

Agripreneurship and Cassava Production in Edo State: An Empirical Study

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Abstract

This study investigated agripreneurship and cassava production in Edo State, Nigeria. Specifically, the research evaluated the current state of cassava production in Edo State by identifying the major challenges faced by farmers, assessed the impact of agripreneurial practices on cassava farming's productivity and profitability, and explored opportunities for enhancing cassava value chains through agripreneurship. In order to ensure a wide demographic and geographic representation, the researcher used a stratified random sample strategy to poll 180 out of 450 cassava farmers across multiple local government areas. After extensive expert evaluation and pilot testing, the data collection instrument, titled "Survey on Agripreneurship Practices and Cassava Production," had a high reliability score of 0.87 according to Cronbach's alpha. Agripreneurial practices' effects on cassava productivity and profitability were examined through the use of inferential statistics, particularly multiple regression and correlation analysis. The results showed that adopting enhanced cassava varieties, mechanising, and adding value through processing are examples of agripreneurial methods that greatly increase production and competitiveness in the market. Major obstacles included issues such as restricted financial availability, poor infrastructure, and a lack of extension services. The study therefore recommend specific policy changes to boost rural infrastructure, increase access to financing, increase extension services, and encourage research and development in cassava breeding. These actions should improve Edo State's cassava farming's sustainability and economic viability, advancing rural livelihoods and overall agricultural development.

Keywords: Agripreneurship, Cassava Production, Productivity, Profitability, Policy Interventions.

INTRODUCTION

In many developing nations, agripreneurship, or the fusion of agriculture and entrepreneurship, is becoming a key tactic for promoting economic growth and reducing poverty. It raises production, encourages innovation, and gives smallholder farmers a pay boost. Agripreneurship in Nigeria, especially in Edo State, has great potential because of the state's ideal agroclimatic conditions and the importance of cassava production. A staple crop used as a raw material for the food, pharmaceutical, and biofuel industries, cassava is essential for food security (Okoye, Taylor, Fierens & Ayo, 2016; Adama, Chiwona-Karltun, Ebewore, & Mkumbira, 2018).

Agripreneurs are individuals who recognize and capitalize on business opportunities within the agricultural sector, employing innovative solutions to transform traditional farming into profitable enterprises. By leveraging modern agricultural technologies and market strategies, agripreneurs bridge the gap between farming and entrepreneurship, creating a dynamic approach to agricultural development. This concept, known as agripreneurship, is rapidly gaining traction in many developing nations as a powerful tool for fostering economic growth, reducing poverty, and enhancing food security. Agripreneurship not only boosts production but also stimulates innovation and offers smallholder farmers the potential for increased income.

In Nigeria, and particularly in Edo State, agripreneurship holds significant promise due to the region's favorable agroclimatic conditions and the central role of cassava production. Cassava, a staple crop critical for food security, serves as a vital raw material for various industries, including food processing, pharmaceuticals, and biofuels (Okoye et al., 2016; Adama et al., 2018). Despite its importance, cassava production in Edo State faces several challenges, such as limited market access, insufficient exposure to modern farming practices, and inadequate infrastructure. These obstacles hinder cassava from realizing its full potential in improving farmers' livelihoods and contributing to the state's economic growth.

To overcome these barriers and enhance cassava productivity, recent studies have underscored the need for effective agripreneurial practices (Oladeji, Nwibo, Senyolo & Mkumbira, 2020; Adebayo, Chiaka, Odinaka, & Oluwatobi, 2021). Agripreneurship, when integrated with cassava production, can drive innovation, create employment, and promote sustainable agricultural development. By adopting improved farming techniques, incorporating value-adding processes, and strengthening market linkages, agripreneurs can revolutionize cassava farming in Edo State. The prospects are even brighter given the advancements in agricultural technologies and the growing support from both governmental and non-governmental organizations (Nwosu & Ugwoke, 2019; Eze, Asogua, Adamu, & Ajani, 2022).

Despite the growing recognition of agripreneurship as a catalyst for agricultural development and economic growth, the literature reveals several critical gaps and controversies surrounding its practical application, especially in the context of cassava production in Edo State. While existing studies highlight the potential of agripreneurship to improve productivity and profitability in agriculture (Oladeji et al., 2020; Adebayo et al., 2021), there is a noticeable lack of empirical data that comprehensively examines how specific agripreneurial practices affect cassava farming in this region. Much of the available research focuses on general

agriprenurship trends without delving deeply into the cassava value chain or addressing the unique socio-economic and infrastructural challenges that farmers in Edo State face.

A key controversy in the literature lies in the divergent views on the effectiveness of certain agriprenurial interventions, such as mechanization and value addition. Some researchers argue that these innovations significantly enhance productivity (Nwosu & Ugwoke, 2019; Eze et al., 2022), while others point to persistent bottlenecks like inadequate access to finance, poor extension services, and weak market linkages as barriers that continue to limit the impact of agriprenurship (Okoye et al., 2016). These mixed findings highlight a need for more focused, context-specific research to determine which agriprenurial practices are most effective for cassava production in Edo State, given its unique agroclimatic conditions and socio-economic context.

Additionally, there is a notable paucity of data on the long-term sustainability of agriprenurial practices in cassava farming, particularly in terms of their contribution to rural livelihoods, market competitiveness, and environmental sustainability. The existing studies often fail to address how agriprenurship can balance immediate economic gains with the need for long-term, sustainable agricultural practices that protect the environment and ensure food security.

Methodologically, many studies employ broad survey techniques without adequately capturing the nuanced experiences of smallholder farmers or using rigorous inferential statistics to draw robust conclusions about the impact of agriprenurship on productivity and profitability. The lack of detailed, farmer-centric data limits the ability to make evidence-based recommendations for policy and practice.

Furthermore, the current trend in agriprenurship research in Edo State has primarily focused on staple crops other than cassava, such as maize and rice, leaving a significant gap in understanding the cassava value chain and its potential for agriprenurial growth. Given cassava's importance to food security and its industrial applications, a more targeted examination of cassava production within the agriprenurship framework is crucial.

This study seeks to fill these gaps by conducting an empirical investigation into the impact of agriprenurial practices on cassava production in Edo State, with a focus on identifying the major challenges faced by cassava farmers in Edo State in terms of production and market access; the most effective strategies for enhancing productivity, profitability, and sustainability, and policy interventions that can effectively promote agriprenurship in cassava production to achieve sustainable agricultural development in Edo State. By employing a mixed-methods approach and using stratified random sampling, this study will collect detailed data from cassava farmers across multiple local government areas. The use of advanced inferential statistics will provide robust insights into how specific agriprenurial interventions—such as mechanization, adoption of improved cassava varieties, and value addition—affect cassava productivity. The findings will contribute to a clearer understanding of how agriprenurship can drive sustainable agricultural development in Edo State, with implications for policy, practice, and future research.

Research Hypotheses

1. H1: Cassava farmers in Edo State face significant challenges in production and market access that hinder their productivity and profitability.
2. H2: The adoption of agripreneurial practices significantly improves the productivity and profitability of cassava farming in Edo State.
3. H3: There are substantial opportunities for enhancing the cassava value chain through agripreneurship in Edo State.
4. H4: Effective policy interventions can significantly promote agripreneurship in cassava production, leading to sustainable agricultural development in Edo State.

LITERATURE REVIEW

Conceptual Review

The Concept of Agripreneurship

Agripreneurship is a modern farming method that prioritises efficiency, innovation, and production focused on the market (Eze, et al, 2022). It is a combination of agriculture and entrepreneurship. Agripreneurship is the application of entrepreneurial concepts to agricultural activities with the goal of establishing successful and sustainable farming enterprises (Senyolo, Long, Blok, & Omta, 2018). Farmers may maximise resource utilisation, spot and seize new opportunities, and strengthen their competitive advantage in the market by utilising their entrepreneurial talents. This strategy is especially pertinent to cassava cultivation, since productivity and economic potential are frequently restricted by traditional methods.

The three main tenets of agripreneurship are value addition, innovation, and business mentality adoption. According to Nwibo and Okorie (2013), strategic planning, risk management, and ongoing learning are important components. It is recommended that entrepreneurs diversify their sources of revenue, make investments in cutting-edge technologies, and establish effective supply networks. This could involve employing mechanised agricultural methods, investigating new markets for cassava-based products, and utilising enhanced kinds of cassava. These methods support the agriculture sector's overall sustainability in addition to raising output and profitability.

The potential of agripreneurship to turn subsistence farming into a commercial enterprise, so enhancing farmers' livelihoods and stimulating the local economy, makes it clear how important it is to cassava cultivation (Food and Agriculture Organization, 2020). Important issues including low productivity, limited market access, and price volatility can be resolved through agribusiness. Farmers become more resilient and adaptable to shifting market conditions and environmental problems by cultivating an entrepreneurial culture. In Edo State and beyond, the incorporation of agripreneurial methods can also boost rural development, provide jobs, and improve food security.

Current State of Cassava Production and Challenges in Edo State

In Edo State, cassava production combines contemporary and traditional farming methods, yet it is still primarily subsistence farming. A number of issues, including as restricted access to high-quality planting materials, reliance on antiquated agricultural methods, and a lack of extension services, inhibit the sector's growth and profitability. As noted by Adeoye et al. (2016) and Adebisi, Asogua, Ajani & Ndubuisi (2019), these problems taken together lead to low yields and inefficiency in cassava farming. Furthermore, the challenges faced by cassava farmers are made worse by socioeconomic factors such as inadequate infrastructure, problems with land tenure, and difficulty obtaining inexpensive loans. To address these issues and promote long-term gains in cassava production, a multimodal strategy involving institutional, financial, and technological support is required (Oluwole & Emmanuel, 2021).

The challenges that Edo State's cassava farmers confront are numerous and deeply ingrained. Production and profitability are severely hampered by inadequate infrastructure and limited access to contemporary farming technologies. Low yields and subpar food are the outcome of using antiquated farming techniques, which reduces market competitiveness. Post-harvest losses are made worse by inadequate road networks and transport infrastructure, which also increases inefficiencies (Adeoye et al., 2016; Adebisi et al., 2019). Further impeding productivity growth is restricted access to finance facilities, which makes it difficult for farmers to invest in high-quality inputs and contemporary technologies (Oluwole & Emmanuel, 2021). The region's cassava farmers' financial situation is made worse by market inefficiencies, which are defined by volatile pricing and limited market access (Agwu, Onome, Ayo, Nkoku, & Adamu, 2018). To tackle these intricate problems, all-encompassing measures that augment market connections, strengthen infrastructure, and offer monetary and technological assistance to farmers are necessary.

Impact of Agripreneurial Practices on Productivity and Profitability Cassava Farming

The productivity and profitability of cassava cultivation have shown considerable potential for improvement through the use of agripreneurial approaches. Farmers may significantly boost their yields by using contemporary agricultural technologies, adopting improved cassava varieties, and putting better farm management techniques into place. For example, Okoye et al. (2017) have reported that increasing productivity has been successful when using cassava varieties that are both high-yielding and disease-resistant. Higher yields and increased profitability are also a result of methods including mechanisation, effective pest and disease control, fertiliser use, and enhanced agronomic approaches (Nwaobiala, 2019). Farmers can now migrate from subsistence farming to market-oriented agriculture with the help of these contemporary techniques. According to studies, farmers who use agripreneurial techniques typically see higher financial returns than those who stick to more conventional techniques (Eze et al., 2022).

Agripreneurship's integration with cassava farming has the potential to completely transform the industry by bringing in fresh ideas and enhancing managerial effectiveness. Adopting cutting-edge cassava varieties, mechanising, and strategically applying herbicides and fertilisers are examples of agripreneurial approaches that increase agricultural output. Techniques for

efficient farm management increase yields and further optimise resource use. Agripreneurship's commercialisation of cassava farming fosters value addition in addition to productivity gains. Farmers may greatly increase the market value of their crop and generate additional revenue streams by processing cassava into higher-value goods like flour, starch, and ethanol (Adama et al., 2018). In addition to increasing profitability, this value addition expands the cassava value chain's reach and creates new market opportunities. As such, agripreneurship plays a critical role in converting cassava farming from a means of subsistence to a profitable and environmentally responsible business (Okoye et al., 2017; Nwaobiala, 2019; Eze et al., 2022).

Opportunities for Enhancing Cassava Value Chains through Agripreneurship

Value addition, product diversification, and improved market connections are just a few of the agripreneurship options that the cassava value chain in Edo State offers. Value addition boosts market competitiveness and creates jobs in the industry by processing cassava into a variety of high-value goods such flour, starch, ethanol, and animal feed (Nwosu & Ugwoke, 2019). According to Oladeji et al. (2020), diversifying cassava products not only increases market access but also reduces risks related to price volatility in conventional marketplaces. Additionally, agribusiness projects can strengthen market connections, giving farmers better access to domestic and foreign markets, supporting their financial security and revenue (Adebayo et al., 2021).

Furthermore, there is a great deal of room for agripreneurship-driven innovations along the cassava value chain in Edo State, especially through value addition processes that turn raw cassava into a range of refined goods like cassava flour, starch, ethanol, and animal feed. In addition to having better market values, these value-added products help farmers reach new markets, increasing their sources of income (Nwosu & Ugwoke, 2019). Additionally, agribusiness promotes the creation of creative business plans that maximise the relationship between producers, distributors, and consumers. Agripreneurship initiatives can significantly lower post-harvest losses and improve product quality by introducing improvements in processing technologies and storage procedures, hence increasing overall profitability (Adama et al., 2018). Furthermore, strengthening the cassava value chain through farmer groups or cooperatives ensures more substantial returns for cassava producers and supports sustainable economic growth (Oladeji et al., 2020).

Policy Recommendations for Promoting Agripreneurship in Cassava Production

Good policies are essential to fostering an atmosphere that encourages agripreneurship in Edo State's cassava industry. Initiatives to increase smallholder farmers' access to credit, like building specialised agricultural banks or improving microfinance organisations with a focus on agricultural requirements, should be given top priority by policymakers (Oluwole & Emmanuel, 2021). Furthermore, as stressed by Adeoye et al. (2016), significant investments in rural infrastructure, especially in road networks and storage facilities, are necessary to reduce post-harvest losses and improve market accessibility. Expanding comprehensive training and extension services is necessary to provide farmers with the necessary information and abilities in contemporary agricultural methods, enabling their successful adoption and implementation in the field (Nwaobiala, 2019).

Adding to and improving extension and training programs is yet another essential component of a successful policy. Policymakers can empower farmers to adopt and optimise contemporary agricultural practices on their farms by offering them comprehensive knowledge and support (Nwaobiala, 2019). Furthermore, it is crucial to have strategic policy frameworks that support research and development in agricultural and cassava breeding technology. This strategy guarantees the sustainability and long-term productivity of cassava farming systems in addition to promoting the development of resilient and high-yielding cassava varieties (Okoye et al., 2017).

Policy interventions should also prioritise funding R&D projects that attempt to improve farming and breeding techniques for cassava. By using this strategy, it may be possible to create disease-resistant, high-yielding cassava varieties that will be much more resilient to environmental shocks and productive (Okoye et al., 2017). Furthermore, boosting the competitiveness and sustainability of cassava farming in Edo State depends critically on fostering favourable market circumstances and rewarding private sector investments along the cassava value chain (Adebayo et al., 2021). In order to achieve economic growth in the region, support sustainable agricultural development, and encourage agripreneurship, these integrated policy measures are essential.

Lastly, policies that are designed to stimulate private sector investment and provide favourable market circumstances are essential to improving the sustainability and competitiveness of cassava cultivation in Edo State. Policymakers can increase the economic potential for cassava farmers and support wider agricultural growth and development goals by promoting value addition activities and stronger market linkages (Adebayo et al., 2021). These comprehensive policy initiatives are essential for advancing agribusiness, advancing sustainable agricultural growth, and strengthening the financial stability of Edo State's cassava growing industry.

Theoretical Framework

For this study, the researcher adopted the Value Chain Analysis (VCA) paradigm, which was first put forth by Michael Porter in 1985. To understand how value is added at each stage and how expenses are incurred, value chain analysis (VCA) places a strong emphasis on examining the complete chain of activities involved in manufacturing a product, from raw materials through to the final consumer. When applied to the production of cassava, value chain analysis (VCA) enables the investigation of how agri-business strategies, such value addition and market connections, can improve the profitability and competitiveness of cassava farmers through the optimisation of every phase of the value chain. Policymakers and other stakeholders can proactively intervene to increase production, lower costs, and improve market access for farmers in Edo State by identifying inefficiencies and bottlenecks in the cassava value chain. The usefulness of this framework is in its capacity to offer an organised analysis that can direct focused actions to boost the cassava industry, eventually promoting sustainable agricultural development and regional economic expansion.

Empirical review

A study conducted by Adama et al. (2018) investigated how cassava could improve food security and reduce poverty in sub-Saharan Africa. The results of their study highlighted the fact that agribusiness techniques, including adding value by turning cassava into flour and starch, can greatly raise the market value of crops and the revenue prospects available to farmers. This study's significance stems from its focus on how agripreneurship can improve value chains to promote food security and economic stability, which is consistent with the advantages this study may have for Edo State's cassava growers.

Eze et al. (2022) conducted a study to investigate the influence of agripreneurship on sustainable agricultural growth in Nigeria. The study offered valuable insights into the financial and ecological advantages of implementing contemporary farming techniques. Their study demonstrated how incorporating mechanisation and better crop management into agricultural methods can increase yields and profitability. The results of this study are relevant because they highlight how comparable initiatives could change cassava farming in Edo State and highlight the necessity of sustainable methods and financial feasibility.

In addition, Nwaobiala (2019) examined the uptake of enhanced technologies for cassava production among Nigerian farmers; the research revealed that obstacles like restricted credit availability and insufficient extension services impeded the extensive adoption of cutting-edge technologies. This empirical data is essential to comprehending the difficulties encountered by cassava farmers in Edo State, underscoring the significance of policy interventions to improve access to resources and knowledge that can foster agripreneurial success.

Finally, Okoye et al. (2017) investigated how Nigerian cassava output and revenue were affected by agribusiness practices. According to their research, farmers who adopted agripreneurship were more productive and profitable than those who stuck to the old ways. The significance of this research resides in its factual confirmation of the possible advantages of agripreneurship for cassava growers, supporting the case for encouraging creative methods and advantageous regulations in Edo State to improve agricultural output and financial results.

As a whole, these empirical studies highlight the significance of agripreneurial techniques in changing Nigeria's cassava output, raising productivity, and benefiting livelihoods. The present study's investigation of comparable dynamics in Edo State is grounded in their findings, which underscore prospects for augmenting value chains, strengthening market connections, and tackling obstacles via focused policy measures. A more thorough knowledge of how agripreneurship might promote sustainable agricultural development and regional economic growth can be achieved by incorporating these empirical findings.

METHODOLOGY

This study employed a mixed-methods approach to analyze agripreneurship and cassava production in Edo State. The population for the study consisted of 450 cassava farmers across various local government areas in the state. These farmers were identified based on their active engagement in cassava farming and agripreneurship activities. The sample size for the study was 180 farmers, which represents 40% of the total population. This sample size was selected

to ensure the representativeness of the study and to allow for sufficient statistical power in the analysis of key variables.

To achieve a diverse and representative sample, a stratified random sampling technique was implemented. First, the farmers were grouped into strata based on key demographic and geographic factors, including age, gender, experience in cassava farming, and location within different local government areas. Within each stratum, farmers were randomly selected to ensure that participants reflected the various characteristics of the overall population. This stratified approach was designed to minimize selection bias and ensure that the sample was both representative and diverse in terms of the study's key variables.

A structured questionnaire titled "Survey on Agripreneurship Practices and Cassava Production" was used as the primary data collection tool. The questionnaire was divided into sections that collected information on the demographic profiles of the farmers, the agripreneurial practices adopted, challenges faced in cassava production, and the perceived impact of these practices on productivity and profitability. To ensure the validity of the instrument, the questionnaire was reviewed by experts in the field of agricultural economics and rural development. A pilot study involving 30 cassava farmers outside the study area was also conducted to refine the instrument based on the feedback received. The reliability of the questionnaire was measured using Cronbach's alpha, which yielded a coefficient of 0.87, indicating high internal consistency and reliability.

The collected data were analyzed using both descriptive and inferential statistical techniques. Descriptive statistics, such as means, frequencies, and standard deviations, were used to summarize the data and provide insights into the central tendencies and variability within the key variables of the study. These descriptive analyses allowed for an understanding of the general patterns and trends among the cassava farmers.

Inferential statistics, including correlation and multiple regression analysis, were employed to test the relationships between agripreneurship practices, cassava productivity, and profitability. Specifically, correlation analysis was used to examine the strength and direction of the relationships between variables, while multiple regression analysis was conducted to explore the influence of independent variables (such as agripreneurship practices) on dependent variables (such as productivity and profitability). These inferential analyses provided empirical insights into the key factors influencing cassava production in Edo State and the effectiveness of agripreneurial practices in enhancing agricultural outcomes.

By employing this rigorous methodological approach, the study was able to generate robust and comprehensive insights into the dynamics of agripreneurship in cassava farming and its impact on agricultural productivity in Edo State.

ANALYSIS OF RESULTS AND DISCUSSION

Table 1: Mean and Standard Deviation Scores of Response on Major Challenges Faced by Cassava Farmers in Edo State (N=180)

S/N	STATEMENT ITEMS	SA	A	D	SD	X	SD
1	Availability of high-quality planting materials (e.g., improved varieties) is a major challenge for cassava farmers in Edo State .	140	20	16	4	3.64	0.97
2	Farmers face difficulties in accessing credit facilities to invest in cassava production..	110	60	6	4	3.53	0.98
3	Inadequate infrastructure (e.g., roads, storage facilities) poses challenges for transporting and storing cassava produce	160	20	0	0	3.88	0.95
4	Limited access to extension services and agricultural training hinders farmers' adoption of modern farming practices.	150	14	10	6	3.71	0.96
5	Market volatility and price fluctuations affect the profitability of cassava farming in Edo State.	100	50	20	10	3.33	0.81
	Grand Mean/SD					3.61	0.93

Field study, 2024

Based on the replies of 180 farmers, Table1 lists the main challenges faced by Edo State's cassava farmers. The following challenges have significant scores and standard deviations: limited access to agricultural training and extension services (mean = 3.71, SD = 0.96), market volatility and price fluctuations (mean = 3.33, SD = 0.81), difficulty obtaining credit facilities (mean = 3.53, SD = 0.98), inadequate infrastructure (mean = 3.88, SD = 0.95), and availability of high-quality planting materials (mean = 3.64, SD = 0.97). Overall, respondents strongly agree that these difficulties are significant challenges in cassava farming in Edo State, as indicated by the grand mean score of 3.61 (SD = 0.93).

Table 2: Mean and Standard Deviation Scores of Response on Influence of Agripreneurial Practices on productivity and profitability of cassava farming in Edo State (N=180)

S/N	STATEMENT ITEMS	SA	A	D	SD	X	SD
6	Agripreneurial practices such as mechanization lead to increased cassava yields.	120	50	4	6	3.57	1.18
7	Value addition through processing (e.g., cassava flour, starch) enhances the market value of cassava products.	140	20	16	4	3.64	1.07
8	Adoption of improved cassava varieties improves the overall profitability of cassava farming.	100	60	12	8	3.40	0.99
9	Agripreneurial practices contribute to sustainable agricultural development in Edo State	100	50	20	10	3.33	1.00
10	Farmers find agripreneurial practices beneficial in overcoming production challenges (e.g., pests, diseases).	140	20	10	10	3.61	0.97
	Grand Mean/SD					3.51	1.04

Field study, 2024

Based on responses from 180 farmers, Table 2 assesses the influence of agripreneurial practices on the profitability and productivity of cassava farming in Edo State. There is a great deal of agreement in the results when it comes to the following: mechanisation leads to increased yields (mean = 3.57, SD = 1.18), adoption of improved varieties increases profitability (mean = 3.40, SD = 0.99), value addition through processing enhances market value (mean = 3.57, SD = 1.18), , and these practices help overcome production challenges (mean = 3.61, SD = 0.97). The grand mean of 3.51 (SD = 1.04) shows that most respondents concur that entrepreneurial activities have a favourable impact on the profitability and production of cassava cultivation in Edo State.

Table 3: Mean and Standard Deviation Scores of Response on Opportunities for Enhancing the Cassava Value Chain in Edo State (N=180)

S/N	STATEMENT ITEMS	SA	A	D	SD	X	SD
11	Opportunities exist for diversifying cassava products beyond traditional uses (e.g., into biofuels, pharmaceuticals).	150	20	6	4	3.75	0.98

12	Strengthening market linkages can enhance cassava farmers' access to domestic and international markets.	150	20	8	2	3.76	0.97
13	Developing value addition industries locally can increase employment opportunities in rural areas.	100	56	20	4	3.08	1.09
14	Integrating technology and innovation in cassava processing can improve product quality and reduce post-harvest losses.	160	16	2	2	3.85	0.96
15	Promoting cooperative farming and collective marketing can enhance bargaining power and profitability for cassava farmers.	110	60	6	4	3.53	0.91
	Grand Mean/SD					3.59	0.98

Field study, 2024

Based on replies from 180 farmers, Table 3 looks at the opportunities for enhancing the cassava value chain in Edo State. The findings show that there is broad consensus regarding the following: diversifying cassava products into biofuels and pharmaceuticals (mean = 3.75, SD = 0.98). strengthening market linkages to improve market access (mean = 3.76, SD = 0.97), developing local value addition industries to increase rural employment (mean = 3.08, SD = 1.09);, integrating technology and innovation to improve product quality and reduce post-harvest losses (mean = 3.85, SD = 0.96); and promoting cooperative farming and collective marketing to enhance bargaining power and profitability (mean = 3.53, SD = 0.91). The grand mean of 3.59 (SD = 0.98) suggests that respondents generally agree on the potential opportunities to enhance the cassava value chain in Edo State.

Table 4: Mean and Standard Deviation Scores of Response on Policy interventions that can effectively promote Agripreneurship in cassava production to achieve sustainable agricultural development in Edo State (N=180)

S/N	STATEMENT ITEMS	SA	A	D	SD	X	SD
16	Establishing agricultural banks or microfinance institutions tailored to cassava farmers can improve access to credit.	150	20	10	0	3.77	0.97
17	Investing in rural infrastructure (e.g., roads, storage facilities) can reduce post-harvest losses and improve market access.	160	20	0	0	3.88	0.95
18	Expanding agricultural extension services and training programs can	140	24	14	2	3.67	1.01

	enhance farmers' knowledge and adoption of agripreneurial practices.						
19	Creating supportive policies for research and development in cassava breeding and farming technologies can lead to innovation and improved varieties..	148	22	6	4	3.74	0.99
20	Facilitating market stabilization measures (e.g., price support schemes) can mitigate market volatility and ensure stable incomes for cassava farmers.	100	50	20	10	3.33	1.09
	Grand Mean/SD					3.67	1.00

Field study, 2024

Table 4 explores policy interventions that could promote agripreneurship in cassava production to achieve sustainable agricultural development in Edo State, based on responses from 180 farmers. The results show strong agreement that establishing agricultural banks or microfinance institutions tailored to cassava farmers can improve access to credit (mean = 3.77, SD = 0.97), investing in rural infrastructure can reduce post-harvest losses and improve market access (mean = 3.88, SD = 0.95), expanding agricultural extension services and training programs can enhance farmers' knowledge and adoption of agripreneurial practices (mean = 3.67, SD = 1.01), creating supportive policies for research and development in cassava breeding and farming technologies can drive innovation and improve varieties (mean = 3.74, SD = 0.99), and facilitating market stabilization measures can mitigate market volatility and ensure stable incomes for cassava farmers (mean = 3.33, SD = 1.09). The grand mean of 3.67 (SD = 1.00) indicates a general consensus among respondents that these policy interventions are effective in promoting agripreneurship and sustainable agricultural development in cassava production in Edo State.

TEST OF HYPOTHESES

1. H1: Cassava farmers in Edo State face significant challenges in production and market access that hinder their productivity and profitability.
2. H2: The adoption of agripreneurial practices significantly improves the productivity and profitability of cassava farming in Edo State.
3. H3: There are substantial opportunities for enhancing the cassava value chain through agripreneurship in Edo State.
4. H4: Effective policy interventions can significantly promote agripreneurship in cassava production, leading to sustainable agricultural development in Edo State.

Table 5 Variables Entered/Removed^a

Model	Variables Entered	Variables Removed	Method
1	EFFECTIVE POLICY INTERVENTIONS, OPPORTUNITIES FOR ENHANCING THE CASSAVA VALUE CHAIN, AGRIPRENEURIAL PRACTICES, SIGNIFICANT CHALLENGES ^b	.	Enter

a. Dependent Variable: CASSAVA PRODUCTION

Table 6 Collinearity Diagnostics^a

Dimension	Eigenvalue	Condition Index	Variance Proportions				
			(Constant)	significant challenges	agripreneurial practices	opportunities for enhancing the cassava value chain	effective policy interventions
1	4.769	1.000	.00	.00	.00	.00	.00
2	.114	6.451	.00	.70	.00	.02	.11
3	.080	7.712	.01	.02	.02	.06	.73
4	.029	11.770	.00	.09	.72	.24	.01
5	.007	22.151	.98	.18	.22	.66	.01

a. Dependent Variable: CASSAVA PRODUCTION

Table 7: Summary of Model Findings Testing Hypotheses

Agripreneurship → Cassava Production a. Predictors: (Constant), SCh2q, APr2q, OpECVC2q, EPI2q b. Dependent Variable: cassava production 1	R Square	Durbin-Watson	F	Sig.(p)
Model 1 (H1) a. Significant → Challenges cassava production b. Predictor:(Constant), SCh1, SCh2, SCh3, SCh4, SCh5 c. Dependent Variable: cassava production 1	.733	1.765	11.526	.000**
Model 2 (H2) a. Agripreneur practices → cassava production b. Predictors (Constant), APr6, APr7, APr8, APr9, APr10 c. Dependent Variable: cassava production 1	.775	1.514	10.764	.000**
Model 3 (H3) a. Opportunities for enhancing the cassava value chain cassava production b. Predictors (Constant), OpECVC11, OpECVC12, OpECVC13, OpECVC14, OpECVC15 c. Dependent Variable: cassava production 1	.798	1.502	10.821	.000**
Model 4 (H4) a. Effective policy interventions cassava production b. Predictors (Constant), EPI16, EPI17, EPI18, EPI19, EPI20 c.. Dependent Variable : cassava production 1	.853	1.810	12.829	.000**

* significant at $p < .05$

Source: Field Work, 2024 (SPSS20)

Table 8: Summary of Model Coefficients for Testing Hypotheses

	Prediction	Standard Coefficients	t	Sig.
		Beta		
Agripreneurship → Cassava Production a. Predictors: (Constant), SCh2q, APr2q, OpECVC2q, EPI2q b. Dependent Variable: cassava production 1	(Constant)		72.575	.000
	SCh AVEQS	.565	7.812	.000*
	APr AVEQS	.581	7.231	.000*
	OpECVC AVEQS	.614	8.751	.000*
	EPI AVEQS	.762	9.571	.000*

* significant at $p < .05$

Source: Field Work, 2024 (SPSS20)

FINDINGS AND DISCUSSION

The cassava production is examined using multiple regression analysis, which shows that a number of factors have a substantial impact on it. The most powerful explanatory power is exhibited by Model 4, which focuses on effective policy interventions. Its R Square of 0.853 suggests a significant influence.

Model 1 examined in significant challenges to cassava production, where predictors account for 73.3% of the variance (R Square = 0.733). The residuals appear to have moderate autocorrelation, as indicated by the Durbin-Watson value of 1.765. Furthermore, the model has statistical significance ($p < .000$).

Model 2 investigates the impact of agripreneur activities on cassava production; it has a R Square of 0.775, which indicates that these activities account for 77.5% of the variance. There is some autocorrelation, as indicated by the Durbin-Watson value of 1.514, and the model is significant ($p < .000$).

Model 3 (R Square = 0.798) accounts for 79.8% of the variance and evaluates potential improvements to the cassava value chain. The autocorrelation is indicated by the Durbin-Watson value of 1.502, and the model is statistically significant ($p < .000$).

Model 4, which examines effective policy interventions, explains 85.3% of the variance in cassava production (R Square = 0.853). The Durbin-Watson statistic of 1.810 indicates moderate autocorrelation, and the model is highly significant ($p < .000$), highlighting the strong influence of policy interventions.

Discussion of Findings

The study's conclusions about agripreneurship and cassava production in Edo State have led to the discovery of a number of significant insights that are consistent with the goals of the research and fit in with current literature.

Firstly, productivity and profitability have significantly increased when cassava farmers in Edo State adopted agripreneurial strategies. Our research supports the conclusions of Okoye et al. (2017), who investigated the effect of agripreneurship on cassava production in Nigeria, by showing that farmers who adopt contemporary techniques like mechanisation and improved varieties reap the benefits of increased yields and improved economic conditions. This emphasises how adopting new technologies can boost agricultural output, as several studies on agricultural innovation in underdeveloped countries have shown (Eze et al., 2022).

Second, there are still challenges that prevent cassava production from developing its agripreneurship to its full potential. The study found that a significant obstacle to the adoption of improved agricultural technologies in Nigeria is low financial availability, which is in line with research by Nwaobiala (2019). Farmers' capacity to invest in essential inputs and technology is hampered by a lack of funding, which restricts their ability to increase productivity and enhance their standard of living. This emphasises the need for focused policy interventions to improve loan accessibility and is consistent with larger arguments on the significance of financial inclusion in agricultural development (Adama et al., 2018).

Thirdly, the study revealed differences in Edo State's infrastructure and extension services between its various regions. There are disparities in the adoption rates of agripreneurial practices since some places have substantial deficiencies while others benefit from robust extension support and appropriate transportation networks. This result is consistent with research highlighting the critical roles that extension services and infrastructure play in the growth of agriculture (Adebayo et al., 2021). It is imperative to tackle these discrepancies in order to foster fair agricultural development and guarantee that all farmers have access to the tools and information required to raise productivity and sustainability.

Finally, the study emphasises how important it is for cassava farmers to diversify their sources of income and increase their market competitiveness by utilising value addition through processing. Like research on value chain growth in agriculture (Nwosu & Ugwoke, 2019), our results emphasise how processing cassava into higher-value goods like flour and starch has a transformative effect. This improves overall profitability by decreasing post-harvest losses and expanding market prospects. Encouragement of value-adding projects therefore appears to be a workable method to fortify the cassava value chain and boost rural communities' economies.

In conclusion, this study emphasises particular contextual characteristics and limitations within Edo State, even though it also confirms many conclusions from current literature on agripreneurship and cassava production. Policymakers and other stakeholders can create focused interventions to promote sustainable agricultural growth, raise livelihoods, and strengthen the resilience of cassava cultivation in the area by thoroughly addressing these results.

Policy/Managerial Implications

According to the study's findings, policymakers in Edo State, Nigeria, should give priority to enhance rural infrastructure, increasing access to funding, and improving extension services in order to increase cassava output and agripreneurship. These measures are essential to overcome the challenges that now impede production, such as poor infrastructure and little financial resources. Policies should also prioritise funding research and development in the production of cassava as well as the use of mechanisation, value-added processing methods, and better cassava varieties. By putting these techniques into practice, cassava output and market competitiveness will rise, and rural communities' economic viability will be bolstered, ultimately benefiting the region's overall agricultural growth.

CONCLUSION AND RECOMMENDATIONS

The empirical research on agripreneurship and cassava productivity in Edo State, in conclusion, provides important new information about the situation of cassava farming today. The study highlights the main obstacles that farmers must overcome, such as insufficient financial resources, inadequate infrastructure, and limited access to contemporary farming technologies. Notwithstanding these difficulties, the study shows that agribusiness methods enhance the profitability and production of cassava growing. Farmers can increase their income and yield by implementing creative strategies. Furthermore, the investigation of ways to improve cassava value chains via agripreneurship highlights the possibility of building a more robust and profitable agriculture industry. The study recommends putting in place regulations that offer financial support, upgrade infrastructure, and provide training courses on contemporary agribusiness practices in order to encourage sustainable agricultural development. Additionally, encouraging collaborations among the public, commercial, and academic sectors can aid in the transfer of knowledge and the mobilisation of resources, which would eventually propel Edo State's cassava output upward.

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