

Effect Of Agricultural Marketing on Rural Economic Development in Ebonyi State

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Abstract- *This study investigated the effect of agricultural marketing on rural economic development in Ebonyi State. The specific objectives were to examine the contribution of aggregating agricultural produce to income generation, the effect of storing agricultural produce on employment creation, the link between transporting agricultural produce and improved road infrastructure, and the impact of distributing agricultural products on market development in rural areas of Ebonyi State. A cross-sectional survey research design was used to collect data, with a questionnaire as the primary data collection tool. The study population comprised rural dwellers in Ebonyi State, and the Cochran formula was used to determine the sample size. The stated hypotheses were statistically tested using Analysis of Variance (ANOVA), computed with the aid of the Statistical Packages for Social Sciences (SPSS) Version 23. The findings revealed that: assembling agricultural produce improves income generation, storing agricultural produce has a significant effect on employment generation, there is a significant relationship between transporting agricultural produce and improved road infrastructure, and distributing agricultural products enhances market development in rural areas of Ebonyi State. Based on these findings, it was recommended that the government and agricultural cooperatives should support aggregation through logistics, provide modern storage facilities, and construct feeder roads to enhance efficient transportation and market development in Ebonyi State.*

Index Terms-Marketing, Agriculture, Rural, Economic, Development, Farm Produce, income generation, employment generation.

I. INTRODUCTION

Agriculture plays a crucial role in driving Nigeria's socio-economic progress, particularly where a significant portion of the population relies on farming for their livelihoods (Olagunju, 2021). Rural farmers sell their agricultural produce to generate income and meet other needs, which leads to the process of agricultural marketing. Agricultural marketing involves anticipating, identifying, and satisfying the needs of consumers in agricultural markets through activities such as assembling, processing, packaging, storing, transporting, distributing, and pricing agricultural products (Ejionueme & Nebo, 2021). This process typically starts with rural farmers who make the products available to consumers through various marketing channel members, such as farmers, agents, wholesalers, and retailers. This brings producers and consumers together for the exchange of agricultural products for money or other valuables. Specifically, agricultural marketing helps determine what agricultural products to produce, how to produce them, for whom to produce them, and how to transfer the produced goods to the final consumers (Onibokun, 2022). On the other hand, Olyaide (2021) defined rural development as the improvement in the living standards of rural dwellers, which is reflected in increased income generation, better road infrastructure, market development, and employment generation, among other factors. These tasks are often carried out by the government, but sometimes, community associations in collaboration with the government can also facilitate these processes.

According to Ojeke (2022), the various activities that constitute agricultural marketing include assembling, processing, packaging, storing, transportation, distribution and pricing of agricultural produce to various markets for sale. Assembling encompasses

gathering the farm produce, especially in its raw form, mostly done by rural farmers who provide them for sale. Processing or grading involves removing the unwanted part or breaking it down as agro -allied products for final usage to produce finished products. Packaging involves bagging the produce while storage involves keeping them in safe location or stores before transportation to various markets for sale (Onibokun, 2022). During transportation to various markets for sale, adequate care is taken to avoid breakage due to bad roads. When the products are brought to the market, further activity taken is the distribution to various locations when the buyers or consumers are situated depending on demands. During the selling process, the seller and buyers bargain on the price and upon agreement, sold to the consumers or industrial buyers.

In similar vein, Olagunju (2021), revealed that the major indicators of rural development are improved income generation for rural dwellers, improved road infrastructure, market development and employment generations among others. Improved income generation deals with the continued increase in the per capita income of rural dwellers as a result of engagement in various economic activities. These economic activities could be farming, businesses or taking up government jobs, which is generally regarded as employment generation. Road infrastructure deals with the construction of feeder roads or trunk C roads which connect communities. The construction of these feeder roads attracts businesses, leads to various markets and enhances other economic activities in the communities. Market development involves construction of markets and the provision of shops for rural dwellers to carry out their businesses (Ojeke, 2022).

According to Shiferaw, Hellin and Muricho (2021), agricultural marketing attracts rural development. When rural dwellers or farmers take their farm produce such as palm kernel ogbono, melon, cassava fruits cashew nuts mangoes oranges vegetables and yam for sale in the market, they generate income which is further used to take care of their health, clothing and training their children in schools. The income generated is also spent on buying some farm inputs such as fertilizer, herbicides and farm implements, which thus enhance their production

process. Ojeke,(2022), also maintained that the enhanced marketing activities bring about the development of various markets and their infrastructure, which serves as the venue for the exchange of agricultural products. Often times the government and communities take notice of the booming activities and construct new markets with shops for the sale of the produce. The construction of new markets also encourages the development of road infrastructure, which enables both buyers and sellers to easily access these markets. The government typically constructs these roads as part of its efforts to promote development, encourage agricultural activities, and discourage rural-urban migration. The various processes involved in the harvesting, processing, storage, transportation, distribution, and sale of agricultural products generate employment and job opportunities for rural residents (Onibokun, 2022).

The citizens of Ebonyi State rely heavily on agricultural production as their primary economic activity, as they are blessed with an abundance of arable land that is well-suited for farming. However, Nigeria's agricultural sector is predominantly rural, with farmers living in widely dispersed locations, while the consumers are primarily from semi-urban and urban areas. This situation creates a disconnect between the expectations and the reality experienced by the farmers and the consumers. The farmers are often forced to sell their produce at very low prices, as they lack access to effective and fair markets. The government's efforts to boost agricultural activities for food security and economic empowerment by developing markets to connect farmers and consumers have not been established in the context of agricultural marketing in rural areas. Furthermore, the lack of adequate infrastructure, such as limited storage facilities like silos for preservation, makes it challenging to maintain a steady supply of agricultural products during the off-season, leading to spoilage and wastage of crops. Also poor transportation network due to the inadequate or bad state of rural roads poses a problem as it hampers the effective movement of agricultural produce to the markets. The seasonal nature of agricultural products makes it vulnerable to price volatility in that fluctuations in prices during peak periods can lead to financial instability for farmers, and also inadequacy

or lack of processing capabilities reduce the value of agricultural produce. These observed gaps are the problem necessitating this study.

1.1 Study Objectives

The overarching goal of this research is to investigate the effect of agricultural marketing on rural development in Ebonyi State, Nigeria. The specific objectives are as follows:

- (1) to assess the contribution of agricultural produce aggregation on income generation among rural residents in Ebonyi State.
- (2) to determine the effect of storage of agricultural produce on employment generation in rural areas of Ebonyi State.
- (3) to find out the nexus between transportation of agricultural produce and improved road infrastructure in rural areas of Ebonyi State
- (4) to evaluate the effect of distribution of agricultural products on market development in rural areas of Ebonyi State.

1.2 Hypotheses

- (1) Assembling of agricultural produce does not improve income generation among rural dwellers in Ebonyi State.
- (2) Storage of agricultural produce has no significant effect on employment generation in rural areas of Ebonyi State.
- (3) There is no significant relationship between the transportation of agricultural produce and improved road infrastructure in rural areas of Ebonyi State.
- (4) Distribution of agricultural products does not enhance market development in rural areas of Ebonyi State.

II. REVIEW OF RELATED LITERATURE

2.1. Conceptual Review

2.1.1 Agricultural Marketing

Agricultural marketing involves anticipating, identifying, and fulfilling the needs of consumers in agricultural markets (Burgess, 2022). It begins before production by determining what products consumers would want, and continues after production by ensuring that what is produced, packaged, processed,

stored, transported, standardized, graded, priced, promoted, and made available to consumers through various marketing channels such as farmers, agents, wholesalers, and retailers (Ejionueme & Nebo, 2021). Agricultural marketing encompasses pre-production, production, and post-production activities aimed at satisfying human needs. It brings producers and consumers together for the exchange of agricultural products for money or other valuables. Specifically, agricultural marketing helps determine what agricultural products to produce, how to produce them, for whom to produce them, and how to transfer the produced goods to the final consumers (Nebo & Ejionueme, 2021).

Badar (2021) identified five key stakeholders or market actors in the agricultural marketing system: "producers, traders, trade supporters, trade planners/decision makers, and consumers". Each of these stakeholders has distinct marketing goals, as outlined below. Producers or farmers are the primary stakeholders in the agricultural marketing system. They cultivate a wide variety of food items for both self-consumption and market supply (Chokera et al., 2022). Producers aim to maximize their net farm income and minimize production and marketing risks. They also desire well-developed and guaranteed markets, improved market positioning, and stable output prices and input supplies.

Traders, including commission agents, brokers, wholesalers, and retailers, operate in the markets and link producers with consumers (Cohen, 2020). Traders seek a high volume of produce, profitable and efficient purchasing, minimal trade restrictions, and reduced market risks. Trade supporters do not directly participate in trading activities but rather facilitate and support the performance of these activities (Olyaide, 2021). Their primary goals are to enhance the efficiency of goods exchange and ensure the smooth functioning of market systems, including through the provision of infrastructure and communication support (Izuchukwu, 2021). Trade planners and decision-makers are responsible for making decisions related to agricultural marketing. This group's objectives are largely social and political, focused on securing sufficient food supplies and promoting domestic agricultural markets (Badar, 2021). Price stabilization and export sector growth

are among their other key goals. Finally, consumers, though their influence is considered a derived function executed through traders and trade institutions, seek to acquire high-quality products at low prices and with better services (Karani & Wanjohi, 2021).

2.1.2.1 Components of Agricultural Marketing

According to Ojeke (2022), the various components of agricultural marketing include assembling, processing, packaging, storing, transportation, distribution and pricing

- (i) Assembling encompasses the gathering of the farm produce especially in its raw form). It is mostly done by rural farmers who provide them for sale or marketers who visit various farmers in the rural areas and demand their farm produce. Fruits, Vegetables, Palm kernels, cashew nuts, Ogbono, Mangoes, oranges, cassava, yams and nuts among others are common agricultural produce that are gathered for further usage by either farmers or businessmen and women who scout for them in rural areas of Ebonyi State (Ojeke, 2022).
- (ii) Processing or grading involves removing the unwanted part or breaking it down as agro -allied products for final usage to produce finished products. For instance, when rice is harvested, the seeds are removed from the stalks and winnowed to remove the chaff before it is parboiled or stored for further sale (Kiaya, 2021). Fruits and nuts of different kinds are also processed by removing unwanted parts before taking to market for sale. Various equipment and machines, such as grinding engines for rice are used during the grading and processing of agricultural produce.
- (iii) Packaging and storage involve bagging the produce, while storage involves keeping them in a safe location or store before transportation to various markets for sale (Onibokun, 2022). Bags or sacks of different kinds, especially in kilograms (kg) are used in the packaging of the various graded and processed agricultural produce. The packaged agriculture produced is stored in silos and other stores depending on the nature of the products. The store or silos could be fumigated against insect or rodent attacks.
- (iv) Transportation: This step involves transporting stored agricultural goods to various markets for

sale. The mode of transportation, whether lorries or cars, is determined by the type of produce, the distance to be covered, and the associated costs. During the transportation process to these different markets, special care is taken to prevent any damage or breakage that could result from poor road conditions (Kohl & Uhl, 2022).

- (v) Distribution: At market, the various products are sent to various market segments depending on the demand. When the products are brought to the market, further activity taken is the distribution to various locations where the buyers or consumers are situated depending on demands (Makhura, 2020). During the selling process, the sellers and buyers bargain on the price and, upon agreement, sell to the consumers or buyers.

2.1.3 The Concept of Rural Development

According to Olayide (2021), rural development is a process of concerted efforts to significantly increase rural resource productivity. The central objective is to enhance rural income and create employment opportunities in rural communities, allowing rural dwellers to remain in the area. It is an integrated approach to food production, provision of physical, social, and institutional infrastructures. The ultimate goal is to bring about a good healthcare delivery system, affordable and quality education, and improved and sustainable agriculture, among other things. Olayide (2021) added that rural development involves reconstructing the eroded economic base of both the rural economy and the farm enterprise, representing the well-understood self-interest of increasing sections of the rural population.

Rural development ensures the modernization of the rural society and its transition from traditional isolation to integration with the national economy. It is essential to generate foreign exchange and attract revenue to finance public and private consumption and investment. Rural development may also be seen as an ideology and a practice (Badar, 2021). It may mean planned change by public agencies based outside the rural areas, such as the National Government and International organizations. It may also involve bringing the countryside into an active state and transforming the inferior nature of the countryside into something more superior in terms of

activities. According to the World Bank (2019), rural development must be designed to increase production. It recognizes that improved food supplies and nutrition, together with basic services like health and education, can directly improve the physical well-being and quality of life of the rural poor, and indirectly enhance their productivity and ability to contribute to the national economy.

In essence, rural development implies a broad-based reorganization and mobilization of the rural masses to enhance their capacity to cope effectively with the daily tasks of their lives and with the resulting changes (Odini, 2021). It is evident that rural development is not a one-off thing or an immediate and snap phenomenon. Rather, it is a gradual and progressive process towards perfection, with a set standard in mind.

2.1.4 Indicators of Rural Development

According to Olagunju (2021), the major indicators of rural development are improved income generation for rural dwellers, improved road infrastructure, market development and employment generations among others.

- (i) Improved income generation: This deals with continued increase in the per capita income of rural dwellers as result of engagement in various economic activities (Okuneye, 2022). It is expected that the as rural dwellers engage in agricultural activities, businesses and take up government works; they are to generate income to meet their various need in health, education, clothing, housing and feeding. Thus when rural dwellers generate adequate income to meet their various needs, their areas could be regarded as developed (Karani and Wanjohi, 2021).
- (ii) Employment Generation: This entails engagement in various ventures to make a living. Engagement in agricultural activities such as crop production, fishery, animal husbandry and forestry constitute a significant aspect of employment. Engagement in businesses or taking up government jobs also constitute part of employment that could be used to measure rural economic development in Nigeria and beyond (Karani and Wanjohi, 2021).
- (iii) Road infrastructure deals with the construction of feeder roads or trunk C roads which connect communities. It is entirely the responsibility of

the government especially the State and Local Governments to construct rural roads. While the state is expected to construct the trunk B road which connects local governments, the local government is expected to construct trunk C roads which link one community or village to another. However, often, notable individuals, community associations or international organisations assist the government in this task (Olagunji, 2021). The construction of these feeder roads attracts businesses, leads to various markets and enhances other economic activities in the communities.

- (iv) Market development involves the establishment of marketplaces and the provision of shops for rural residents to conduct their business activities (Ojeke, 2022). Additionally, the primary responsibility of constructing markets in Nigeria lies with the local government. Nonetheless, state governments, prominent individuals, and community associations may voluntarily contribute to this endeavor. Well-designed markets feature shops for storage and protection from rain. They also incorporate motor parks where traders can load their goods for further transportation and distribution after making their purchases.

2.1.5 Nexus between Agricultural Marketing and Rural Development

According to Wahab and Abiodun (2021) and Ojeke (2022), agricultural marketing attracts rural development in many economies of the world. It is noted that the various components of agricultural marketing, such as assembling, processing, packaging, storing, transportation, distribution and pricing of agricultural produce, bring about rural economic development in the form of improved income generation for rural dwellers, improved road infrastructure, market development and employment generations, among others.

Agricultural marketing plays a crucial role in the economic development of a country, regardless of its level of development. In less developed countries, the importance of agricultural marketing systems is amplified as their economies heavily rely on the agricultural sector, which employs a significant portion of the labor force. Rural poverty is a

prevalent issue, and a significant share of consumer spending is allocated to food. Therefore, the literature suggests that developing agricultural marketing systems is central to economic progress (Badar, 2021), ultimately empowering farmers financially.

An effective marketing system guarantees higher incomes for farmers (Bakos, 2021), reduces rural-urban migration (Regev and Nisan, 2018), improves local production among farmers (Cohen, 2020), and facilitates the adoption of farming technology (Burgess, 2022). Agricultural marketing ensures better prices for farm products, incentivizing farmers to invest their surpluses in modern inputs to boost productivity and production. This, in turn, leads to an increase in the surplus available for marketing and a rise in farmers' incomes (Makhura, 2020). Without easy access to markets where they can sell their surplus produce, farmers have little motivation to increase production. Providing adequate incentives for enhanced production is, therefore, crucial, and this can be achieved by streamlining the marketing system (Acharaya and Agarwal, 2022).

2.2 Empirical Review

Chokera, Ngwenya, and Njovo (2021) conducted a qualitative study on the role of agricultural marketing in improving the livelihoods of rural farmers in Masvingo province, Kenya. The study gathered data from 361 respondents and found that maize, millet, groundnuts, and vegetables are widely grown crops. The primary markets for these crops are urban dealers, boarding schools, hospitals, churches, and supermarkets. However, the study identified several challenges faced by the farmers, including input supply issues, transportation problems, and lack of market information, which affect their ability to price their agricultural produce effectively. The paper concluded that rural farmers lack access to market information and still rely on traditional selling approaches. The researchers recommended that the government should improve road infrastructure, establish training centers to equip farmers with marketing skills, and support the establishment of a rural farmers' marketing board to identify markets and facilitate direct delivery of produce.

Asogwa and Okwoche (2022) examined the marketing of agricultural produce among rural farm households in Nigeria, using sorghum marketing in Benue State as a case study. The study collected data from a randomly selected sample of 100 sorghum marketers and found that the average sorghum marketer earns a farm-to-retail price spread of 0.34 Naira for every 1 Naira retail price paid by the final consumer. The study also revealed that the marketers had a significant marketing margin and that sorghum marketing serves as a source of livelihood for the respondents.

Karani and Wanjohi (2020) studied the factors influencing the marketing of agricultural produce among small-scale farmers, using sorghum in Giaki location, Meru County, Kenya as a case study. The study used a descriptive research design and collected data from a sample of 138 sorghum farmers. The findings showed a strong positive correlation between access to information and sorghum marketing (0.679), followed by the influence of middlemen in the market (0.510), while road infrastructure had the weakest positive correlation (0.390) with sorghum marketing.

Nebo and Ejionueme (2021) investigated the role of adopting an agricultural marketing approach in improving the performance of the agricultural sector in Nigeria. The study used a survey research design and collected data from a sample of 250 agricultural marketers, including farmers and farm product distributors in South-eastern Nigeria. The findings revealed that production, distribution, and pricing-related factors were the most significant problems of agricultural marketing, and that product, distribution, and price were the marketing variables most likely to significantly improve agricultural sector performance in Nigeria.

While the above-reviewed literature focused on various aspects of agricultural marketing and its impact on rural livelihoods, none of the studies were conducted in Ebonyi State, Nigeria. Therefore, this study aims to fill this gap by examining the effect of agricultural marketing on rural development in Ebonyi State, Nigeria.

2.1.3 Theoretical Framework

2.2.1 System Theory

The theoretical framework for this study is the system theory developed by Ludiwing Von Bertalanffy in 1968. He proposed that for any organization to survive, similar to how living organisms do, it must function as an open system rather than a closed one. The theory is centered on the arrangement and relationships between the various parts of the system and how they work together cohesively. The way these parts are organized and how they interact with each other determines the characteristics of that system. The fundamental premise of the theory is that organizations should deliver a specified level of customer service at the lowest possible cost. Applying this approach to agricultural marketing, the parts consist of farmers, assemblers, and processors who carry out activities such as production, assembling, processing, distribution, transportation, and pricing. The system theory posits that these components are interconnected and interdependent parts of a larger system. For effective agricultural marketing and rural development to be in place, these components should be properly coordinated and integrated; hence changes in one component can affect the relative efficiency of others. How fluctuations in agricultural product prices impact rural development and infrastructure improvement can influence market access for farmers. The relevance of this theory to the study is that the various elements of agricultural marketing are interconnected and reliant on one another. Ensuring proper coordination and alignment of these elements will help boost the morale of farmers in their agricultural activities, which in turn will lead to increased production and ultimately contribute to the development of rural areas.

III. METHODOLOGY

3.1 Research Design

The researcher utilized a cross-sectional survey research approach to gather the data. This entailed collecting data from participants at multiple sites, organizing the information into a tabular format, and

subsequently analyzing the data to reach a logical conclusion.

The population of the study constitutes the rural dwellers and farmers who market their agricultural produce in markets in Ebonyi State. However, since the population is infinite, marketers of agricultural produce from two markets each in the three senatorial districts of Ebonyi State were utilized as the population of the study. The specific markets include Afor Izo in Ezza North and Eke Igboji in Ikwo LGA (Ebonyi Central), Okwor in Ohaukwu and Iboko markets in Izzi (Ebonyi North), Eke Ishiagu in Ivo and Nwankwo Ukawu in Onicha LGA (Ebonyi South)

The Cochran general acceptable formula for determining sample size for an infinite population was employed to calculate the sample size for this study, as follows:

$$Ss = \frac{Z^2 P(1-P)}{C^2}$$

$$C^2$$

$$Z = \text{Confidence Interval} = 95\% = 1.96$$

$$P = \text{Percentage of Population} = 50 = 0.5$$

$$C = \text{Confidence Level} = 0.19$$

Substituting the figures in the formula

$$Ss = \frac{1.96 \times 0.5(1-0.5)}{0.14}$$

$$0.14$$

$$Ss = 3.5 \times 100 = 350$$

The simple random sampling approach was utilized to choose a minimum of 58 participants from each of the six selected markets. The data collected for the study were presented in tabular format and analyzed using the five-point Likert scale, which included options for Strongly Agree, Agree, Undecided, Disagree, and Strongly Disagree. The stated hypotheses were statistically tested using Pearson product-moment correlation, which was computed with the assistance of the Statistical Packages for Social Sciences (SPSS) Version 23.

IV. DATA ANALYSIS AND DATA PRESENTATION

4.1 Presentation of Data Out of the 350 copies of the questionnaire served, 345 were duly filled, returned and valid for analysis

The result is presented in Table 1 below.

Table 1: Analyses of specific objectives

	Questions	SA	A	U	D	SD
	Assembling agricultural produce improves income generation					
1	Gathering of farm for onward generates adequate revenue for farmers	145	124	35	25	21
2	Scouting and purchase of agricultural produce for onward sale in major markets raises income of rural dwellers	139	134	36	26	20
3	Collection of agricultural products from rural forests boosts the income of rural dwellers	138	135	40	24	18
4	Collection of agricultural products in large quantities before sale increases the income of rural dwellers	141	132	35	22	16
	Mean	141	134	37	24	18
	Grading/ storage of agricultural produce and employment generation					
5	A large number of workers are employed in the harvest of agricultural products in rural areas	142	126	18	39	19
6	Grading of agricultural products attracts agro-allied industries	140	127	20	42	14
7	An adequate number of workers are employed by processing equipment owners in rural areas	137	130	10	25	20
8	Many rural dwellers are employed in the building of storage stores or silos	140	128	11	24	20
	Mean	140	128	16	32.8	18.3
	Transportation of agricultural produce and improved road infrastructure					
9	The government builds access roads to enable the efficient transport of agricultural goods from rural regions to major marketplaces.	141	129	11	31	33
10	Community associations construct rural roads to ease the transportation of agricultural produce	140	127	13	34	31
11	Due to heavy vehicles that ply rural roads for lifting agricultural commodities, calls are made for improved road infrastructure	137	134	6	35	33
12	Feeder roads are constructed to link communities and markets for the sale of agricultural products.	142	117	5	42	39
	Mean	140	123	8.9	35	34
	Distribution of agriculture products and enhanced market development					
13	Numerous marketers in rural areas are engaged in the acquisition and distribution of agricultural commodities across various marketplaces.	142	136	3	44	20
14	Due to the growing number of agricultural products in Ebonyi State, markets are built for selling and buying of the products.	141	133	4	38	29

15	Several stores are built in major markets in Ebonyi State for storage of agricultural produce.	143	132	2	37	30
16	There is an increasing number of markets with shops in rural areas due to increasing demand for agricultural produce.	144	131	3	36	35
	Mean	142	133	3	37	27

SA (Strongly Agree), A (Agree), U (undecided), D (Disagree), and Strongly Disagree (SD)

4.2 TEST OF HYPOTHESES

Hypothesis One

Assembling of agricultural produce does not improve income generation among rural dweller in Ebonyi State.

Table 2

	Assembling	Income generation
Assembling Pearson Correlation	1	.835
	5	.137
Sig.(2-tailed)		5
N		
Income generation Pearson Correlation	.835	1
	.127	
Sig.(2-tailed)	5	5
N		

*. Correlation is significant at the 0.05 level (2-tailed).

The correlation analysis reveals that the Assembling of agricultural produce has a strong positive correlation of 0.835 with the improved income of rural residents in Ebonyi State. Since the calculated correlation coefficient r of 0.835 exceeds the critical r value of 0.666 for a two-tailed test at a 0.05 significance level, we can reject the null hypothesis. This means that the assembling of agricultural produce leads to enhanced income generation among the rural population in Ebonyi State.

Hypotheses two

Grading and storage of agricultural produce has no significant effect on employment generation in rural areas of Ebonyi State.

Table 3

	Grading and storage	employment generation
Grading and storage Pearson Correlation	1	.951
	5	.018
Sig.(2-tailed)		5
N		
employment generation Pearson Correlation	.951	1
	.018	
Sig.(2-tailed)	5	5
N		

*. Correlation is significant at the 0.05 level (2-tailed).

The correlation analysis reveals that the grading and storage of agricultural products has a strong positive correlation of 0.951 with employment generation. Since the computed correlation coefficient of 0.951 exceeds the critical r value of 0.666 for a two-tailed test at a 0.05 level of significance, we can reject the null hypothesis. This indicates that the grading and storage of agricultural produce has a significant impact on employment generation in the rural areas of Ebonyi State.

Hypotheses three

There is no significant relationship between the transportation of agricultural produce and improved road infrastructure in rural areas of Ebonyi State

Table 5

	transportation	road infrastructure
Transportation	1	.962
Pearson Correlation		.020
Sig.(2-tailed)	5	5
N		
road infrastructure	.962	1
Pearson Correlation	.020	
Sig.(2-tailed)	5	5
N		

*. Correlation is significant at the 0.05 level (2-tailed).

The correlation analysis shows that the transportation of agricultural goods has a strong positive correlation of 0.962 with the quality of road infrastructure. Since the calculated correlation coefficient of 0.962 is greater than the critical r value of 0.666 for a two-tailed test at a 0.05 level of significance, we can reject the null hypothesis. This indicates that there is a significant relationship between the transportation of agricultural produce and the improvement of road infrastructure in the rural areas of Ebonyi State.

Hypotheses Four

The distribution of agricultural products does not enhance market development in rural areas of Ebonyi State.

Table 5

	Distribution	market development
Distribution	1	.904
Pearson Correlation		.026
Sig.(2-tailed)	5	5
N		
market development	.904	1
Pearson Correlation	.026	
Sig.(2-tailed)	5	5

N		
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*. Correlation is significant at the 0.05 level (2-tailed).

The correlation analysis reveals a strong positive relationship of 0.904 between the distribution of agricultural products and market development. Since the calculated correlation coefficient of 0.904 exceeds the critical value of 0.666 for a two-tailed test at a 5% significance level, we can reject the null hypothesis. This indicates that the distribution of agricultural products plays a significant role in enhancing market development in the rural areas of Ebonyi State.

V. DISCUSSION OF FINDINGS

The findings from the first hypothesis demonstrate that the consolidation of agricultural goods enhances income generation among rural inhabitants in Ebonyi State. The correlation analysis reveals that the assembling of agricultural produce has a strong positive correlation of 0.835 with the improved income of rural dwellers in Ebonyi State. At various markets in Ebonyi State, many rural dwellers and farmers are seen coming to sell various agricultural produce bought from rural areas. Some of the sellers go to the farmers at the point of harvest, buy some fruits such as orange, mango, pineapple, bush mango, palm kernel and oil etc and bring them to various markets on the specific market days for sale to buyers from within and outside Ebonyi State. Most of them take the gathered farm produce to markets outside Ebonyi State for sale. In this way, they generate adequate income to meet their needs for health, education, housing and shelter. This finding is in line with the view of Ojeke, (2022) who held that farmers or businessmen and women scout and buy fruits, Vegetables, Palm kernels, cashew nuts, Ogbono, Mangoes, oranges, cassava, yams and nuts among others in rural areas of Ebonyi State and further sell them thereby improving their revenue base.

The findings of the second hypothesis suggest that the grading and storage of agricultural products have a substantial impact on job creation in the rural areas of Ebonyi State. The correlation analysis reveals a strong positive correlation of 0.951 between the

grading and storage of agricultural produce and employment generation. Grading is the process of sorting produce into different categories based on factors such as size, shape, color, and freedom from pest and disease damage. The primary purpose of grading is to ensure that the produce sold in the market meets the established regulatory and retailer standards. At various markets in Ebonyi State, many people have locally manufactured machines for rice processing, grinding of various farm produce such as cassava for the production of garri, measurement and bagging agricultural produce, among others. Many people are employed to perform these tasks, hence generating employment to those who carry out the task. This finding is supported by the work of Karani and Wanjohi (2021) who held that engagement in agricultural activities such as crop production, fishery, animal husbandry and forestry constitute a significant aspect of employment.

The results of hypothesis three indicate a significant positive correlation of 0.962 between the transportation of agricultural goods and improved road infrastructure in the rural areas of Ebonyi State. Several major markets in the region, such as Afor Izo, Eke Igboji, Okwor, Iboko, Eke Ishiagu, and Nwankwo Ukawu in Onicha, feature large motor parks that facilitate the movement of vehicles used to transport agricultural produce to and from these markets. Recognizing the importance of this process for boosting economic activities in the rural areas of Ebonyi, the administrations of Martin Elechi and Dave Umahi made it a priority to construct bridges and roads to improve access to these communities. This finding is supported by Olagunji (2021), who noted that the construction of these feeder roads attracts businesses, leads to the development of various markets, and enhances other economic activities in the communities.

The result of hypothesis four indicates that the distribution of agricultural products enhances market development in rural areas of Ebonyi State with a high positive correlation of 0.904 with market development. This is true because all the sampled markets in this study had well developed parks and stores while majority had power and water supply. These facilities were provided by both the State Government and the various local governments

where the market findings are in line with that of Ojeke, (2022) who noted that the state and local governments, notable individuals and community associations recognised the importance and booming activities of agricultural marketing products, volunteer does assist in constructing markets containing shops for storage and coverage against rain as well as motor parks where traders load their commodities for onward transportation and distribution after buying.

CONCLUSION

The marketing of agricultural products plays a crucial role in the development of rural areas. It not only stimulates production and consumption but also accelerates economic progress. Marketing serves as an economic link between producers and consumers, maintaining a balance between demand and supply. Previous studies have attempted to validate this assertion, and some have also examined the challenges and prospects of agricultural marketing. However, there has been limited research on the relationship between agricultural marketing and the financial empowerment of rural farmers. The current study found that factors such as the marketing of products, ease of marketing, and consideration of price have a significant association with the income and local production of rural farmers.

The study concludes that the aggregation of agricultural produce improves income generation among rural residents in Ebonyi State, and the grading and storage of agricultural produce have a significant effect on employment creation in rural areas of Ebonyi State. Additionally, the findings indicate a significant relationship between the transportation of agricultural produce and improved road infrastructure in rural areas of Ebonyi State, while the distribution of agricultural products enhances market development in rural areas of Ebonyi State.

RECOMMENDATIONS

Based on the study's findings, the following recommendations were made:

- (1) Ebonyi State's rural farmers should continue the practice of aggregating agricultural goods for subsequent sale, as it enhances their income generation.
- (2) Rural residents should be motivated to participate more in grading and storing agricultural produce, as it provides a reliable means of employment creation.
- (3) Government and community associations should liaise to construct feeder roads so to encourage rural transportation of agricultural produce and improve rural development in Ebonyi State
- (4) Rural dwellers should sustain the practice of distribution of agricultural products as a measure to enhance market development in rural areas of Ebonyi State.

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