

# ANALYSIS OF MARKETING MARGIN AND EFFICIENCY OF BEANS IN IMO STATE

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## ABSTRACT

The study evaluates the marketing system for beans in Imo State, with intention to describe the socio-economic characteristics of the market actors, determine the marketing cost and marketing margins of beans and ascertain the degree of marketing efficiency. Purposive and simple random sampling techniques were employed to select twenty (20) wholesalers and forty-two (42) retailers. Descriptive statistics, Marketing margin and Efficiency were used to analyze the data collected. Results showed that majority of the beans traders were males, with the mean age of 44.5 years and 41.5 years for wholesalers and retailers respectively. The mean purchase and selling price per kilogram of beans of the wholesaler were ₦242.82k and ₦279.97k respectively; while that of the retailer were ₦251.9k and ₦286.5k respectively. Marketing costs were ₦21.83k and ₦22.58k respectively for the wholesaler and retailer; their gross marketing margins were ₦37.15k and ₦34.60k respectively and the net marketing margins were ₦15.32k and ₦12.02k respectively. The marketing efficiencies were 70.18% and 53.23% for wholesaler and retailers respectively implying that beans marketing were inefficient. Marketing cost out-weighted the amount of value addition on beans marketing causing marketing inefficiency of both traders. Efforts to reactivate agricultural marketing board should be intensified to keep agricultural prices stable all year round through price stabilization policy, traders' co-operatives should provide storage facilities to store beans at bumper periods to curtail the effects of seasonality on selling price and marketing margin. Government should provide lasting solution to the insurgency of Boko-Haram in the Northern States of the country to ensure the safe transportation of agricultural producer in Nigeria.

## 1.0 INTRODUCTION

The marketing system plays a decisive role in vibrant economies as mechanisms for both exchange functions and the proper coordination of exchange through price signals that reflects and shape producers and consumer incentives in supply and demand interaction (Aidoo et. al, 2012). A well-developed marketing system is expected to complement the farm production efforts towards the realization of its desirable goals through the provision of time, place, possession and form utilities (Oteh and Njoku, 2014). A market that is efficient does not only bring buyers and sellers together, it enables entrepreneurs to take advantage of the opportunities to innovate and improve in response to demand and price signals (Fakayode et al, 2010). An efficient marketing system is considered

to be a pre-requisite for prompt delivery of goods. Prompt delivery of goods at a reasonable price is possible only when the market works in effective competition (Oteh and Njoku, 2014). The degree of efficiency is often a criterion by which marketing systems are measured.

Beans marketing is one of the most lucrative businesses engaged in by most agricultural produce merchants because of the high economic value of the crop. There is usually a high economic return on the marketing of beans because of its value in the diet of most consumers (Faye, 2000). The emerging picture of beans marketing in West Africa is one of well-established hierarchical trade link, especially between Nigeria and its neighbours (Lowenberge-Deboer and Coulibaly, 2000; Faye, 2000). There is a growing potential for beans market both in international and local markets. In Sub-Saharan Africa, Muimui (2010) reported that demand for beans is at 20,000 metric tons per year and is projected to grow in excess of 40,000 metric tons over the next 10 years. In terms of demand, CIAT (2001) observed that as Africa's cities are expanding, market demand for beans is also rising rapidly, creating opportunities for farmers to increase their incomes by producing both grain and high-quality seed. Olukosiet *al.*, (2005) opined that demand is affected by the level of income of the consumers, the price of the commodity, the price of substitute good, taste and preference of the consumer etc.

The objective of the marketing system being efficient and effective is to get to loyal customers at low marketing cost and consequently increased profit (Rust et al., 2004). Good Marketing efficiency is necessary because consumers derive the greatest possible satisfaction at the least possible cost (Acharya and Agarwal, 2006). To the consumer, marketing efficiency may mean getting his commodities at the lowest price while from the producers' perspective it may imply selling at the highest price (Oteh and Njoku, 2014). Inadequate marketing services such as transport, packing and handling represents major obstacles that face marketing activities, and impede efficiency. The need for the marketing system for agricultural products to be well structured and efficiently organized cannot be over emphasized. Understanding the marketing system for beans in Imo State is vital for improved beans consumption and increased participation in its marketing which possibly may lead to increased farmer income, reduced malnutrition problems and ultimately reduced poverty.

## METHODOLOGY

This study was carried out in Imo State, which is situated in the Southeastern of Nigeria and lies between latitude  $5^{\circ}41'N$  and  $6^{\circ}31'N$  and longitude  $6^{\circ}15'E$  and  $7^{\circ}34'E$ . Imo State occupies a land mass of about  $5,530 \text{ km}^2$  with a total population of 3,934,899 persons in 2006 (NPC, 2006). It is bordered by Abia State on the east, by the River Niger on the West, by Anambra State to the north and River State to the south. The location of Imo State in the Southeastern zone makes it a strategic commercial centre. The people are known for their traditional hospitality, revered as the cradle of peaceful co-existence and famed for their cultural affinity. Education is the biggest industry in the State (IMSG, 2001).

Imo State of Nigeria was chosen purposively for the study due to proximity, costs and accessibility; and mostly due to the fact that beans marketers and other stake holders are found in the area. Imo state is made up of three (3) agricultural zones, which are: Owerri, Okigwe and Orlu agricultural zone. Owerri zone is made up nine (9) local Governments, while Orlu and Okigwe have twelve (12) and six (6) local governments respectively. In each of the zones, the zonal main market was purposively selected due to relative high concentration of marketing activities and beans trade in these markets. In this connection, Owerri main market, Orlu main market and Okigwe main market were purposively selected. However, in Owerri Urban, Relief market was also purposively added as a result of its position as the centre of commodity trade in the State making a total of 4 urban markets. From each zone, one rural LGA was randomly selected. In each of the rural LGAs, the major market was selected for the study. Thus four (4) urban and (3) rural markets, were randomly selected, giving a total of (7) markets. In each of the markets, with the help of executive members of beans sellers' association, lists of names of beans traders were collected to form the sample frame of 168 urban and 49 rural beans marketers for the study. From the sample frame obtained for the study, five (5) beans wholesalers and 6 beans retailers were randomly selected in each of theselected urban markets to have 20 wholesalers and 24 retailers from the urban markets. Similarly, From the rural markets, 6 retailers were randomly selected, giving 18 retailers on the whole. The study therefore selected 20 wholesalers and 42 retailers (24 urban retailers 18 rural retailers) to give a total of 62 respondents.

Data for this study were collected from primary sources. The primary data were obtained through the use of well-structured questionnaire. The variables of interest include characteristics of the

traders, purchases and sales transaction, sources of purchase, cost of purchase, transportation cost, major buyers and selling prices, marketing constraints, etc. However, the secondary data such as empirical and theoretical literature on agricultural marketing systems was obtained from textbooks, journals, internets and publications of related articles. Data collected were analyzed based on descriptive statistics, Gini analytical tool, Agarwal’s marketing efficiency index, marketing margin and Gini coefficient.

### 3.0 RESULTS AND DISCUSSION

#### Socioeconomic Characteristics of the Beans Marketers

Table 1 shows that 71% of the pooled beans traders were males and 29% of them were female marketers. In the wholesales category, 80% of the traders were male while 20% of them were female and in the retail category, 63% of them were male while 33% of them were female. This distribution shows that the males were more involved in the business of beans marketing than the female folks. This is connected with the strenuous nature of the beans marketing particularly wholesaling which involves travelling a long distance to the Northern part of beans in search of beans where it is mainly produced. This nature imposes a lot of marketing risks which may deter female participation particularly in wholesale marketing. Most females, because of their significant role in home-keeping and child care could not conveniently engage themselves in beans trading.

This is line with Katanga et. al. (2016), Ani et. al. (2015) and Girei et. al. (2013). Majority of the wholesale traders (40%), retailers (48%) and pooled traders (45%) were in the age range of 41 – 50 years. About 25% of the wholesalers, 26% of the retailers and pooled traders respectively were in the range of 31 – 40 years. About 15%, 10% and 11% of the wholesalers, retailers and pooled traders respectively are in age range of 51 – 60 years. About 10%, 14% and 13% of wholesalers, retailers and pooled traders respectively were in the age range of 21 – 30 years. The mean ages of traders were 44.5 years, 41.5 years and 42.4 years for wholesalers, retailers and pooled traders respectively which is regarded as economically active, self-motivated and innovative age.

**Table 1: Socio-economic Characteristics of Beans Marketing in Imo State**

Variables	Wholesalers		Retailers		Pooled	
	Freq.	%	Freq.	%	Freq.	%
<b>Gender</b>						
Male	16	80	28	67	44	71

Females	4	20	14	33	18	29
<b>Total</b>	20	100	42	100	62	100
<b>Age (Years)</b>						
21-30	2	10	6	14	8	13
31-40	5	25	11	26	16	26
41-50	8	40	20	48	28	45
51-60	3	15	4	10	7	11
61-70	2	10	1	2	3	5
<b>Total</b>	20	100	42	100	62	100
<b>Mean</b>	44.5		41.5		42.4	
<b>Years spent in School (Years)</b>						
None	0	0	1	2	1	2
1 – 6	2	10	9	21	11	18
7 – 12	16	80	25	60	41	66
13 – 18	1	5	6	14	7	11
> 18	1	5	1	2	2	3
<b>Total</b>	20	100	42	100	62	100
<b>Mean</b>	9.8		9.1		9.4	
<b>Marketing Experience (Years)</b>						
≤ 10	5	25	11	26	16	26
11-20	8	40	20	48	28	45
21-30	4	20	6	14	10	16
> 30	3	15	5	12	8	13
<b>Total</b>	20	100	42	100	62	100
<b>Mean</b>	18		16.7		17.1	
<b>Marital Status</b>						
Married	16	80	30	72	46	74
Single	4	20	12	28	16	26
<b>Total</b>	20	100	42	100	62	100

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This is also in line with Girei et. al. (2013), Katanga et. al. (2016) and Ani et. al. (2015) that found out that majority of the Beans traders are in youthful category which is range between 31 – 45 years. About 80% of the wholesale, 60% of retailers and 66% of pooled beans traders had spent 7 – 12 years in school, 10% of the wholesalers, 21% of the retailers and 18% of pooled beans traders had spent 1 – 6 years in school and 5% of wholesalers, 14% of the retailers and 11% of the pooled traders had spent 13 – 18 years in school. The mean years spent in school were 9.8 years and 9.1 years for wholesalers and retailers respectively. These imply that most of the beans traders were literate which implies they are well enlightened and receptive to good business ideas and innovations that will enhance their businesses. It is expected that education would enhance the marketing efficiency of the traders which could translate to higher profitability for them as equally highlighted by Girei et. al. (2013).

About 40% of the wholesalers, 48% of the retailers and 45% of the pooled traders respectively had been in beans marketing between 11 – 20 years; about 25% of wholesalers, 26% of the retailers and 26% of the pooled traders had less than or equal to 10 years marketing experience; about 20% of the wholesalers, 14% of the retailers and 16% of the pooled traders respectively had 21 – 30 years marketing experience and about 15% of the wholesalers, 12% of the retailers and 13% of the pooled traders had above 30 years of marketing experience. The mean marketing experience was 18 years and 16.7 years of experience for wholesale and retail marketing respectively. This implied that the beans traders had acquired the needed experience and skills to cope with the intricacies of marketing over the years. This result collaborates that of Katanga *et. al.* (2016) who obtained mean marketing experience of 10 years among cowpea marketers in Jigawa State, Nigeria. Majority of the beans traders were married. The results show that 80% of the wholesalers, 72% of the retailers and 74% of pooled traders respectively were married while only 20% of the wholesalers, 28% of the retailers and 26% of the pooled traders respectively were single. In view of the fact that married people bear more responsibilities than single people, it is believed that the married traders were more committed to their businesses in order to generate more money to cater

for their families. Katanga et. al. (2016) indicated that the large presence of married individuals in beans marketing implies that most of them are responsible, more committed and able to making rational decisions in the business.

### Marketing Cost and Marketing Margins of Beans

The results in Table 2 showed that the minimum and maximum purchase price of the beans of the wholesalers was N84.99/kg and N303.53/kg respectively with the mean value of N242.82/kg and minimum and minimum and maximum selling price of beans of the wholesalers was N97.99/kg and N461.95/kg respectively with the mean value of N279.97/kg. This implies that Wholesalers made a maximum gross marketing margin of N158.43/kg, a minimum gross margin of N13.00/kg and the mean value of N37.15/kg when they purchase and sell a kilogram of beans, without considering the associated costs incurred in marketing. Considering cost incurred in wholesale marketing, it was evidenced that transportation cost is the highest with the mean value of N14.8/kg and the range values of between N8.14/kg and N19.98/kg.

**Table 2: Estimated Marketing costs and Net Marketing Margins per kilogram of Beans**

Items	Wholesaler (₦/kg)			Retailer (₦/kg)		
	Min	Max	Mean	Min	Max	Mean
Selling price: Sp	97.99	461.95	279.97	240.80	618.39	286.5
Purchase price: Pp	84.99	303.53	242.82	235.63	348.66	251.9
<b>Gross Marketing Margins:</b>	<b>13.00</b>	<b>158.43</b>	<b>37.15</b>	<b>5.17</b>	<b>269.73</b>	<b>34.6</b>
<b>GMM = Sp – Pp</b>						
<b>Marketing cost items:</b>						
Transportation	8.14	19.98	14.8	2.23	17.24	2.35
Handling (loading/offloading)	0.25	1.24	0.99	0.42	4.02	0.83
Rent per month	1.03	6.77	4.1	0.69	57.47	11.37
Packaging	0.01	0.08	0.05	0.34	3.51	2.25
Market charges	0.26	1.68	1.02	0.51	5.26	3.37
Storage	0.22	1.44	0.87	0.36	3.76	2.41
<b>Total Marketing Costs: TMC</b>	<b>9.90</b>	<b>31.18</b>	<b>21.83</b>	<b>4.54</b>	<b>91.26</b>	<b>22.58</b>
<b>Net Marketing Margins:</b>	<b>3.11</b>	<b>127.24</b>	<b>15.32</b>	<b>0.63</b>	<b>178.47</b>	<b>12.02</b>
<b>NMM = GMM – TMC</b>						

As evidenced from the result, it was indicated that transportation cost was the highest marketing cost incurred by wholesalers, this is due to the fact that the beans consumed in the study area was



majorly obtained from Northern Nigeria which is very far from the study area. It was followed by rent of stall per month with the mean value of ₦4.1/kg and the range value of between ₦1.03/kg and ₦6.77/kg. Other associated costs are market charges with the mean value of ₦1.02/kg and range value between ₦0.26/kg and ₦1.68/Kg; Handling cost (Loading/offloading) with the mean value of ₦0.99/kg and range value between ₦0.25/kg and ₦1.24/Kg; storage cost with the mean value of ₦0.87/kg and range value between ₦0.22/kg and ₦1.44/Kg and the least expense was on packaging cost with the mean value of ₦0.05/kg and range value between ₦0.01/kg and ₦0.08/Kg. All these costs summed up as total marketing cost whose mean value was estimated as ₦21.83/kg and the range value of between ₦9.90/kg and ₦31.18/kg. The net marketing margin of wholesalers of beans which is the difference between the gross marketing margin and total marketing cost is estimated to ranges between ₦127.24/kg and ₦3.11/kg with the mean value of ₦15.32/kg. This agreed with the Obasi and Nzeakor (2016) and Ani et. al. (2016) that produce wholesalers usually spent the highest amount in marketing than other groups probably due to long distances involved in conveying agricultural produced from the farm gates to the markets leading to high transport costs, costs of booking at markets and payment of tax and produce levies at road blocks. All these variables contributed to high cost incurred by wholesalers in the business. Similarly, the minimum and maximum purchase price of the beans of the retailers was ₦235.63/kg and ₦348.66/kg respectively with the mean value of ₦251.90/kg and minimum and minimum and maximum selling price of beans of the retailers was ₦240.80/kg and ₦618.39/kg respectively with the mean value of ₦286.50/kg. It means that the maximum and minimum value of the retailers' gross marketing margin was ₦269.73/kg and ₦5.17/kg respectively and the mean value was ₦34.60/kg. It was evidenced that there is a large variation in the gross marketing margin which could be associated with different patterns of costs of marketing of the retailers to create utilities of place, time and possession to the final consumers. Considering cost incurred in retail marketing, it was evidenced that rent on stall is the highest with the mean value of ₦11.37/kg and the range values of between ₦0.69/kg and ₦57.47/kg. It was followed by market charges with the mean value of ₦3.37/kg and the range value of between ₦0.51/kg and ₦5.26/kg. Other associated costs are storage cost with the mean value of ₦2.41/kg and range value between ₦0.36/kg and ₦3.76/Kg; transportation cost with the mean value of ₦2.35/kg and range value between ₦2.23/kg and ₦17.24/Kg; packaging cost with the mean value of ₦2.25/kg and range value between ₦0.34/kg and ₦3.51/Kg and the least expense was on handling cost (Loading and Off-loading) with the



mean value of ₦0.83/kg and range value between ₦0.42/kg and ₦4.02/Kg. All these costs summed up as total marketing cost whose mean value was estimated as ₦22.58/kg and the range value of between ₦4.54/kg and ₦91.26/kg. From the marketing cost outlay of the retailers, it is indicated that retailers spent higher on rent of shops, market charges and storage and less in transportation cost, this could be as a result of their close proximity to the wholesalers who would have transported beans from the far distance to the markets which are closers to the retailers. This agreed with the findings of Ani et. al. (2016) that obtained a similar result but disagreed with World Bank (2009) that short distance marketing had much higher cost on the basis of kilometer per tonne. The net marketing margin of the retailers of beans which is the numerical difference between the gross marketing margin and total marketing cost is estimated to range between ₦178.47/kg and ₦0.63/kg with the mean value of ₦12.02/kg.

**Table 3: Estimates of Marketing margins of Beans in the study area.**

Items	Wholesaler (₦/kg)			Retailer (₦/kg)		
	Min	Max	Mean	Min	Max	Mean
<b>Selling price: SP</b>	97.99	461.95	279.97	240.8	618.39	286.5
<b>Purchase price: PP</b>	84.99	303.53	242.82	235.63	348.66	251.9
<b>GMM = SP – PP</b>	<b>13</b>	<b>158.43</b>	<b>37.15</b>	<b>5.17</b>	<b>269.73</b>	<b>34.6</b>
<b>TMC</b>	9.9	31.18	21.83	4.54	91.26	22.58
<b>NM = GMM – TMC</b>	3.11	127.24	15.32	0.63	178.47	12.02
<b>%TMC of GM</b>	76.15	19.68	58.76	87.81	33.83	65.26
<b>%NM of GM</b>	23.92	80.31	41.24	12.19	66.17	34.74
<b>%NM of PP</b>	3.66	41.92	6.31	0.27	51.19	4.77
<b>%TMC of PP</b>	0.10	0.07	0.08	0.02	0.15	0.08

From the Table 3, it was shown that wholesalers made the mean value of 41.24% of the gross margin as net margin per kilogram of bean marketed and the range of 23.92% and 80.31%. This implies that total marketing cost accounted for between 19.68% and 76.12% and the mean value of 58.76% of the gross margin derived from beans marketing. Equally, the retailers made the mean value of 34.74% of the gross margin as net margin per kilogram of bean marketed and the range of 12.19% and 66.17%. This implies that total marketing cost accounted for between 33.93% and

87.91% and the mean value of 65.26% of the gross margin derived from beans marketing. The mean percentage of net margin in purchase price of beans was 6.31% and 4.77% for wholesalers and retailers respectively indicating that for every purchase price of ₦1, net margin of 6.31k and 4.77k accrued to the wholesalers and retailers respectively. Similarly, the mean percentage of marketing cost to purchase price was 0.08% for both wholesalers and retailers which implies that they expended only 8k as marketing cost to sell N1 worth of beans to their respective customers. This implies that wholesalers made a higher percentage of net margins to gross margin than retailers which could be due to the fact that wholesalers purchased and sold in large quantity in the far northern markets. Although, they incurred more cost, they likewise earned more profit. Their net earnings differed significantly from retailers because they committed a higher capital base and undertook greater marketing risks than retailers. In addition, the net margin of less than 5% of gross margin is an evidence of competitive pressure among the traders. However, the mean values of 15.32% and 12.02% for wholesalers and retailers respectively indicated uncompetitive nature of bean market. Ani et. al. (2016) obtained a similar result in Soyabean marketing in Benue and Enugu States.

### Beans' Marketing Efficiency

Table 6 shows the estimated marketing efficiency for beans marketing among the wholesalers and retailers in the study area. the values added for wholesale and retail beans marketing were ₦37.15/kg and ₦34.6/kg respectively. These represent the gross margin for beans marketing. The costs of marketing were N21.83/kg and N22.58/kg for wholesales and retails marketing respectively. Based on these, the marketing efficiencies were 70.18% and 53.23% for wholesaler and retailers respectively. Since the ratios are less than 100%, it implies that both marketers are inefficient; which means that more is spent on marketing services such as cost of purchase, transportation, rent, market levy and deprecation of fixed assets compared to the amount received by marketers for value addition on wholesales and retails marketing.

**Table 6: Marketing Efficiency for Beans marketing among Wholesalers and Retailers**

Items	Wholesalers (₦/kg)	Retailers (₦/kg)
Selling price: Sp	279.97	286.5
Purchase price: Pp	242.82	251.9

Gross Marketing Margins: $GMM = Sp - Pp$	<b>37.15</b>	<b>34.6</b>
Total Marketing Costs: TMC	21.83	22.58
<b>Marketing Efficiency: <math>(GMM/TMC)*100\%</math></b>	70.18	53.23

This means that an increase in the cost of performing marketing service (that is added time, form and place utility) by 100% will give a less than proportionate increase of 70.18% and 53.23% in value addition in the marketing of wholesales and retails marketing respectively. The higher marketing efficiency value of wholesalers could be due to higher investment they commit to the marketing activities, through travelling long distance to purchase beans in large quantity in the Northern States. Ani et. al., (2017), Girei et. al., (2015) and Obasi and Nzeakor (2016) obtained similar results in their separate studies.

## CONCLUSION AND RECOMMENDATIONS

From the foregoing, it could be deduced that there are more males in wholesale than retail marketing. Most of the beans traders are within the youthful age and educated to carry out the marketing efficiently. Beans wholesalers had higher marketing margins than the beans retail traders. Marketing cost out-weighted the amount of value addition on beans marketing causing marketing inefficiency of both traders. Efforts to reactivate agricultural marketing board should be intensified to keep agricultural prices stable all year round through price stabilization policy, traders' co-operatives should provide storage facilities to store beans at bumper periods to curtail the effects of seasonality on selling price and marketing margin. Government should provide lasting solution to the insurgency of Boko-Haram in the Northern States of the country to ensure the safe transportation of agricultural producer in Nigeria and Credit facilities should be provided to the potential traders to ease their entrance into the beans marketing to improve equality of sellers' distribution.

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