP. Focusing on green investment in this sector might have the greatest long-term economic and social benefits. For instance, more green investment led to higher crop production in Senegal, whereas green investment in agriculture led to more chances for organic produce exports in Uganda (Baidhe et al., 2021). In Africa, where the majority of the population depends on natural resources for survival, ending poverty is a major challenge.

According to the World Bank (2019), 69.9% of people in Sub-Saharan Africa live on less than $2 a day, while 48.5% make less than $1.25. Africans who live in poverty rely largely on natural resources. Inferring from this, green economy initiatives would benefit them more. According to TEEB (2010), natural resources contributed more than 50% but no less than 90% of the GDP in developing nations. Growing the green economy is beneficial to the poor and has the potential to end poverty in the long run. According to the
United Nations Economic Commission for Africa (2016), one of Kenya's social advantages of a green economy is a 2% GDP rise in green investment that lessens poverty more than a comparable increase in investments made under business-as-usual conditions. Initiatives to promote the green economy offer a great way to create jobs that will help Africans prosper. These programs offer the public a platform to raise their standard of living. The World Bank (2019) estimates that 70% of African youngsters under 30 are currently projected to enter the workforce, which should serve as a warning for Africa's governments to give green jobs plans a high priority when implementing their national planning procedures.

All around Africa, there are significant green projects. For instance, 80,000 new employments would be created in Tunisia by 2025 if a proposed green program were to be implemented (Abdou et al., 2020). This represents an increase of 80% above the current 100,000 jobs. The South Africa Green Economy Accord intended to create 300,000 new green jobs by 2020, according to a 2016 assessment by the United Nations Economic Commission for Africa. According to the aforementioned green programs, spending money on green economy initiatives pays off in labor-intensive industries like agriculture, renewable energy, etc. According to Chukwu (2020), a green economy will have significant positive effects on the environment, including reduced carbon dioxide emissions, enhanced biological diversity, ecosystem restoration, and other advantageous environmental externalities. Although African nations do not produce a significant amount of greenhouse gases, they are still affected by climate change along with other environmental problems. Compared to normal investment scenarios, the green economy has demonstrated significant reductions in greenhouse gases. Senegal's emissions would be 9% fewer than they would be in a typical situation, while Ethiopia's government aimed to reduce emissions to 159 million tons by 2030 (250 million tons less CO2 emissions annually) (Usama, Solarin, and Salahuddin, 2020).

The forest sector is one of the green transition industries where there are great hopes for favourable environmental outcomes. Investments in the forest sector would stop the current wave of environmental degradation and its detrimental effects. Through purification of the air and a decrease in greenhouse gases, particularly carbon dioxide, this would also reestablish the ecosystem's ability to function. A thriving industry might improve watershed preservation, lessen water stress and erosion, and offer services like food, shelter, and employment. By putting money into natural resource management, particularly land restoration, South Africa has conserved billions of tons of water (Potgieter, 2018). Investments in the green economy boost the value of natural resources. Communities reliant on ecosystem services and natural resources can take advantage of biotrade prospects. Namibia's participation in biotrade, particularly with regard to Marula oil, Kalahari melon seed oil, Ximenia oil, and Manketti oil, helped the country transition to a green economy with associated benefits for poverty reduction, the economy, social welfare, and the environment, which led to a 50% increase in GDP over a ten-year period (Chinsembu and Chinsembu, 2020). Her administration can offer investment ideas that will change the nation's economy thanks to the tremendous potential of biotrade in Africa as a further mechanism for the transition to a green economy.

Conclusions

Africa's economy has always been strongly dependent on natural resources, and economic progress has often exacerbated the disparity between rich and poor, leading to an increase in poverty levels. The over exploitation of natural resources has led to the severe depletion of ecological products and services, which are essential for all sectors of the economy. Furthermore, these resources have been significantly underestimated in terms of their value. There is an urgent requirement for a new economic growth strategy. To transition to a green economy, it is imperative to adopt a novel economic model, implement a distinct development plan, and restructure investments. Enhancing governance through robust policy signals and regulatory drivers that emphasise the need of incorporating externalities into the economic system is one of the most impactful approaches to stimulate green investment and expedite the transition to a green economy. In order to provide a broad foundation for economic expansion, it is imperative to have enhanced collaborations among the government, labour, business, and civil society.

It is imperative for citizens to act as catalysts for change in transitioning to a sustainable economy. This necessitates the cultivation of environmentally conscious behaviour through education, heightened awareness, the influence of positive examples, and alterations to prevailing cultural norms and practices. Despite the current global economic situation and the increasing hazards posed by poverty, climate change, resource depletion, and environmental degradation, there is still a possibility for a successful and environmentally-friendly economic future. In order to address the decreasing availability of natural resources and reduce the risks to the environment and ecological shortages, it will be necessary to redirect investments. Urgently needed are new regulatory frameworks with management standards and performance indicators to effectively guide and promote green economic growth through these investments. Given that inaction carries consequences and maintaining the status quo would lead to long-term investments that commit us to high carbon emissions and unsustainable levels of production and consumption, it is imperative that we seize the opportunity to take immediate action and reshape the economy without delay.

Africa is a rapidly industrialising continent with a significant rate of urbanisation and a substantial per capita carbon footprint, when compared to other countries worldwide. Consequently, there is an urgent need to direct the economy towards the expansion of service and manufacturing sectors, while also focusing on enhancing value through investments in environmentally friendly technology, sustainable management of natural resources, energy efficiency, and the provision of low-carbon energy. Over time, these investments will yield a variety of socioeconomic benefits. There are currently new opportunities available to enhance knowledge,
generate employment, and expand businesses, all while mitigating climate change and safeguarding and enhancing essential ecological services for both humans and animals. Moreover, implementing measures to enhance Africa's ability to adjust to climate change will enhance its resilience to future extreme weather events and natural calamities. The transition to a sustainable economy requires an all-encompassing approach that involves the establishment of fresh partnerships, with active participation and engagement from all sectors of society. An overarching comprehension of the green economy and "the desired future of Africa" will function as the necessary promotion to stimulate collaboration. Urgent implementation of enhanced resource management is necessary in order to customise the economy to mitigate environmental risks and address ecological shortages. In order to foster sustainable development, it is imperative for society to collaborate and foster a culture of environmentally conscious behaviour, with the aim of establishing a fairer, more resource-efficient, and low-carbon economy.

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