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Determinants of Marketing Channel, Margin and Efficiency in Local Stimulants Marketing in Osun State, Nigeria

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Abstract: This study examined the channel and marketing efficiency of local stimulants in selected Local Government Area of Osun State, Nigeria. A total of two hundred and forty (240) respondents were sampled. Structured questionnaire was used in obtaining data from the respondents. Specifically, the study described the socio-economic characteristics of the respondents, examined the market channel for local stimulants, the marketing margin, marketing efficiency, examined the degree of market concentration for the marketers of the local stimulants and described the constraints encountered in the marketing of local stimulants in the study area. Results from the study revealed that majority (75.8%) of the respondents had at most primary school education earning at least ₦53,321 per month. The results showed that market channel of local stimulants have shorter chain which reduces the marketing cost. Analysis of the marketing margin of the local stimulants revealed that typical retailers earned ₦323.50, ₦274.40, ₦162.50, ₦285.65 and ₦33.26 per Kilogram for bitter kola, kolanut, ginger, alligator pepper and pepper respectively. The marketing efficiencies is between 2.48 and 4.62 across markets for all the stimulants. An evaluation of market concentration revealed that pepper stimulant have the highest market concentration of 2,083 while bitter kola had the least market concentration of 871 across the LGAs. High transportation (51.5%) and middlemen rip-offs (42.6%) constituted the most common challenges confronting the respondents while low demand (3.3%) was the least challenge or constraint faced by local

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stimulant marketers. It is therefore recommended in order to solve the problem of finance, by forming cooperatives, the marketers can have better access to finance for their businesses rather than relying substantially on money lenders with cut-throat interest rates.

Keyword: Agriculture; Stimulant; Efficiency; Middlemen; Market

JEL Classification: D25

1. Introduction

Nigeria is a principal producer of kola, producing 150,000 tonnes annually of which over 90% are locally consumed. Kola is usually in two varieties namely bitter kola and kola nuts. (*Garcinia kola*) Orogbo is one of the varieties of kola that can be found in Nigeria. They are mostly found in the South western part of the country. The product is usually available in the market between March to November of the year. The stimulant can be sourced mostly from southern part of the country in the following state in Ondo, Osun, Oyo, Ekiti and Ogun. The average selling price is usually, N 200 per kg. It can be traded on a large or small scale. Kola trees are natives of central and West Africa and are distinguished primarily by the medicinal and stimulant properties of their nuts

Pepper *Capsicumspp* is one of the most important spices as well as stimulant used in making most Nigerian foods. Pepper belongs to the family *Solanaceae* which is an important group of vegetables.

FAO (2015) estimates world production of capsicum peppers in 2015 at 34.5 million tonnes. Nigeria's production is 67,156 tonnes from 90,000 per hectares and Ghana with the production of 984, 586 tonnes from 75,000ha as the largest producers in Africa. The statistics for Africa does not include home farms and garden production (FAO, 2015). Peppers can act as a heart stimulant which regulates blood flow and strengthens the arteries, possibly reducing heart attacks.

The price of pepper in Nigeria has been subjected to seasonal fluctuation. In South West Nigeria, pepper has been massively conveyed from Northern Nigeria despite the fact that it is also grown in the South West. This indicates that there is a great and urgent need for increased production of pepper in Nigeria and most especially in the South.

The domestic demand for pepper has increased overtime which has resulted in the decline in the quantity of pepper being exported in several producing countries. This signifies that there is the need for an increase in the supply of pepper to make up for the increase in the domestic demand and also give room for exportation. Pepper accounts for about 20% of the average vegetable consumption per person per day in Nigeria (Alegbejo, 2002). The average price of pepper is 300 per kg.

Despite the local production level of pepper in Nigeria, pepper is still being imported. General increase in pepper yield in Nigeria could be enhanced by an increase in cultivation of improved cultivars and intensification of cultural practices. High potential pepper- producing areas in Northern Nigeria are Kaduna, Kano, Jigawa, Katsina, Sokoto, Plateau and Bauchi states. In the South West we have Ogun, Oyo, Ondo, Osun, and Ekiti. It is used extensively in food flavouring in daily diet of over 120 million Nigerians irrespective of the socio-economic status.

Ginger (*Zingiber officinal)* is another type of local stimulant. The variety cultivated in southwestern Nigeria is known as Tumeric (Red ginger). Ginger is a monocotyledonous crop plant which produces rhizomes. It takes its name from the word "stringa –vera" which means "with a body-like a horn". Ginger is a root crop with characteristic pungent taste and pleasant aroma used in the production of various pharmaceutical products, beverages and confectionaries (Obinatu, 2003).

Three major types of Ginger are cultivated in Nigeria are; yellow ginger, black ginger and red ginger. The yellow ginger is mostly cultivated in the Northern parts of Nigeria; Kaduna, Nasarawa, Benue, Niger and Gombe States. The black ginger is mostly cultivated in the Eastern part of the country while the red ginger is produced in the South western states of Nigeria; Ogun, Oyo, Ondo and Osun in particular. (Eddy, 2016), opined that the yellow ginger yields much more than the black and red ginger. Based on his research, the yields are 35 tonnes per hectare for the yellow ginger and 25 tonnes per hectare for the black and red ginger. The quality of fresh ginger produced in Nigeria is the best in the world and is highly valued for its stimulant properties, aroma, pungency, high oil and oleoresin content (Ojo and Ajibefun 2000). Ginger is a tonic stimulant. It is known to help reduce fever and cleanse the body of toxins. It is used as appetite stimulant making the digestive juices revved up so that the meal is digested better. It can also be used as a mild and can be used to promote circulation. (Eddy, 2016) opined that ginger is used to stimulate the production of saliva. In Nigeria, precisely Osun State, which is the study area of this research work, harvesting of red ginger starts from October and normally continues until April or May. This largely depends on the market situation as ginger can be left inside the ground for two years (Dominic *et al*, 2018).

Another type of locally grown stimulant being investigated onis Alligator pepper (ataare) *Afomomium melegneta*. This is a non-timber forest product species from the sub humid tropical environment. These are canna-like plant except that leafy stems and flowering stems are separate. *A. melegneta* arises from a creeping rhizome. Alligator pepper is cultivated in the tropical forest of Nigeria; Ogun, Oyo, Ondo, Ekiti and Osun States. The plant is about 1m high with bamboo-like narrow leaves in two rows. *A. melegneta* is the source of aromatic seed known as grain of paradise which are usually used for African medicine and other economic values. Due to its stimulating properties and peppery pungent taste, the alligator pepper is normally

chewed as a stimulant to keep the body alert. It could also be used to stimulate thirst especially in cases where the body is low in water but the taste buds do not have appetite for water (Blessing, 2016).

Kolanut (Obi) *Kola nitida* is a locally grown stimulant largely in the tropical forest of Nigeria. About 90% of the kolanut produced in Nigeria is consumed within the country while 10% is exported (Evarestus *et al*, 2012). The cultivation of kolanut in Nigeria is ecologically limited to the rain forest zones of south western of the country such as; Ondo, Osun, Ekiti, Oyo and Osun. It is a tree crop with over 20 species grown out of which *Kola nitida* (Gbanja) and *Kola accumulata* (Abata) are the two major species grown in Nigeria. The consumption of Kola accumulate is greatly cherished by the Yoruba of south-west of Nigeria. Kola nitida is used as a stimulant substitute for alcoholic drinks. It is also used as masticatory stimulant (Akinbode, 2011).

Kolanut is the third most important among the world's stimulants whose production covered about 47million tonnes in 1985, Kolanut is an important economic cash crop to a significant proportion of Nigeria population who are involved in kolanut farming, trading and industrial utilization. It has been an item of local stimulants traded in Africa. Nigeria accounts for about 70 percent of the total world production of kolanuts (Evarestus *et al*, 2012)

Local stimulants that are consumed in every home and used in processing industry have a fairly constant market demand. They are easily stored for five to six months after harvest which favours long marketing season. Local stimulants such as garlic, ginger, kolanut, bitter kola and alligator pepper are transported to the assembly centers in sacks, baskets or jute bags. Local stimulants, after reaching the assembly centers, are generally sold to the local traders for distribution to the consuming market such as wholesalers and retailers. This transaction usually takes place with the help of commission agents. Exporters either buy their requirements directly from assembling centers through local commission agents or from wholesalers in a regulated market.

In other market, sale of local stimulants often takes place by mutual negotiation which may either be direct between the buyer and seller or through commission agents. Markets which lack facilities such as sheds or stores might result in increased loss. There is a need to strengthen facilities as the assembly centres so as to handle the produce safely and to increase marketing efficiency.

There is a considerable fluctuation in local stimulants price from year to year due to an increase or a decrease in production. The prices of some local stimulants are generally low during March to May due peak period of arrival in which the average price varies from ₦300 -₦400 per kilogram. Thereafter, prices of these stimulants increase and generally remain higher during the period of October to January. The average price rate prevailed during the period is normally more than ₦700 per kilogram. Market supports by government is necessary to encourage farmers in

continuing production of quality local stimulants such as ginger, garlic, bitter kola, kolanut and alligator pepper every year (Dominic *et al*, 2014).

1.1. Objectives of the Study

The broad objective of the study is to conduct the structural analysis and marketing efficiencies of local stimulants in selected Local Government areas of Osun State.

The specific objectives are to:

(i) analyze the market channel and marketing margin for the local stimulants in Osun State.

(ii) estimate the marketing efficiency of the local stimulants.

(iii) estimate the degree of market concentration for the marketers of local stimulants.

2. Methodology

2.1. The Study Area

The study was conducted in Osun State. The State is one of the 36 States of the Federal Republic of Nigeria. It is made up of 30 Local Government Areas (L.G.As). Osun State is bonded in the north by Kwara State, in the East partly by Ekiti State and partly by Ondo State, in the south by Ogun state and in the west by Oyo state. The global location of the state is between longitude $4^0 30^I$east of the Greenwich meridian and also between latitude of 7^0 30^I north of the equator. The state occupies an area of approximately 14,875 square kilometers and has a population of 3,416,959 (NPC, 2006). About 70% of this population engages in peasant farming. There are two marked seasons the dry windy season and the rainy (wet) seasons. The wet season is usually from April through October. On the average, the state enjoys a rainy season of about seven months. The mean annual temperature for Osun state varies between 21.1 and 31.1^0C. Annual rainfall is within the range of 1000mm in the derived savannah agro-ecology to 1200mm in the forest belt. (OSSADEP 2007). Though, a land locked state, it is blessed with the presence of many rivers and streams which serve the water need of the state (see Figure 1).

2.2. Methods of Data Collection

The study used both primary and secondary data. The instrument used in the collection of primary data was a set of well-structured and pre-tested questionnaire. Secondary data was obtained through relevant publications which included journals, bulletins, textbooks and unpublished materials of importance to the study.

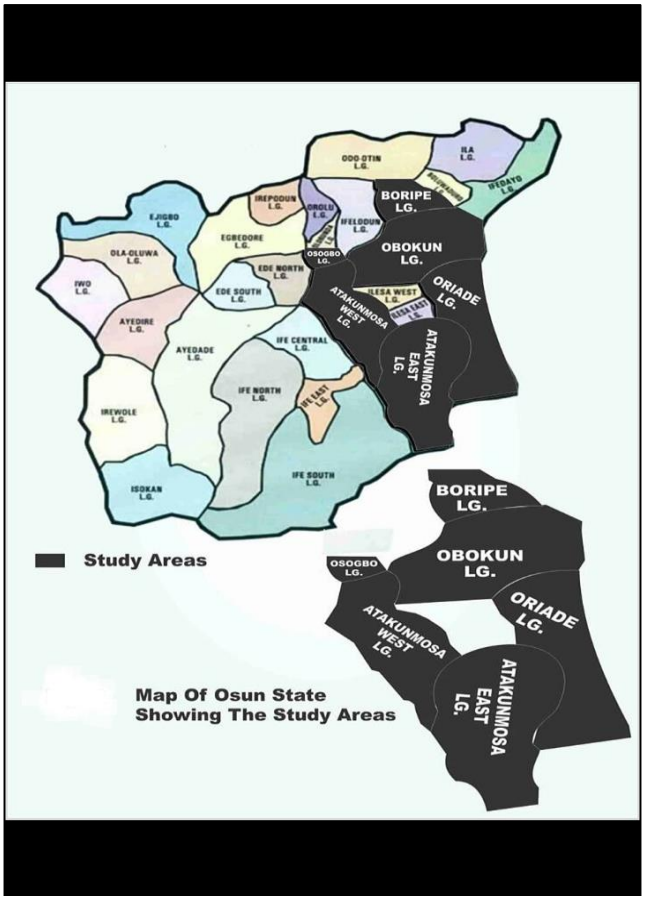

Figure 1. Map of Osun State showing the study Areas.

3. Sampling Procedure

Purposive sampling method was used to select six Local Government Areas from Osun state. The Local Government Areas (LGAs) are Boripe, Osogbo, Atakumosa East, Atakumosa West, Obokun and Oriade Local Government Areas. From Boripe LGA, the total stimulants trading markets were 12 villages. From Osogbo LG, the total stimulants trading markets were 7 villages, also from Atakunmosa East LG, the total stimulant trading markets were 22 villages, in Obokun LG, the total stimulant trading markets were 26 villages. While in Oriade LG, the total stimulant markets were 31 villages.

Secondly, the multi-stage random sampling was used to select the respondents. Firstly, towns were selected in each Local Government Area according to the availability of local stimulant marketers. secondly, markets were selected based on the sales of local

stimulants. Thirdly, respondents were selected from each market based on the size of stimulants traders in the respective markets. This makes up of farmer/producer-trader of local stimulants, middlemen, wholesaler and retailer. This finally brought the sample size to two hundred and forty (240) respondents.

Markets were selected based on the sales of local stimulants sold in the towns selected from each local government. From Boripe LGA 3 towns were selected from the total of 12 towns, from Osogbo LGA, 2towns were selected from the total of 6 local stimulant trading towns. Also from Atakunmosa East LGA, 4towns were selected from the total of 21towns that have local stimulant marketers. In Obokun LGA, the total number of towns selected were 5towns for the purpose of sampling while in Oriade LGA, the number of towns selected were 6towns. The selection of towns was based on taking at least 20% of the total market that have the number of local stimulant marketers. Respondents were selected from the markets based on the size of stimulants traders in the respective markets. This makes up of retailers and wholesalers. This formally brought the sample size to two hundred and forty (240). The reason is that the agro-climatic conditions prevalent in these local government areas have allowed the commercial production and marketing of local stimulants like bitter kola, kolanut, pepper, alligator, bitter and ginger.

4. Methods of Data Analysis

Both descriptive and statistics analysis techniques were used to analysis data collected and the descriptive statistics was analyzed through the use of frequency counts, percentages, means and ranks to achieve objective (i). While, inferential statistics such as marketing efficiency model and Henfindal-Hirchman Index were used to analysis objective (ii) and (iii).

Objective i Both the marketing channel and marketing margin of local stimulant were analysed using descriptive statistics.

Objective ii The marketing efficiency of the local stimulants was analysed through the use of marketing efficiency which measures the market performance.

ME = Net Margin * 100

Marketing Cost 1

Where; ME= Marketing Eficiency

Objective iii The degree of market concentration of local stimulant was estimated by Henfindal-Hirchman Index (HHI)

$$HHI = \sum_{i=1} (MSi)^2 \quad \text{(ix)}$$

5. Results and Discussion

The diagram (Figure 1) below described the marketing channel of the local stimulants which passed through various routes and middlemen before reaching the final consumers. It was found out that most of the routes have shorter chain that reduced the cost of transportation, and while others have long chain which added to the marketing cost of the local stimulants.

5.1. Channels of Distribution of Local Stimulants

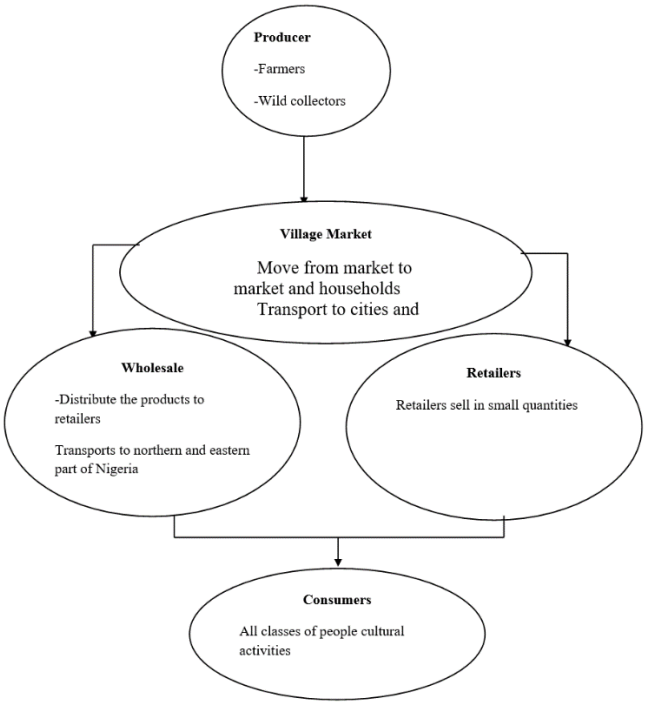

Figure 1. Channels of Distribution of Local Stimulants

5.2. Marketing Margins of the Local Stimulants

The marketing margins realized from retailing and wholesaling of the five local stimulants are presented in Table 1. As evident in the table, a typical retailer earned ₦323.60 per kg as marketing margin for retailing bitter kola while she earned ₦274.40, ₦162.50, N285.65 and ₦33.26, respectively, retailing a kilogram of kola nuts, ginger, alligator pepper and pepper. The retailers appear to make more marketing margin per kilogram of any of the stimulants than the wholesalers which might be due

to higher markup from the retailers than volume traded. Besides, a cursory look at the table reveals that pepper has the highest average marketing margin. It is surprising that the retailing function with highest concentration of marketers and consequential competition still managed to generate the highest marketing margin. This might not be unconnected with the beneficial relationship between demand and supply of the stimulant (pepper) in the study area.

Table 1. Marketing Margin of Market Participants Across Stimulant Types

	Producer-retailer				**Producer-wholesalers**				**Retailer**				**Wholesaler**				**All marketers**			
	BP	SP	MM (₦)	N	BP	SP	MM (₦)	n	BP	SP	MM (₦)	n	BP	SP	MM (₦)	n	BP	SP	MM (₦)	n
Bitter kola	-	465.50	-	7	-	435.75	-	4	450.50	783.65	323.50	18	432.79	455.30	25.50	8	430.81	654.21	218.5	37
Kola nut	-	542.90	-	7	-	521.50	-	6	531.80	805.72	274.40	24	519.50	536.25	18.30	15	504.13	729.50	221.50	52
Ginger	-	117.40	-	2	-	109.62	-	3	126.50	295.25	162.50	2	102.75	133.45	26.75	1	104.46	256.73	139.75	21
Alligator pepper	-	422.50	-	5	-	403.45	-	4	410.50	688.90	285.65	6	390.12	438.90	44.39	8	401.74	647.50	229.5	23
Pepper	-	428.50	-	2 1	-	411.75	-	1 7	427.50	465.50	33.26	4 8	409.25	428.50	15.77	2 1	407.29	436.55	32.55	107

Source: Field Survey, 2020. n = number of marketers in each category, BP = buying price, SP = Selling price, MM = Marketing margin

5.3. Market Concentration for the Marketers of Local Stimulants.

According to Brhan *et, al*, 2013, size distribution of market participants is one of the ways of measuring degree of concentration which is an important measure of market structure. In the Table 8, the analysis of participants (categorized by their market functions) in relation to their size in each of the product segment is presented.

a. Market participants and Concentration in Stimulant Product Segment

Knowledge of concentration of the market can help in understanding the product concentration of the market participants. Besides, it can also help in understanding market participants that are more likely to trade a particular local stimulant for decision making and policy development. This is the basis for analyzing the relationship between the marketing functions performed by the respondents and the local stimulants being marketed. Evidence on Table 2 revealed that the retailers and wholesalers are more likely to trade in pepper and Kolanut than any of bitter kola, ginger and alligator pepper. Besides, the marketers are more likely to market ginger on wholesale basis (21.1%) than on retail basis (4.0%) perhaps directly to processors. This is also true for the wholesalers. Generally, there is significant difference ($p < 0.01$) in the number of marketers marketing each of the stimulants on wholesale and retail bases.

Table 2. Functions Performed by Local Stimulants Marketers

Marketing function	Local stimulants					
	Pepper	**Kola nut**	**Bitter kola**	**Ginger**	**Alligator pepper**	**Total**
Producer-retailer	21(50.0)	7(16.7)	7(16.7)	2(4.7)	5(11.9)	42(100.0)
Producer-wholesaler	17(50.0)	6(17.6)	4(11.8)	3(8.8)	4(11.8)	34(100.0)
Retailer	48 (49.4)	24(21.3)	18(16.7)	2(4.0)	6(8.6)	98 (100.0)
Wholesaler	21(31.9)	15(22.8)	8(12.1)	14(21.1)	8(12.1)	66 (100.0)
DF	3	3	3	3	3	3
P-value	7.055*	19.223***	21.905***	25.004***	21.917***	17,223***

*Source: Field Survey, 2020, * Significant at 10% level, *** Significant at 1% level. Figures in parenthesis are percentages of sellers.*

b. Herfindahl-Hirschman Index (HHI) Analysis of Market Concentration

Market concentration measures the extent of dominance of sales by one or more firms in a particular market. Market concentration is measured by concentration ratio. A high concentration ratio indicates a large degree of market concentration and raises concerns over sellers abusing their market power (this entails such market charging higher prices to consumers or offering lower prices to producers relative to a more competitively determined price, limiting entry, constraining the degree of market information and constraining output) while a low concentration ratio indicates that firms have limited market power. The closer the value of market concentration to 1, the higher the concentration would be.

As evident in Table 3, a typical retailer earned ₦323.60 per kg as marketing margin for retailing bitter kola while she earned ₦274.40, ₦162.50, ₦285.65 and ₦33.26, respectively, retailing a kilogramme of kola nuts, ginger, alligator pepper and pepper. With high market concentration, marketers wield high market power and has higher tendency to influence either price or quantity supply. This might have accounted for the relatively higher marketing margin and efficiency found in the pepper market. Within less standardized local stimulant market in Nigeria, quality of market associations' regulations might have made the difference.

Shown in the Table 4 below, The pepper market concentration was high across the LGAs except for the Obokun LGA where pepper market concentration was found to be low and below the threshold (0.0476). For bitter kola, the market concentration was high in Atakumosa West (0.7553) but low in other locations (at most 0.3732). The kola nut market concentration was very high in Obokun (0.9818), Atakumosa East (0.6515) and Boripe (0.5882) but very low in Osogbo (0.1924). The ginger market concentration was low generally except for in Osogbo (0.9706) and Boripe (0.5882)

where the concentration was high. Alligator pepper market concentration was high in Atakumosa West (0.9871), Oriade (0.8018) and Atakumosa East (0.7932) but very low in Boripe (0.1006). The implication of these findings is that where the market concentration of a particular stimulant was high, less competition and high marketing margin are much more realizable compared to where the market concentration is low.

Table 3. Market Concentration of Local Stimulants in the Study Area

Local stimulants	**Market Concentration('000)**						
	Obokun	Oriade	Atakumosa west	Osogbo	Boripe	Atakumosa east	Total
Bitter kola	1,203	1,269	2,568	793	544	138	871
Kola nut	3,338	870	1,241	654	2,000	2,215	1,698
Ginger	754	814	802	5,000	2,000	468	1,364
Alligator pepper	1,116	2,726	4,036	890	342	2,697	1,669
Pepper	162	3,146	2,339	3,000	2,640	2,030	2,083

Source: Field Survey, 2020

Table 4. Market Concentration of Local Stimulants in the Study Area

Local stimulants	**Market Concentration (in decimcal)**						
	Obokun	Oriade	Atakumosa west	Osogbo	Boripe	Atakumosa east	Total
Bitter kola	0.3538	0.3732	0.7553	0.2332	0.1600	0.0406	0.2562
Kolanut	0.9818	0.2559	0.3650	0.1924	0.5882	0.6515	0.4994
Ginger	0.2218	0.2394	0.2359	0.9706	0.5882	0.1376	0.4012
Alligator pepSper	0.3282	0.8018	0.9871	0.2618	0.1006	0.7932	0.4909
Pepper	0.0476	0.9253	0.6879	0.8824	0.7765	0.5971	0.6126

Source: Field Survey, 2020

5.4. Marketing Function

Marketing function has tendency to show the types of market participant in the local stimulant marketing chain and their concentration. An assessment of the marketing functions performed by the respondents revealed that the majority (72.5%) of them performed retailing functions while 27.5% of them performed wholesaling functions. The majority of the marketers being retailers may imply a more developed market where the consumers can enjoy specialized services from retailers (e.g. bulk breaking) and wholesalers (e.g. discounts on large purchases).

Table 5. Distribution of Respondents by Marketing Functions Performed.

Marketing function	Frequency	Percent
Producer-retailer	42	17.5
Producer-wholesaler	34	14.2
Retailer	98	40.8
Wholesaler	66	27.5
Total	240	100.0

Source: Field Survey, 2020

5.5. Marketing Efficiency of the Local Stimulants

The marketing efficiency of the stimulants in the five LGAs across market participants are presented in Table 6. Evidence on the table reveals that generally, the marketing of the stimulants across the LGAs by the market participants was efficient. For instance, the average market efficiency across the stimulants and market participants in any of the LGAs is not less than 2.48 indicating high level of efficiency (see across all market participants).

Retailers Marketing Efficiency

A cursory look at the table reveals that the marketing efficiency for bitter kola was highest among retailers in Oriade LGA (3.62) and lowest in Boripe LGA (3.00). The marketing efficiency of kola nut for local stimulants was highest in Boripe LGA (4.23) and lowest at the Obokun LGA in (3.38). The marketing efficiency of ginger was found to be highest in Atakumosa East LGA (3.23) and lowest in Obokun LGA (2.47). In for the alligator pepper retailing marketing efficiency (ME), the highest ME was recorded in Oriade LGA (4.22) while the lowest ME was recorded in Atakumosa East LGA (3.63). The pepper retailing ME was found to be highest in Boripe LGA (4.16) while the lowest pepper retailing ME was found in Atakumosa West LGA (2.95).there should be an attempt by the government, financial bodies and non-governmental associations towards inducing more efficient resource allocation, modifying environment and creating more market expansion and cost reductions in other local government which are less efficient in marketing (Akanni,2010)

Wholesaling Marketing Efficiency

The wholesaling ME of bitter kola was found to be highest in Boripe LGA (3.47) and lowest in Oriade LGA (3.07). In terms of ME of kola nut wholesaling, the highest was found in Atakumosa LGA (3.96) while the lowest was found in Obokun LGA (3.42). The wholesaling ME of ginger was highest in Osogbo LGA (3.14) while the lowest was found in Oriade LGA (2.44). The marketing efficiency (ME) of wholesaling of alligator pepper was found to be highest in Oriade LGA (4.22) but the lowest was found in Osogbo LGA (3.14). The highest pepper wholesaling marketing efficiency

was found in Atakumosa East LGA (4.11) while the lowest was found in Obokun LGA (3.12).efficient marketing in Atakumosa LGA suggests that factors which help or triggers better efficient marketing are more embedded in the LGA; such as better market information, better market conduct and performance(Adegeye and Dittoh, 1985). Other markets in the study area should improve on their market structure to creat a better marketing efficiency

Table 6. Marketing Efficiency across stimulants in various LGAs within the study area.

Market Participants	Obokun LGA				Oriade LGA				Atakumosa West LGA					Osogbo LGA					Boripe LGA					Atakumosa East LGA						
	BK	KN	GG	AP	PP	BK	KN	GG	AP	PP	BK	KN	GG	AP	PP	BK	KN	GG	AP	PP	BK	KN	GG	AP	PP	BK	KN	GG	AP	PP
Producer-retailer	2.12	3.82	2.13	3.45	2.66	3.12	3.65	2.61	4.12	3.18	3.22	3.42	2.74	4.01	2.89	2.73	3.42	2.43	3.09	3.76	2.97	4.05	2.78	3.62	3.90	3.11	3.61	3.29	3.75	4.26
Producer-wholesaler	3.16	3.44	2.72	3.77	3.01	3.53	3.84	2.68	4.19	3.56	3.19	3.31	2.88	4.29	2.56	3.03	3.23	2.19	2.98	3.82	3.26	4.17								
Retailer	3.44	3.38	2.47	3.91	3.83	3.62	4.08	2.55	4.22	3.17	3.28	3.85	2.51	4.02	2.95	3.22	3.56	2.77	3.63	3.91	3.00	4.23	2.69	3.95	4.16	3.04	3.81	3.23	3.96	4.03
Wholesaler	3.19	3.42	2.55	4.14	3.12	3.07	3.85	2.44	4.22	3.89	3.39	3.35	2.90	4.08	3.41	3.13	3.55	3.14	3.14	3.36	3.47	3.81	2.47	3.29	3.75	3.13	3.96	2.63	4.13	4.11
Across all market participants	3.36	3.41	2.55	4.05	3.78	3.49	4.09	2.48	4.21	3.98	3.43	3.85	2.55	4.22	3.36	3.43	3.85	2.60	3.50	3.68	3.43	4.22	2.55	4.22	3.73	3.50	3.92	2.55	4.48	4.62

Source: Field Survey, 2020, BK = Bitter kola, KN = Kola nut, GG = Ginger, AP = Alligator pepper, PP = Pepper, LGA = Local Government Area.

5.6. Constraints Encountered in the Marketing of Local Stimulants

In the Figure 2, the challenges confronting the respondents in marketing of local stimulants are presented. It is evident in the figure that high transportation cost (51.3%) constituted the most common challenges confronting the respondents in marketing local stimulants in the study area. These high transportation cost have been cited by many authors as detrimental to the efficiency of food production and marketing in Nigeria (Akanni, 2018; Oladunjoye, 2006; Olusegun and Kayode, 2002). Akanni (2018) aptly describes the ugly situation in the Nigeria agrifood chain production in marketing as causing 'inefficiency and imperfection in the agrifoods trades and thus reduce the level of consumer benefits/satisfaction. Worthy of note is the fact that high transport cost (51.5%,), middlemen rip-offs (42.6%) and insufficient finance were the major challenges encountered by the marketers of local stimulants.

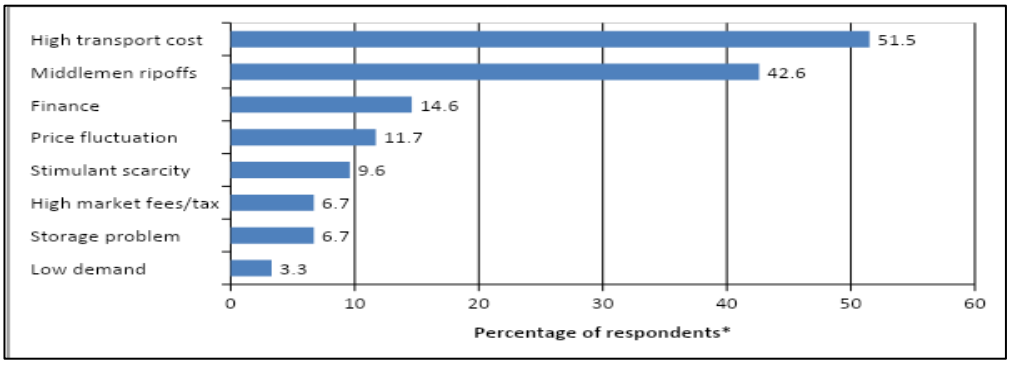

Figure 2. Distribution of Respondents by Challenges Faced in Marketing Local Stimulants (n=240)

*Source: Field Survey, 2020, * Multiple responses*

6. Conclusion

The purpose of this study is to assess the market structure and marketing efficiency of local stimulants in selected markets in Osun State, Nigeria. The markets were generally efficient across the stimulants but the alligator pepper had the highest marketing efficiency. In terms of market concentration, the pepper markets were the most concentrated which might have accounted for relatively higher marketing margin recorded in pepper trading/marketing. Pepper is a local stimulant that is in high demand across the study area. It is needed daily by many households in the study area. The high demand for pepper over time prompted the high number of pepper traders and high concentration rate. The least concentrated market was the bitter kola market. . Bitter kola is often used occasionally in the study area usually for special purposes. It is not highly consumed like peeper and bitter kola. The low use might have accounted for the low incentives for many marketers to enter the market, hence, the low market concentration. The middlemen rip-offs constituted higher impediments to marketing of local stimulants in the study area followed by high cost of transportation. Supply chains for stimulants apart from those pepper and kolanuts are less organized and the demands are erratic. The middlemen with resources and who can wait-the-time gather the stimulants and sell it at exorbitant prices to the retailers when they need it.

Recommendations

Based on the study findings, it is recommended that;

(vi) The marketers should embrace association to continue to strengthen their position in the market. By forming association, the marketers can solve control either price or supply to maximize profitability of the business.

(vii) The marketers should cultivate the habit of seeking market information from variety of sources rather than mainly through co-traders. Market information is very important to market efficiency and profitability. Seeking market information from variety of sources can provide check and balance and prevent marketers from relying on false information which can be counterproductive.

(viii) The marketers form cooperatives to help themselves in addressing the problem of finance. Finance is one of the major problem identified in the study. By forming cooperatives, the marketers can have better access to finance for their businesses rather than relying substantially on money lenders with cut-throat interest rates.

(ix) The marketers should consider trading in pepper and alligator pepper as they hold the promise of higher marketing margin. Pepper and alligator pepper were observed to be more profitable and the marketers may consider conducting feasibility on these

two stimulants to determine if engaging in them can improve the overall profitability of their local stimulant businesses.

(x) The marketers can also seek for soft loans from commercial banks or government parastaltals and ministry of Commerce, Trade and Industry to source for more funds.

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