ANALYSIS OF STRUCTURE, CONDUCT AND PERFORMANCE OF GINGER MARKETING IN BENUE STATE, NIGERIA

*Ocholi Ali and Gege Juliana Nguwasen

Department of Agribusiness, Joseph Sarwua Tarka University, Makurdi

*Corresponding Author

ABSTRACT

The study analysed the structure, conduct and performance of ginger marketing in Benue State, Nigeria. Multistage sampling techniques were used in selecting 256 respondents. Data were obtained from primary source with well-structured questionnaire and analysed using descriptive statistics, gini coefficient, marketing margin and marketing efficiency analysis. Results from the socio-economic characteristics of marketers showed that 35.2% were male and 64% were female with a mean active workforce of 46.82 years. Majority of ginger marketers (77.3%) were married with mean household size of 9; ginger marketers had a mean marketing experience of 10years, and the mean formal education attained was 7years indicating that most ginger marketers had formal education. The result of the Gini coefficient calculated for structure of the marketers was 0.46 for the retailers and 0.27 for the wholesalers indicating inequitable distribution of sales income for retailers while wholesalers was perfectly competitive. The marketers were faced with the problem of heavy taxation and high cost of transportation. It is recommended that tax payment should be properly conducted to avoid multiple taxation and good roads should be provided to reduce transportation cost.

Keywords: Ginger, Marketing, Performance, Structure.

INTRODUCTION

Ginger (*Zingiber officinale*) is an important and widely grown flowering plant whose rhizome is commonly used as a spice or a folk medicine (Olumu, 2000; Gege, 2021). Ginger is believed to have originated from the tropical rainforest in Southern Asia (Musa, 1991; Langner *et.al*., 1998: Mohamed, *et.al*.2021). The crop was introduced into Nigeria for cultivation in 1927 (Titilayo

and Banake, 2014). Indeed, its full blown production and marketing was encouraged with the aim of generating internal trade for the people and improve foreign exchange earnings for the government (Titilayo and Banake, 2014). Since then, ginger has steadily increased in importance as a valuable domestic spice and export crop in Nigeria (Maigida and Kudi, 2000; Ezeagu, 2006).

Today, the plant is cultivated, marketed and consumed in different parts of the country, including Benue State (Dauda and Waziri, 2006; Nandi *et al.*, 2011; Ejechi, *et al.* 2018). According to food and agricultural organization statistics (FAOSTAT, 2014) Nigeria is the third-largest producer of ginger in the world, with a production average of more than 300,000 tons during the five-year period 2014-2018. Its global market share is about 11 per cent, trailing only India (35%) and China (18%) (CBI, 2020). Benue State produces about 500 tons of fresh black ginger annually (Gbenga, *et al* 2019).It is also estimated that about 1728.93 metric tons of ginger is produced in the Jaba region of Kaduna State (Kaduna State perspective;2009) and currently it has increased by about 14 times (Ahmed, 2018). While Kaduna State remains the largest producer of "*taffin Giwa* and *yatsun Biri*"- varieties of ginger (NdaNmadu and Marcus, 2011), its storage, transportation and marketing activities cut across genders and different tribes in Nigeria (Ewuziem, Onyenobi, Ironkwe, & Torkula 2015), Among other vegetables in Nigeria, it is the only vegetable that is grown on commercial scale for export; it is mainly exported in split dried form, while exports of fresh ginger are negligible (Eze and Agbo, 2011)

The economic value of ginger (Zingibor Officinale Roscoe) centres around its uses in the preparation of medicines, foods and in the manufacturing of beverages, pharmaceuticals and perfumes. In foods, ginger is used to flavor bread, cakes, biscuits, usages and cookies. It is also blended with other spices for household uses. Ginger ale, ginger beer, and ginger tea are among the beverages produced with it (Rodriguez, 1971, Egbuchua and Enujeke, 2013, Olubumi *et al*. 2013). It is also used to some extent in perfume products (Currement, 2021).

With the emphasis currently being placed on local sourcing of raw materials in Nigeria, it is envisaged that in the very near future, ginger will be industrially utilized on a larger scale for the manufacture of an assortment of perfumes, confectionery, alcoholic drinks and pharmaceuticals.

The ginger crop, in spice sub-sector, has an immense potential for economic development and poverty reduction through creation and expansion of employment opportunities and distribution of income and foreign exchange earnings. Despite all the potentials and opportunities of having such a long history with a diversified conducive agro-ecology base, this spice sub-sector is still not organized or packaged.

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The Nigerian ginger sector has been facing serious difficulties over the past years: low yields, high post-harvest losses, lack of technical know-how and infrastructure to improve processing and product quality, fierce competition from Asia, price fluctuations, poor organisation and an ineffective enabling institutional environment. (FAOSTAT, 2014). Nigeria needs an organized system where production will be done through specific demand.

The availability of ginger to consumers at the right time and place requires an effective marketing system; the structure, conduct and performance are very important. Market structure relates to the degree of competition in a market. It tends to consider whether the number of firms producing products is large or whether the firms are of equal sizes or dominated by small group. It is concerned with whether entry for new firm is easy or not. Structure also relate to the degree of market knowledge which is available to these firms. (Vu Trong and Casablanca, 2002; Egbeadumah, 2016). Market conduct refers to possible practices of collusion or exclusion, in addition to price-fixing methods, while market performance on the other hand, is the assessment of how well the process of marketing is carried out and how successfully its aims are accomplished (Vergriette, 2002; Egbeadumah, 2016). According to these analyses, markets of developing countries are generally characterized by imperfect competition and poor circulation of information, which calls for a better match between supply and demand through the establishment of "modern" wholesale markets and market information systems (Goosens *et al*. 1994; Mohtar, 2000; Egbeadumah, 2016). However, in marketing system, the structure conduct and performance of a market is one of the most important approaches to analysis of market. This encourages the participation of a large number of individuals at various types of markets and exchange points where marketing services of assembling, storage, processing, transportation and break-of-bulk are performed (Egbeadumah, 2016).

As a method for analysis, the structure, conduct and performance (SCP) paradigm postulates that a relationship exists between the three levels that must be distinguished through proper investigation, hence the need for this study. A number of studies have been carried out on conduct, structure and performance of ginger marketing and other agricultural products both at national and international planes. For example, Asumugba G.N *et al* investigated guide to ginger production and marketing in Nigeria, Abah Daniel Abah investigated and analysed ginger value chain in Kaduna state, Nigeria and Ezeagu W. on ginger exports. The markets of ginger in Benue State have not received adequate attention concerning research on structure, conduct and performance, hence the need for this study. The specific objectives of the research are to describe the socio-economic characteristics of ginger marketers, structure, conduct and performance of ginger marketing and identifying the problems of ginger marketing in Benue State Nigeria.

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METHODOLOGY

The Study Area

The area of this study is Benue State of Nigeria. Benue state was created in 1976 and is located in the middle belt region of Nigeria with the capital at Makurdi. Benue state lies approximately between latitudes $6^030'N$ and $8^010'N$ of the equator and longitudes $6^035'E$ and $8^010'E$ of the Greenwich meridian, [Benue State Agricultural and Rural Development Authority, (BNARDA), 2005]. Benue state is considered as one of the hottest States in Nigeria with an average minimum and maximum temperature of 21^0C and 38^0C respectively. It is in the southern guinea savannah ecological zone, which has a typical climate with the clearly marked seasons of dry season (late October to March) and wet season (April to early October).

The main annual rainfall in the state is 15000mm.The important feature of the state is the river in which the state derived its name from. The state share boundaries with five States, Nassarawa to the North, Taraba to the East, Cross -River to the Southeast, Enugu to the Southwest and Kogi to the west. The southern part of the state is also bounded with republic of Cameroun. Benue State has a land mass of about 33,955km with 23 local government areas. Geographically and agriculturally, Benue State is divided into three zones, Zone A (Katsina-Ala, Ukum, Ushongo, Vandeikya, Logo,Kwande and Konshisha local government areas) Zone B (Gboko, Tarka, Buruku, Gwer East , Gwer West, Guma and Makurdi Local government areas), Zone C (Ado , Agatu, Apa, Otukpo, Ohimini, Okpokwu, Ogbadibo, Obi and Oju Local Government Areas).

The state has a total population of 5,741,800 people (National Population Commissions 2006). About 80% of the state population is directly involved in agriculture. The state is also called the food basket of nation, because the state produces agricultural commodities in large quantities. These crops among others are cultivated in great quantity and cash crops like; Palm produce, Cashew, Groundnut, Coffee, Cotton etc. Ginger, being a multi-facet economic crop and having both domestic and international value, its cultivation and marketing is becoming popular within the study area, as its production and marketing cuts across gender groups.

Figure 1: Map of Benue State showing the study areas.
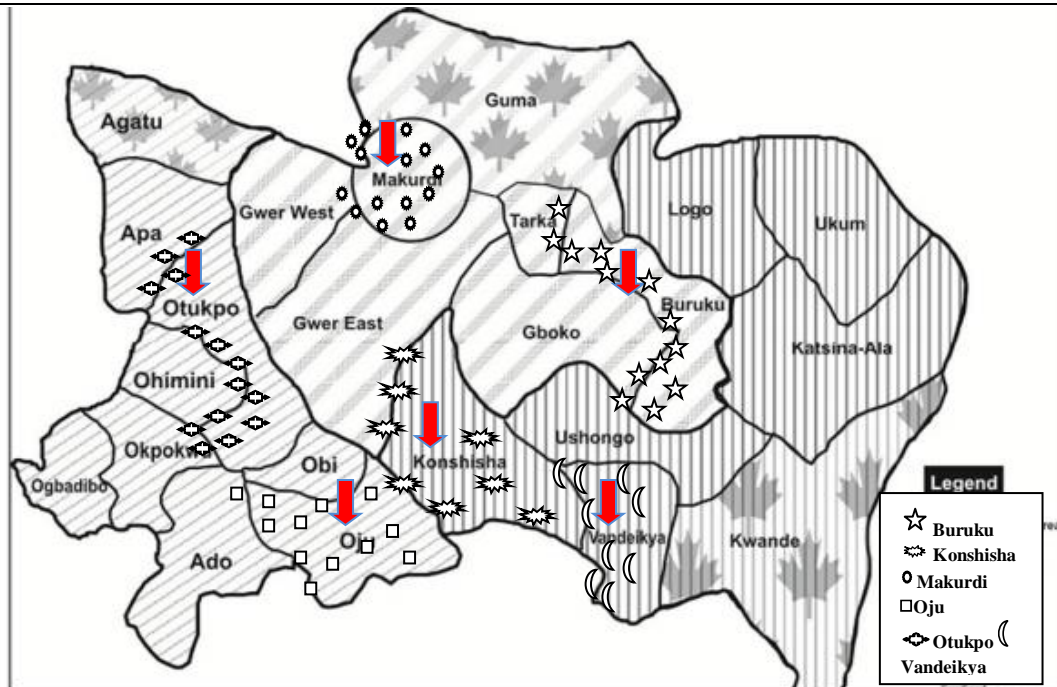
Source: Modified from https://www.onlinenigeria.com (2003)

Population and Sampling Method

The population of the study comprised 850 ginger traders in Benue State (Association of Ginger farmers Benue State 2022). The interest was on wholesalers and retailers who purchased ginger in large quantities of 500kg and above for resale to both processing establishments and final consumers in major towns and local government.

Purposive, multistage and stratified sampling techniques were adopted for the study. In stage one; the study area was divided into three agricultural zones which are; zone A, zone B and zone C. In stage two, two local government areas (LGAs) were purposively selected from each of the three agricultural zones, namely, Vandeikya and Kkonshisha from zone A, Buruku and Makurdi from zone B and Otukpo and Oju from zone C. In third stage, eighteen major markets were randomly selected from these local governments based on a prior information that they are leading ginger markets in terms of existence of many buyers and sellers and also volume of ginger. These markets are Tsar, Ihugh and Agbo markets in Vandeikya Local Government Area, Tse-Agberagba, Korinya and Jor markets in Konshisha Local Government Area, Wurukum, Wadata and Railway markets from Makurdi Local Government Area, Tyowanye, Abwa and

Ajoho markets in Buruku Local Government Area, Ihigile, Ihi-ejo and Ihi-Obile markets from Oju LGA and Ela, Olihi-Ogli and Ogoli markets from Otukpo LGA. In the last stage, the marketers were stratified into wholesalers and retailers and proportionately selected according to the population of each market. From the sample frame of 850 registered ginger marketers, a sample of 256 marketers were randomly selected to constitute the study respondents.

Data Collection and Analysis

Primary data were collected using a structured questionnaire on the socio-economic characteristics of ginger sellers, marketing margin, efficiency, structure, conduct and constraint associated with ginger marketing in the study area. Prior to the administration of the questionnaires, the questionnaires were pre-tested and necessary corrections were made. Content validity was used to determine the adequacy of the research instrument. In the process, the instrument was thoroughly and independently examined by appropriate experts. The experts gave their critical opinion on the adequacy and relevance of the instrument to the objectives of the study. The observation was harmonised and necessary corrections were made on the instrument before the start of the survey. The test retest method was used to determine the reliability of the research instrument. Twenty copies of the research instrument were administered twice to the respondents at given intervals. The two results were correlated and a correlation coefficient of 0.920 was obtained indicating high reliability. The data collected for this study were analysed using both descriptive and inferential statistics. The elements of descriptive statistics such as average, frequency and percentages were adopted to analyse the socio-economic characteristics of ginger sellers in Benue State while Gini coefficient marketing margin and marketing efficiency were used to determine structure, conduct and performance

Models specification

Descriptive statistics

Descriptive statistics involving the use of measure of central tendency such as frequency and percentages was used to describe the socioeconomic characteristics of ginger marketers and problems associated with ginger marketing.

Gini Coefficient

Gini coefficient was used to analyse the market structure

$$G = 1 - \Sigma X_i Y_i$$

Where:

G – Gini coefficient

1 – constant

X_i– percentage of ginger sellers in the ith class of traders

Yi – cumulative percentage of ginger sellers in the ithclass of traders.

i- 1,2,3…..5

The Gini coefficient ranges from 0 to 1, where 0 implies perfect equality in the distribution (perfect market)and 1 implies perfect inequality (imperfect market), the closer the Gini coefficient is to zero, the greater the degree of equality, and the lower the level of concentration, the more competitive the market are.

Marketing margin analysis

The gross marketing margin for the participants was estimated using the formular given below,

GM = SP – CP

Or

Also it can be expressed in percentage as follows:

Marketing margin $= \frac{Selling\ price - Purchase\ price}{Selling\ price} X\ \ 100$

Where:

GM = Gross Marketing per bag of ginger (Naira/100kg)

Selling price = Selling Price per bag of ginger (Naira/100kg)

Purchase price = cost price

Cost Price = Cost Price per bag of ginger (Naira/100kg)

Marketing efficiency analysis

Marketing efficiency analysis was employed to estimate the marketing efficiency for the wholesalers and retailers of ginger,

Marketing efficiency $= \frac{sellingprice - costprice}{Marketingcosts} X \frac{100}{1}$

Where

Selling price = the return from the sale of ginger.

Cost price = purchase price

Marketing costs =   all expenses made to market ginger.

RESULTS AND DISCUSSION

Socio-economic Characteristics of Ginger Marketers

The socio-economic characteristics of ginger marketers studied in this research work in Benue State included sex, age, marital status, household size, formal education and membership of market association. The distribution of respondents by each of the socio-economic characteristics in this study is shown in table 1.

From the study, the distribution by sex showed that, out of the 256 farmers interviewed, 90 were male and 166 were female. The percentage distribution by sex is 35.2 % for male and 64.8 % for female. This revealed that females play a greater role in the marketing of ginger in the study area. The dominance of the females in the marketing activities may be due to small capital base required to start the business. This is in agreement with Akinpelu *et al.* (2011) that spice marketing is dominated by female. Thus, females are more active in the marketing of ginger than men in the study area.

The result of the analysis showed that, the average age of respondents was 46.82. This implies that ginger marketers are in the productive age which could lead to increase in their efficiency. Specifically, 36-47 years had the highest frequency of 93 with percentage distribution of 36.3 % followed closely by the age range of 48-59 years which had a frequency of 90, with percentage 35.2 %. Next is the age range of 24-35 whose frequency was 56 and had percentage of 21.9 % and lastly, the age range of 60-71 with the percentage of 6.6 %. This indicated that the active work force in ginger marketing in the study area fell within the ages of 36-47. Young people of age 24-35 did not find ginger marketing very attractive as the age range ranked third in the frequency distribution. People within the ages of 48-59 also find ginger marketing business an attractive one. This is shown in the table as the age range ranks second highest.

From the table also, 77.3 % of the respondents were married from the result of this study while 22.7 % were single. This meant that, people who are married engage more in ginger marketing. It also implied that the income from the sale of ginger is also used for the upkeep of the family. This agreed with Akinpelu *et al.* (2011) that married people tend to have more financial commitment and home up keep than singles therefore need to have a source of income such as

marketing spice to Cater for these responsibilities. This also confirms Ishaya (2014) who reported that it could also be attributed to the fact that marriage comes with more responsibilities as a result of large family size, and hence, the need for household head to engage in multiple livelihoods that could provide sufficient income for the family upkeep.

The mean distribution of household size was 9. This implies that there was availability of family labour and this could lead to reduction in the cost of marketing. Specifically, the household size of range 6-9 (54.7 %) had the highest frequency followed by the range of 2-5 with the percentage of 34.8%, next the range of 10-13 household size with the percentage of 7.8 % and lastly the household size of 14-17 which is represented by 2.7 %. This agrees with Ocholi *et al.,* (2021) that onion sellers in the study area (Benue State) are more likely to have higher marketing margin due to the fact that the higher number of people in the family working together reduces the need for hired labour, thereby reducing costs.

Ginger marketers had a mean marketing experience of 10 years. Specifically, 171 marketers had experiences that fell within the range of 2-10 with the highest percentage of respondents 66.8 %, the range of marketing experience between 11-19 had 21.1 % the range of 20-28 had 9.0 % and ginger marketers with marketing experience of range 29-37 had 3.1 %. This result implied that majority of ginger marketers are new in the business.

The mean distribution of educational attainment of respondents in this study was 7.0. This shows that majority of the respondents were literate enough to acquire additional knowledge to sustain their marketing activities. Specifically, 16.40 % had no formal education, 14.45 % had primary education, 46.87 % had secondary education and 22.28 % attended higher institutions. This is in agreement with Ishaya, (2014) that most of the respondents are literate enough to give room for effective communication in undergoing their marketing business in the study area.. This is acceptable on the ground that educational level plays a good role in adoption of new policy and undertaking risks (Nkang et al, 2009), as cited by Ishaya, (2014).

Table 1: Socio –economic characteristics of respondents

Characteristics	Frequency	Percentage	Mean
Sex			
Male	90	35.2	
Female	166	64.8	
Age (years)			46.82
24-35	56	21.9	
36-47	93	36.3	
48-59	90	35.2	
60-71	17	6.6	
Marital Status			
Single	58	22.7	
Married	198	77.3	
Household Size			9
2-5	89	34.8	
6-9	140	54.7	
19-13	20	7.8	
14-17	7	2.7	
Ginger Marketing Experience			10.31
2-10	171	66.8	
11-19	54	21.1	
20-28	23	9.0	
29-37	8	3.1	
Formal Education			7.0
No formal Education	42	16.40	
Primary Education	37	14.45	
Secondary Education	120	46.87	
Tertiary Education	57	22.88	
Marketing Association			
Yes	52	20.3	
No	204	79.7	

Source: field survey, 2022

Structure of Ginger Marketers

Market structure consists of the relatively stable features of the market that influence the rivalry among buyers and sellers operating in a market. It affects the trader's behaviour and their performances (Rao *et al.,* 2012).

The gini coefficient model was used to determine the structure of the market for retailers and wholesalers. The gini coefficient for retailers was computed to be 0.46. The value of Gini coefficient greater than 0.35 are high (Dillon and Hardakar, 1993; Bakare, 2012) indicating that there is inequitable distribution of sales income. The observed inequality in earning is a partial reflection of differences in the risk of investment (Iheanacho, 2005) and a reflection of inefficiency in the market structure for ginger in the study area and consequently higher market concentration. This agrees with Abah *et al.*,(2015) who found a Gini Coefficient of 0.46 for paddy rice market in Benue State.

The gini coefficient computed for wholesalers was 0.27. This implies that ginger market in the study area was highly competitive with greater degree of equality and low level of concentration. This is reflected by the existence of many suppliers of the produce with the result that none of them could influence supplies by either increasing or decreasing the quantity supplied to influence price. This agrees with the findings of Ilo *et al,* (2016) who in Alero local Government of Kebbi State found that the Gini Index for wholesalers and retailers were 0.026 and 0.103 respectively which indicated a low market concentration.

Table 2: Gini coefficient for retailers

Class of income (N)	Frequency(F)	Income per class (N)	X	% Income	Y	XY
130000-303750	48	10491000	0.28	0.14	0.14	0.04
303751-477501	60	23567500	0.34	0.32	0.46	0.16
477502-651252	53	29614750	0.30	0.41	0.87	0.27
651253-825003	13	9258750	0.07	0.13	1.00	0.07
Total	**174**	**72932000**	**1.00**	**1.00**		**0.54**

Source: field Survey, 2022

$G = 1 - \Sigma XY$

$G = 1 - 0.54$

$G = 0.46$

Table 3: Gini coefficient for Wholesalers

Class of income (N)	Frequency (F)	Income per class (N)	X	% Income	Y	XY
18000-208500	1	18000	0.01	0.0004	0.0004	0.000005
208501-399001	8	2573200	0.10	0.0167	0.0621	0.0006059
399002-589205	58	29288380	0.71	0.7026	0.0765	0.540885
589503-780003	15	9806650	0.18	0.2352	1.0000	0.187927
Total	**82**	**41686230**	**1.00**	**1.0000**		**0.729876**

Source: field Survey, 2022

$G = 1 - \Sigma\ XY$

$G = 1 - 0.73$

$G = 0.27$

Conduct of Ginger Marketers

The market conduct for the retailer marketers is shown in Table 4. 13.79 % members belong to marketing association and 86.21 % were not members of any association. 14.3 % entered the market by registration and 85.63 % by chance. All the retailers had free entry and exist. Price determination was done by individual bargaining as shown in the table. There was no product differentiation. About eighty six (86.21 %) market information was obtained by middlemen and 13.79 % market information was obtained through market association.

The market conduct for the wholesaler marketers is shown in table 4. 34.15 % members belong to marketing association and 65.85 % were not members of any association. 34.15 % entered the market by registration and 65.85 % by chance. 100 % of wholesalers had free entry and exist. Price determination was done by individual bargaining as show in the table. There was no product differentiation. 65.85 % market information was obtained by middlemen and 34.15 % by market association.

Table 4: Conduct of Ginger Marketers

Variables	Wholesalers		Retailers	
	Frequency	Percentage	Frequency	Percentage
Membership of market association				
Member	28	34.15	24	13.79
Non member	54	65.85	145	86.21
Total	82	100	174	100
Entry mode				
By registration	28	34.15	25	14.3
By chance	54	65.85	149	85.63
Total	82	100	174	100
Free entry and exist				
Yes	82	100	174	100
No	-	-	-	-
Total	82	100	174	100
Price determination				
Individual bargaining	82	100	174	100
Market association	-	-	-	-
Total	82	100	174	100
Product differentiation				
Yes	-	-	-	-
No	82	100	174	100
Total	82	100	174	100
Source of market information				
Middlemen	54	65.85	154	86.21
Market association	28	34.15	24	13.79
Total	82	100	174	100

Source: field survey, 2022

Marketing Efficiency of Ginger Marketers

The marketing efficiency analysis was used to determine the marketing efficiency of ginger marketers. The mean marketing efficiency of retailers was 46.58 and 7.96 for wholesalers obtained from the result of retailers and that of the wholesaler was 7.96% from the study. Values of result shown in table 3 are greater than 1, indicating that ginger marketing in the study area is efficient.

The marketing efficiency of the retailers is higher than that of the wholesalers. This may be attributed to retailers adding value to the products by way of packaging in smaller quantities. This is reflected in the higher profitability level as analyzed under costs and returns. This finding

agrees with Sulumbe *et al.* (2015) who associated nature of cost incurred in performing the marketing functions as the reason for differences in marketing efficiencies of onion farmers in Borno State.

This result on table 3 further showed that the coefficient of variation (CV) of marketing efficiency of retailers and wholesalers were 0.43 and 0.99 respectively. The coefficient of variation is often compared between two groups to understand which group has lower standard deviation relation to its mean (in this case, the retailers and the wholesalers). In most fields, lower values for coefficient of variation are considered better because it means there is less variability around the mean. In this scenario, the retailers had a lower coefficient of variation from the mean. It is better to invest there as a greater chance of recovery of investment is more guaranteed.

Table 5: Marketing Efficiency of Ginger Marketers

Variable	N	Mean	Standard Deviation	Minimum	Maximum	CV
Retailer	174	46.58	19.98506	43.59013	49.57019	0.43
Wholesaler	82	7.96	7.937843	6.21718	9.704989	0.99

Source: field survey, 2022

Marketing Margin of Ginger Marketers

The marketing margin for ginger marketers in the study area was computed as follows:

Market Margin for wholesalers.

$$\text{Marketing Margin} = \frac{10584.81 - 9115.85}{10584.81} \; X \; 100$$

$$mm = 0.1347 \times 100$$

$$mm = 13.47\%$$

Market Margin for retailers.

$$\text{Marketing Margin} = \frac{16508.11 - 10229.31}{16508.11} \; X \; 100$$

$$mm = 0.3557 \times 100$$

$$mm = 35.57\%$$

The Market Margin for wholesalers and retailers were 13% and 36% per 100kg of ginger respectively. This result did not agree with Sulumbe *et al* (2015) whose finding showed that the margin of onions for wholesalers and retailers were 32% and 27% per 50kg bag. This margin below 50% indicates an average return on investment in providing the marketing services. This however implies that ginger marketing in the study area is profitable. The low level of calculated average marketing margin for wholesalers compared to that of the retailers could be attributed to the exploitative activities of the agents.

Table 6 also showed the coefficient of variation (CV) of the retailers and wholesalers to be 2.0 and 5.0 respectively. The actors with the least variation from the mean are the retailers. This means that it is safer to invest with the retailers to avoid fluctuations in marketing margins. Recovery of investment is also guaranteed.

Table 6: Marketing Margin of Ginger Marketers in Benue State. (n = 256)

Variables	N	Mean	Standard Deviation	Minimum	Maximum	C V %
Retailers	174	36.26	.6445645	35.03358	37.57803	2.0
Wholesalers	82	13.23	.6781185	12.61734	15.31583	5.0

Source: computed from field survey, 2022

Performance of ginger marketers

The market performance is the measure of marketing margin and efficiency. The wholesalers had a marketing margin of 13.23 % and a marketing efficiency of 7.9 %. The retailers had an average marketing margin of 36.26 % and marketing efficiency of 46.58 %.

Olukosi and Isitor (1990) defined market performance as the strategic end result of market adjustments engaged in by buyers and sellers. In order words, market performance is the appraisal of the extent to which the interactions of the buyers and sellers in a market stimulate results that are consistent with social purposes. The performance of ginger marketers was good because the values of both marketing margin and marketing efficiency were high.

Table 7: Performance of Ginger Marketers

Variables	Wholesaler	Retailer
Marketing margin (%)	13.23	36.26
Marketing efficiency (%)	7.96	46.58

Source: field survey, 2022

Constraints to Ginger Marketing

From the study, heavy produce tax/levy ranked the highest with frequency of 96 or 37.5% of marketers followed by high transportation cost (32.8%). Ginger marketers also lacked credit facilities (29%). Most ginger marketers obtain their source of finance from personal savings which was one of the reasons they could not expand their business. Infrastructures, storage facilities and security were also a noticeable problem. These constraints have affected the performance of ginger marketing in the study area. This study disagrees with Obayelu, *et al.*(2014) whose findings showed that most (29 %) of the marketers were faced with the problem of inadequate storage facilities which often lead to produce loss due to spoilage as a result of fungal and bacteria attack, insects and rodents infestation. These result into increase in marketing costs leading to higher retail prices and reduced marketing efficiency.

Table 8: Constraints to Ginger Marketing

Variables	Frequency	Percentage	Rank
Heavy produce tax/levy	96	37.5	1
High transportation	84	32.8	2
Lack of credit facilities	75	29	3
Inadequate infrastructures	70	27.3	4
Poor storage facilities	60	23.4	5
Robbery	52	20.3	6

Source, field survey, 2022

CONCLUSION

This study analysed the structure, conduct and performance of ginger marketing in Benue State, Nigeria. The findings showed that ginger marketing was dominated by female and married with large households' size within the active age bracket.

Most ginger marketers were new in business and did not belong to ginger marketing association. The Gini coefficient of 0.46 for retailer and 0.27 for wholesalers indicate inequitable distribution of sales income for retailers and perfect competition for wholesalers. Transportation cost and payment of multiple taxes were the major cost incurred.

RECOMMENDATIONS

Based on the findings, the following recommendations were made;

1. Efforts should be made to eliminate the constraints of ginger marketing in the area by improving on socio-economic facilities such as roads, markets and related amenities. The Benue State Government can do its own part by renovating existing bad roads and constructing new ones especially those that link the points of supply to points of consumption.
2. The marketers should be encouraged to form cooperative societies to promote bulk purchase and transportation of ginger in the area. This will reduce the high cost of transportation involved in the marketing of these commodities as well as enable them achieve the benefits from the economy of scale.
3. More security post should also be provided given that robbery is among the constraints faced by the marketers.

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