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A CRITICAL ANALYSIS OF ECONOMIC BENEFITS AND CHALLENGES OF COCOA FARMING IN NIGERIA.

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ABSTRACT

This study examined the economic benefits and challenges of cocoa farming in Nigeria as a strategic agricultural activity for promoting rural development and national economic growth. Specifically, the study investigated the economic benefits of cocoa farming, identified the challenges confronting cocoa farmers, and examined mitigating strategies for addressing these challenges. A descriptive survey design was adopted for the study. The study was carried out in Akwa Ibom State, Nigeria. The population comprised all agriculturalists in Akwa Ibom State. A stratified sampling technique was used in selecting two Local Government Areas each from the Uyo, Eket, and Ikot Ekpene Senatorial Districts, from which 10 cocoa farmers were drawn, giving a total sample size of 60 respondents. Data were collected using a structured questionnaire titled Economic Benefit and Challenge of Cocoa Farming Questionnaire (EBCCFQ). The instrument was validated by an expert in Test, Measurement, and Evaluation, while a reliability coefficient of 0.89 was obtained, confirming its reliability. Data collected were analyzed using descriptive statistics. The result of the findings revealed that income generation for farmers and rural households recorded the highest percentage (28.33%) among the economic benefits of cocoa farming, while poverty reduction and economic empowerment recorded the least percentage (11.67%). The study further revealed that climate change and environmental stress constituted the major challenge of cocoa farming with the highest percentage (25.00%), whereas deforestation and environmental degradation recorded the least percentage (5.00%). In terms of mitigating strategies, the adoption of climate-smart agricultural practices recorded the highest percentage (20.00%), while sustainable land-use practices and forest conservation recorded the least percentage (1.67%). The study concluded that cocoa farming remains a vital source of income, employment, and economic development in Nigeria despite the numerous challenges confronting the sector. One of the recommendations was that farmers should be encouraged to adopt climate-smart practices such as agroforestry, irrigation, and soil conservation techniques to mitigate the effects of climate change and improve resilience.

KEYWORDS: Cocoa Farming, Economic Benefits, Challenges, Rural Development, Nigeria, Agricultural Sustainability

INTRODUCTION AND PROBLEM STATEMENT

The cultivation of cocoa remains one of the most important agricultural activities in Nigeria, particularly in promoting rural development and economic sustainability. Cocoa, derived from Theobroma cacao, serves as a major cash crop that contributes significantly to employment generation, income creation, and foreign exchange earnings in the country. Over the

years, Nigeria has maintained its position as a key cocoa-producing nation in Africa, with the sector playing a crucial role in diversifying the economy beyond oil dependence. As global demand for cocoa and its products continues to rise, the relevance of cocoa farming in supporting both local and international markets has become increasingly significant (Fold & Neilson, 2021).

Furthermore, cocoa farming contributes immensely to the economic well-being of rural households by providing a steady source of livelihood for millions of smallholder farmers. The sector stimulates economic activities across the value chain, including production, processing, marketing, and exportation. In addition, cocoa farming supports infrastructural development in rural areas and enhances access to basic social amenities. Studies have shown that income derived from cocoa production plays a vital role in improving the standard of living of farming households and reducing poverty levels. This underscores the importance of cocoa farming as a driver of both micro-level household income and macro-level economic growth.

Despite its numerous benefits, cocoa farming in Nigeria faces several challenges that limit its productivity and sustainability. Issues such as climate change, pest and disease outbreaks, aging plantations, price fluctuations, and limited access to modern inputs and financial resources continue to affect the sector negatively (Bunn Läderach, Quaye., 2021). These challenges not only reduce yield and farmer income but also threaten the long-term viability of cocoa production. Therefore, this study provides a critical analysis of the economic benefits and challenges of cocoa farming in Nigeria, with a view to identifying sustainable strategies that can enhance productivity, improve farmer livelihoods, and ensure the continued growth of the sector.

Objectives of the Study

The main objective of the study is to examine cocoa farming in Akwa Ibom State. Specifically, the study seeks to:

1. Examine the economic benefits of cocoa farming.
2. Identify the challenges of cocoa farming.
3. Find out the mitigating strategies to the challenges of cocoa farming.

Research Questions

The following research questions guided the study:

1. What are the economic benefits of cocoa farming?
2. What are the challenges of cocoa farming?
3. What are the mitigating strategies to the challenges of cocoa farming?

LITERATURE REVIEW

Concept of Cocoa

Cocoa refers to the dried and fully fermented seeds of Theobroma cacao, a tropical tree crop primarily cultivated in humid regions of the world. According to the Food and Agriculture Organization (FAO, 2020), cocoa is an important agricultural commodity that serves as the main raw material for chocolate production and contributes significantly to the economies of many developing countries. The crop thrives in equatorial climates where rainfall, temperature, and soil conditions are favorable for its growth.

The International Cocoa Organization (ICCO, 2019) defines cocoa as the beans that are harvested from the cacao tree and processed into cocoa powder, butter, and liquor. The culinary, cosmetic, and pharmaceutical industries all make extensive use of these goods. Harvesting, fermenting, drying, roasting, and grinding are some of the steps in the manufacture of cocoa, and each one has an impact on the end product's flavor and quality.

According to the World Bank (World Bank, 2021), cocoa farming is a major source of livelihood for millions of smallholder farmers, particularly in West Africa, which accounts for over 70% of global cocoa production. Cocoa is a major export commodity and a catalyst for rural development in nations like Nigeria, Ghana, and Côte d'Ivoire.

As illustrated by Afoakwa (2014), cocoa is not only economically valuable but also nutritionally significant due to its rich content of antioxidants such as flavonoids, which have been linked to various health benefits. The significance of cocoa in international trade has been further increased by the rising demand for chocolate and items made from cocoa around the world.

CONCEPT OF COCOA FARMING

Cocoa farming refers to the cultivation and management of cocoa trees (Theobroma cacao) for the production of cocoa beans, which are essential raw materials in the manufacture of chocolate and related products. According to the Food and Agriculture Organization (2020), cocoa farming encompasses a range of activities, including land preparation, planting, maintenance, harvesting, fermentation, and drying of cocoa beans. Similarly, the International Cocoa Organization (2022) describes cocoa farming as a critical agricultural enterprise predominantly practiced in tropical regions due to favorable climatic conditions.

As observed by Oyekale et al. (2009), cocoa thrives in areas characterized by high humidity, moderate temperatures, and well-distributed rainfall, conditions commonly found in countries such as Nigeria, Ghana, and Côte d'Ivoire. Additionally, cocoa is frequently grown in shaded areas, especially in the early phases of growth, which promotes sustainable agroforestry systems. In line with this, Aikpokpodion (2010) emphasizes that proper farm management practices, including pest and disease control, are essential for improving yield and maintaining the genetic quality of cocoa.

Additionally, cocoa farming is vital to national economies and rural livelihoods. According to the World Bank (2021), the cocoa sector contributes substantially to employment, income generation, and export earnings in producing countries. However, as multiple studies have shown, the industry faces several difficulties, including aged plantations, price instability, pest infestations, and climate change. These challenges, as noted by the FAO (2020), necessitate the adoption of modern agricultural techniques, policy support, and continuous research to ensure sustainable cocoa production.

ECONOMIC BENEFITS OF COCOA FARMING

Cocoa production, based on the crop Theobroma cacao is still one of the most economically important crops grown in tropical regions, especially in parts of Asia, Latin America, and West Africa. Over time, the production of cocoa has made a significant contribution to rural development, employment creation, economic growth, and foreign exchange profits. Cocoa is a key export crop that is essential to the agricultural economies of nations like Ghana, Nigeria, and Côte d'Ivoire. Therefore, the economic advantages of cocoa farming are multifaceted, impacting both macro-level national development and micro-level household earnings.

Income generating for farmers and rural households

Income generating for farmers and rural households is one of the most prominent economic advantages of cocoa farming. Millions of smallholder farmers in underdeveloped nations rely on cocoa as their main source of income. Cocoa is a major cash crop that greatly raises household income levels in Sub-Saharan Africa, where a substantial section of the rural population is employed in agriculture. In a similar vein, cocoa cultivation gives farmers a steady stream of cash income that they may use to pay for necessities like housing, healthcare, and education. Cocoa production has been found to be a major factor in reducing poverty and generating income for rural households in Nigeria (Amuda et al, 2024). This demonstrates how crucial the crop is to raising farming communities' standards of living.

Jobs creation

The creation of jobs is another significant economic advantage of cocoa farming. Numerous work possibilities are created along the cocoa value chain, from cultivation and harvesting to processing and marketing. Farm workers, transporters, processors, exporters, and traders are among them. Planting, trimming, harvesting, fermenting, and drying are just a few of the many labor-intensive processes involved in cocoa production. As a result, it lowers unemployment rates in rural areas by employing both skilled and unskilled workers. Millions of people around the world depend on cocoa for their livelihoods, especially smallholder farmers who produce more than 90% of the crop (Tokou 2025). Cocoa growing is an essential part of rural economic systems due to its extensive job contribution.

Substantial Contribution to both National Revenue and Foreign Exchange Earnings

Cocoa farming makes a substantial contribution to both national revenue and foreign exchange earnings in addition to providing jobs and income. One of the most traded agricultural products in the world, cocoa exports provide producing nations with a sizable amount of foreign exchange. For example, cocoa makes up a sizable portion of Nigeria's agricultural exports and greatly boosts export revenue. The cocoa industry has historically made a significant contribution to the GDP of Côte d'Ivoire, the largest producer of cocoa in the world, sometimes as much as 20%. In a similar vein, cocoa continues to be one of Ghana's most important exports, fostering economic diversification and stabilizing the country's economy (Kongor et al, 2024). These contributions highlight how crucial cocoa cultivation is to boosting the country's economy. Cocoa planting also encourages value addition and industrial growth. Beyond basic production, the cocoa industry includes processing operations including making chocolate, cocoa butter, and cocoa powder. The value of raw cocoa beans is raised by these downstream industries, which also generate new economic prospects. Cocoa cultivation is crucial to the $100 billion worldwide

chocolate business, which connects farmers to a sizable global market. Cocoa-producing nations can increase employment, preserve more value in their economies, and lessen their need on raw commodity exports by investing in domestic processing industries (Otekunrin, 2025).

Contribution to Infrastructure development and rural development

Infrastructure development and rural development are further benefits of cocoa production. The money made from cocoa growing encourages local economic activity in many cocoa-producing regions, resulting in the construction of rural infrastructure like markets, schools, roads, and medical facilities. To increase productivity and guarantee effective transportation of cocoa beans, governments and private sector entities frequently make investments in cocoa-producing regions. These initiatives boost the general standard of living in rural areas and promote more economic activity. Furthermore, having access to financing and financial services related to cocoa production enables farmers to invest in better farming methods and technology, boosting output and revenue (Dago, 2025).

Poverty reduction and economic empowerment

Poverty reduction and economic empowerment are two more significant economic advantages. A well-known strategy for lowering poverty in underdeveloped nations is cocoa planting. Cocoa cultivation helps households raise their standard of living and lessen their susceptibility to economic shocks by offering a reliable source of income and employment. According to studies, cocoa growing significantly contributes to improving economic resilience and helping rural populations escape poverty. Furthermore, by providing premium rates for superior and ethically produced cocoa, programs like certification programs and sustainable farming methods have increased farmers' earnings even more (ResearchGate 2024).

Notwithstanding these advantages, it is crucial to remember that variables like price volatility, restricted financing availability, and climate change have an impact on the economic potential of cocoa growing. However, the economic advantages of cocoa production can be optimized with appropriate policy interventions, technological developments, and investment in value addition. Maintaining the financial benefits of cocoa production requires bolstering farmer assistance programs and guaranteeing equitable income distribution along the value chain (Statista 2025).

The production of cocoa is essential to the economic growth of the nations that produce it. It is an essential sector in many emerging nations due to its contributions to employment creation, foreign exchange profits, industrial development, income generation, and poverty alleviation. There is substantial opportunity for additional economic growth through increased productivity, sustainable practices, and higher value addition as the demand for cocoa products rises globally. As a result, in the global agricultural landscape, cocoa growing continues to be both a source of income and a key factor in economic development.

CHALLENGES OF COCOA FARMING

Millions of smallholder farmers in West Africa depend on cocoa production, which is essential to the economies of many tropical nations. Cocoa cultivation confronts many obstacles that restrict productivity, farmer income, and long-term sustainability despite its economic significance.

- **Climate change and environmental stress**

Environmental stress and climate change are two significant challenges. Temperature and rainfall variations have a significant impact on cocoa. The yield and quality of cocoa are adversely affected by rising temperatures, protracted droughts, and erratic rainfall. These climatic changes also increase the incidence of pests and diseases, further threatening production (Schroth et al., 2020; Bunn et al., 2021).

- **Prevalence of pests and diseases**

The frequency of illnesses and pests is another major problem. Insect pests like mirids and diseases like black pod disease and cocoa swollen shoot virus regularly harm cocoa fields. These problems can cause severe yield losses if not properly managed, and many farmers lack access to effective control measures (Aikpokpodion et al., 2021).

- **Low productivity and aging plantations**

Aging plantations and low productivity are major problems as well. Due to budgetary limitations and a lack of better planting materials, replanting efforts are frequently delayed, and many cocoa trees in producing regions are elderly and less productive. Additionally, poor farm management practices contribute to low yields (Anim-Kwapong & Frimpong, 2020).

- **Economic constraints and price volatility**

Cocoa farmers are also impacted by price volatility and economic limitations. Farmers find it challenging to sustain steady profits due to fluctuating worldwide cocoa prices. Most cocoa farmers are smallholders who receive a small share of the final market value, limiting their ability to invest in farm improvements and modern technologies (Fold & Neilson, 2021).

- **limited access to inputs and technology**

Limited access to technologies and inputs is another difficulty. Obtaining high-quality seeds, fertilizers, herbicides, and contemporary farming equipment can be difficult for farmers. This limitation reduces productivity and hinders the adoption of improved agricultural practices (Aikpokpodion et al., 2021).

- **Labor shortages and social issues**

Cocoa growing is also impacted by social problems and labor shortages. Due to rural-urban migration, many farming communities struggle to find skilled workers for the labor-intensive production of cocoa. In some regions, concerns about child labor and poor working conditions have raised ethical and social issues within the cocoa sector (Bunn et al., 2021).

- **Deforestation and environmental degradation**

Lastly, environmental degradation and deforestation continue to be major issues. Environmental harm and biodiversity loss are caused by the expansion of cocoa fields into forested regions.

Unsustainable farming practices further degrade soil fertility, threatening long-term productivity (Schroth et al., 2020).

MITIGATING STRATEGIES TO THE CHALLENGES OF COCOA FARMING

Technology advancements, regulatory assistance, and sustainable agricultural methods are all necessary to address the problems associated with cocoa growing. These tactics are crucial for raising farmer livelihoods, increasing production, and maintaining environmental sustainability.

- **Adoption of climate-smart agricultural practices**

Adopting climate-smart agriculture practices is one important tactic. Cocoa fields may adjust to changing climate conditions by using strategies including agroforestry, shade control, and enhanced water conservation. Agroforestry systems, where cocoa is grown alongside trees, not only regulate temperature but also improve soil fertility and biodiversity (Schroth et al., 2020; Bunn et al., 2021).

- **Use of improved and disease-resistant cocoa varieties**

Using enhanced and disease-resistant cocoa cultivars is another crucial strategy. Research organizations have created pest-resistant, high-yielding cocoa seedlings that can drastically lower losses from diseases like black pod and cocoa swollen shoot virus. Encouraging farmers to adopt these varieties can improve productivity and resilience (Aikpokpodion et al., 2021).

- **Strengthening pest and disease management practices**

Enhancing strategies for controlling pests and diseases is also crucial. Integrated Pest Management (IPM), which integrates chemical, biological, and cultural control techniques, can successfully lower pest populations while reducing environmental impact. Training farmers on proper disease identification and control techniques further enhances farm productivity (Anim-Kwapong & Frimpong, 2020).

- **Access to finance and stable pricing systems**

Another crucial tactic is to improve financing availability and stable pricing structures. Giving farmers access to reasonable loans, subsidies, and equitable pricing structures might encourage them to make investments in modernization, replanting, and farm inputs. Certification programs and cooperative systems can also increase farmers' income by providing better market access (Fold & Neilson, 2021).

- **Capacity building and farmer education**

In order to close knowledge gaps, farmer education and capacity building are essential. Extension services, farmer field schools, and training programs can equip farmers with modern farming techniques, post-harvest handling skills, and sustainable practices (Bunn et al., 2021).

- **Access to inputs and technology**

Improving technology and input access is equally crucial. The availability of modern tools, insecticides, and fertilizers at reasonable costs should be guaranteed by both public and commercial entities. The introduction of digital tools and mobile-based advisory services can also support better decision-making among farmers (Aikpokpodion et al., 2021).

- **labor and social challenges**

Policies that support ethical work practices and enhance rural lives are necessary to address labor and social issues. Encouraging youth participation in cocoa farming through incentives and mechanization can help reduce labor shortages and improve productivity (Fold & Neilson, 2021).

- **Sustainable land-use practices and forest conservation**

Finally, promoting sustainable land-use practices and forest conservation is crucial. Preventing deforestation and encouraging cocoa production within existing farmland through intensification and agroforestry can reduce environmental degradation while maintaining productivity (Schroth et al., 2020).

METHODOLOGY

To carry out the study, a descriptive survey design was adopted. The study was carried out in Akwa Ibom State, Nigeria. The population of the study comprised all agriculturalists in Akwa Ibom State, Nigeria. A stratified sampling technique was used in selecting 2 Local Government Areas each from Uyo, Eket, and Ikot Ekpene Senatorial Districts, from which 10 cocoa farmers were drawn. This gave a total sample size of 60 respondents. Data were collected using a structured questionnaire titled *"Economic Benefit and Challenge of Cocoa Farming Questionnaire" (EBCCFQ).* The instrument was validated by an expert in Test, Measurement, and Evaluation to ensure its suitability and clarity. A reliability coefficient of 0.89 was obtained, confirming the reliability of the instrument. The data collected were analyzed using descriptive statistics to answer the research questions

Research Questions 1:

The research question sought to examine the economic benefits of cocoa farming. To answer the research question, percentage analysis was performed on the data (see Table 1).

Table 1:
Percentage analysis of the economic benefits of cocoa farming

Economic benefits of cocoa farming	**FRQ**	**%**
Income generating for farmers and rural households	17	28.33**
Jobs creation	14	23.33
Substantial contribution to both national revenue and foreign exchange earnings	12	20.00
Contribution to Infrastructure development and rural development	10	16.67
Poverty reduction and economic empowerment	7	11.67*
TOTAL	**60**	**100**

****** **The highest percentage frequency**
***** **The least percentage frequency**
SOURCE: Field survey

The table 1 presents the percentage analysis of economic benefits of cocoa farming. From the result of the data analysis, it was observed that the highest percentage (28.33) was recorded against "income generating for farmers and rural households," while the least percentage (11.67) was recorded against "poverty reduction and economic empowerment". This study is in agreement with the findings of Tokou (2025), who stated that the creation of jobs is another significant economic advantage of cocoa farming. Numerous work possibilities are created along the cocoa value chain, from cultivation and harvesting to processing and marketing. According to him, Farm workers, transporters, processors, exporters, and traders are among them. Planting, trimming, harvesting millions of people around the world depend on cocoa for their livelihoods, especially smallholder farmers who produce more than 90% of the crop. Similarly, Dago, (2025) affirmed that Infrastructure development and rural development are further benefits of cocoa production. The money made from cocoa growing encourages local economic activity in many cocoa-producing regions, resulting in the construction of rural infrastructure like markets, schools, roads, and medical facilities. To increase productivity and guarantee effective transportation of cocoa beans, governments and private sector entities frequently make investments in cocoa-producing regions.

Research Questions 2:

The research question sought to identify the challenges of cocoa farming. To answer the research question, percentage analysis was performed on the data (see Table 2).

Table 2:
Percentage analysis of the challenges of cocoa farming

Challenges of cocoa farming	**FRQ**	**%**
Climate change and environmental stress	15	25.00**
Prevalence of pests and diseases	13	21.67
Low productivity and aging plantations	7	11.67
Economic constraints and price volatility	12	20.00
Limited access to inputs and technology	6	10.00
Labor shortages and social issues	4	6.67
Deforestation and environmental degradation	3	5.00*
TOTAL	**60**	**100**

****** **The highest percentage frequency**
***** **The least percentage frequency**
SOURCE: Field survey

Table 2 presents the percentage analysis of the challenges of cocoa farming. From the result of the data analysis, it was observed that the highest percentage (25.00) was recorded against "climate change and environmental stress," while the least percentage (5.00) was recorded against "deforestation and environmental degradation". This study aligns with the findings of Anim-Kwapong & Frimpong, (2020), who stated that aging plantations and low productivity are major problems as well. Due to budgetary limitations and a lack of better planting materials, replanting efforts are frequently delayed, and many cocoa trees in producing regions are elderly and less productive. Additionally, poor farm management practices contribute to low yield**.** Similarly**,** Fold & Neilson, (2021) also affirmed that cocoa farmers are also impacted by price volatility and economic limitations. Farmers find it challenging to sustain steady profits due to fluctuating worldwide cocoa prices. Most cocoa farmers are smallholders who receive a small share of the final market value, limiting their ability to invest in farm improvements and modern technologies.

Research Question 3:

The research question sought to examine the mitigating strategies to the challenges of cocoa farming. To answer the research question, percentage analysis was performed on the data (see Table 3).

Table 3:

Percentage analysis of the mitigating strategies to the challenges of cocoa farming.

Mitigating Strategies to the challenges	**Frequency**	**%**
Adoption of climate-smart agricultural practices	12	20**
Use of improved and disease-resistant cocoa varieties	11	18.33
Strengthening pest and disease management practices	11	18.33
Access to finance and stable pricing systems	9	15.00
Capacity building and farmer education	7	11.67
Access to inputs and technology	5	8.33
Formulation of Policies that support ethical work practices and enhance rural lives	4	6.67
Sustainable land-use practices and forest conservation	1	1.67*
TOTAL	**60**	**100**

****The highest percentage frequency**
***The least percentage frequency**
SOURCE: Field survey

Table 3 presents the percentage analysis of the mitigating strategies to the challenges of cocoa farming. From the result of the data analysis, it was observed that the highest percentage (20%) was recorded against "adoption of climate-smart agricultural practices," while the least percentage (1.67) was recorded against "sustainable land-use practices and forest conservation". The findings agree the opinion of with Anim-Kwapong & Frimpong, (2020), who stated that local Enhancing strategies for controlling pests and diseases is also crucial. Integrated Pest Management (IPM), which integrates chemical, biological, and cultural control techniques, can successfully lower pest populations while reducing environmental impact. Training farmers on proper disease identification and control techniques further enhances farm productivity. The result of the findings in agreement with (Aikpokpodion et al., 2021), who mentioned that using enhanced and disease-resistant cocoa cultivars is another crucial strategy. Research organizations have created pest-resistant, high-yielding cocoa seedlings that can drastically lower losses from diseases like black pod and cocoa swollen shoot virus. Encouraging farmers to adopt these varieties can improve productivity and resilience.

CONCLUSION

Cocoa farming in Nigeria remains a vital pillar of agricultural and economic development, offering numerous benefits such as income generation, employment creation, foreign exchange earnings, and rural development. The sector has continued to support millions of smallholder farmers and contribute significantly to national revenue and global agricultural trade. Its role in poverty reduction and economic empowerment further underscores its importance in strengthening rural economies. However, the sustainability and profitability of cocoa farming are threatened by several persistent challenges. Issues such as climate change, pest and disease infestations, aging plantations, inadequate access to finance and modern inputs, and price volatility continue to limit productivity and reduce farmers' income. Additionally, social and environmental concerns, including labor shortages and deforestation, pose significant risks to the long-term viability of the sector. In view of these findings, it is evident that while cocoa farming holds immense economic potential, its full benefits can only be realized through deliberate and coordinated efforts. Addressing these challenges through sustainable practices, policy support, and technological innovation is essential for enhancing productivity and ensuring the continued contribution of cocoa farming to Nigeria's economic development.

RECOMMENDATIONS

- Farmers should be encouraged to adopt climate-smart practices such as agroforestry, irrigation, and soil conservation techniques to mitigate the effects of climate change and improve resilience.
- Government and research institutions should ensure the availability and affordability of high-yielding, pest- and disease-resistant cocoa varieties to replace aging plantations.
- Agricultural extension programs should be expanded to educate farmers on modern farming techniques, pest and disease control, and post-harvest management practices.

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