PROFITABILITY ANALYSIS OF GROUNDNUT (*Arachis hypogaea L.*) MARKETING IN YOLA NORTH LOCAL GOVERNMENT AREA OF ADAMAWA STATE, NIGERIA

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Abstract: The study examined the Profitability of groundnut marketing in Yola North Local Government Area, Adamawa State with a view to identifying and proffering solution to the problems affecting groundnut marketing. Fifty two (52) respondents were randomly sampled for the study and structured questionnaire were used to collect primary data from the respondents. The primary data were analysed using descriptive statistics such as frequency and percentages and gross margin. The results of the data analyses revealed that (58%) of the marketers were between 25 – 44 years of age, (65%) were males and 71.2% of them were married. (82.7%) of the marketers have attended a level of formal education and (46.1%) have less than 10 years of marketing experience. The Study also shows that, the business is profitable with a gross margin per bag of ₦913.04 and the net profit per bag of ₦600, thus depicting profitability in the business. The problems that are being faced by groundnut marketers in the study area were inadequate capital, inadequate transportation, inadequate storage facilities and excessive price fluctuation. Based on the study it was recommended that there should be efficient policy formulation and implementation such that to protect both the marketers and producers by educating the traders on good marketing principles through the extension agents to improved groundnut marketing activities in the area. Groundnut marketers in the study area should form cooperative group(s) to have access to loans from bank(s) for better capital base for higher profit, Storage facilities should be provided so that surplus groundnut can be stored to avoid spoilage and loss among others.

Keywords: Profitability, marketing, groundnut, gross marketing income, marketing channel

Introduction

Marketing is the sum total of all business activities involved in the movement of commodities from production to consumption (Kohls and Uhl, 1985). It is the method of bringing the impersonal forces of demand and supply together irrespective of the location of the market (Adekanye, 1988). Arene (1998) defined market as an area or setting in which price making forces (demand and supply) operate. Marketing, according to Nwoke (2000) is the process of planning and executing the conception, pricing, promotion and distribution of ideas, goods and services to create exchange that satisfy individual and organisational objectives. It involves the provision of time, form, place and possession utilities of commodities. Reddy *et al.* (2004) defined marketing as the economic process by which goods and services are exchanged between the producers and the consumers and their values determined in terms of money prices.

According to Olukosi *et al.* (2007) agricultural marketing can be defined in two ways; first is the micro viewpoint which is concerned with the individual participants in marketing be it a farmer or business firm, while the second definition focuses on macro viewpoint which sees marketing as the total system of economic activities concerned with the flow of agricultural products from producers to final consumers.

Marketing of agricultural products is necessary if a subsistence economy is to rise above that level (Igwe *et al.,* 2005). Any plan of economic development that aims at eliminating poverty and waste of agricultural population should pay special attention to development of an efficient marketing for agricultural products (Olayemi, 1972; cited in Igwe *et al.,* 2005).

Groundnut (*Arachis hypogea L*) provided raw materials for edible and industrial vegetable oils and groundnut cake for livestock feed. The seed contain about 27% protein, 45% oil and 10% carbohydrate. It is eaten raw, boiled, roasted made into paste use for soup stews and is extensively used for West Africa as a cooking oil as well as in industries for making margarine (Nwanosike, 2011). It is the 13th most important

food crop of the world and the world's 4th most important source of edible oil and 3rd most important source of vegetable protein (Taru *et al.,* 2010). It is one of the most popular commercial crop in Nigeria which accounted for 70 percent of the total Nigeria export earning between 1956 and 1967 but declined between 1955 and mid 1980s due to combine effect of drought and disease (Misari *et al.,* 1980). According to Taru *et al.* (2010), major groundnut zones in Nigeria are the Sudan and northern Guinea Savannah where the soil and agro climatogical conditions are favourable. It requires 500 to 1600 mm of rainfall, which may last for 70 to 200 days of rainy season in the Sudan savannah.

Groundnut (*Arachis hypogaea L.*) belongs to the genius *Arachis* in family *legiminosea* (Fabacaea) which has replaced the traditional bambara groundnut (*Vigna subterranean*) in many areas of the country (Girei *et al.,* 2013). Groundnut seeds contain high quality edible oil (50%), easily digestible protein (25%), carbohydrates (20%), and 5% water (Awoke, 2003). After oil extraction, the residues are good sources of protein useful in bakeries and in the manufacture of livestock feeds. The most commercial product of groundnut is peanut candy, which is sold at supermarkets or hawked in the streets. It is grown on 26.4 million ha worldwide with a total production of 36.1 million metric tons, and an average productivity of 1.4 metric tons/ha (FAO 2009). Groundnut is grown in nearly 100 countries with China, India, Nigeria, U.S.A, Indonesia and Sudan as major producers.

The bulk of groundnut in Nigeria especially in Adamawa State is produced in rural area. Therefore, there is a need to transport and market the surpluses in the urban market. Therefore mass marketing became a prerequisite for successful mass production. Hence, the emergence of marketing specialized discipline (Danjuma, 2003). Little is known about the profitability of groundnut marketing in the study area.

Objective of the Study

The main objective of the study is to examine the profitability of groundnut marketing in Yola-North Local Government Area Adamawa State. The specific objectives are to;

i. describe the socio-economic characteristics of groundnut marketers
ii. describe the marketing channels of groundnut
iii. determine the profitability of groundnut marketing
iv. examine the problems associated with groundnut marketing

Materials and Methods

Study area

The study was carried out in Yola-North local government (latitude 9^0 14' and 9^0 21'N and longitude 12^0 18' and 12^0 28'East). It is bounded by Girei to the north and Yola-South to the south and to the east and west. It has a land mass of $113KM^2$ and a population of 199, 674 (Adebayo, 1999; NPC, 2006).

The mean annual temperature of the study area is 26.7°C while the mean annual rainfall ranges between 1100 and 1600 mm with a distinct dry season which begins in November and ends April and the wet season begins in April and ends in October or sometimes in November. The areas are located within the Guinea Savannah zone of the Nigeria's vegetation zones (Adebayo, 1999).

The predominant ethnic groups found in the area are Laka and Fulani, the main occupations of the people in this area are farming, marketing and civil operation which are carried out daily in Yola-North because most of the inhabitants are civil servants and they depend on the market for their basic food requirements and other services (ADSEED, 2004).

Source of data

The data for the study were collected from primary sources. A structured questionnaire and personal interview was used to collect primary data for the study. The questionnaires were designed to obtain information on the socio-demographic characteristics of the groundnut marketers in the study area. Secondary data were sourced from agricultural journals, proceedings, agricultural textbooks and other periodicals.

Sampling technique

A multi-stage sampling technique was used to select fifty-two groundnut marketers in the study area. The first stage involved the purposive selection of two markets that is main market and Jimeta old market because they are notable in groundnut marketing. The second stage is the random selection of the groundnut marketers proportionate to the numbersof marketers in each market where thirty (30) was selected from Jimeta main market and twenty-two (22) from Jimeta old market.

Method of data analysis

Data were analysed using descriptive statistical tools such as frequency distribution and percentages to describe the socio-demographic characteristics of the groundnut marketers, while Gross Margin was used to determine the profitability of groundnut marketing in the study area.

Descriptive statistics

The simple descriptive statistics are frequency distributions and percentages. These were used to describe the socio-demographic characteristics, as well as the constraints associated with groundnut marketing in the study area.

Model specification

Gross margin analysis, is used to measure profit (or loss) in groundnut marketing. The gross margin for groundnut marketing is one measure of profitability that is a useful tool for cash flow planning and determining the relative profitability of marketing. Gross margin profit is the difference between the annual gross income for that enterprise and the variable costs directly associated with the enterprise.

Profit in economics refers to pure profit, i.e. any excess of revenues over all opportunity cost. In other words, it is a return in excess of all opportunity costs including those of capital. Profit is positive when there is an excess of revenues over costs while it is negative (commonly called losses) when revenues fall short of the costs (Lipsey, 2007). Therefore, profit refers to the difference between total gross income and how much it has cost to produce and market the product. Although any scale can be used to measure profit, it is more commonly measured using a monetary scale, as money is more easily compared across applications (Lutzs, 2010).

Profitability, derived from profit, is the power of a business entity to earn profits or the ability of a given investment to earn a return from its use (Tulsian, 2014). According to Rahman *et al.* (2014) profitability referred to the profit earning capacity of a product, plant, process or an undertaking. Profit level was measured thus: The model is expressed as follows (Fabusoro and Agbonlahor, 2002; Iheanacho and Mshelia, 2004; Umoh, 2006; Girei and Dire, 2013):

GMI = GMR – (TMVC – TFC)

Where: GMI = Gross Marketing Income; TMI = Total Marketing Income; TMVC = Total Marketing Variable Income; TMFC = Total Marketing Fixed Cost {if any}

Net Profit = GMI – TMFC

Where: GMI = Gross Marketing Income; TMFC = Total Marketing Fixed Cost (Olukosi and Erhabor, 2005).

Results and Discussion

Socio-economic characteristics of the respondents

Analysis of the socio-economic characteristics presented in Table 1 indicated that (69%) of the groundnuts marketers were within the age bracket of 25 to 44 years of age. This means that they are able-bodied, still economically active and must have profit maximization goal as their objectives in groundnut marketing. The Table also shows that (65%) of the respondents were male and 35% were female which depicts that men are more involved in groundnuts marketing compared to women in the study area. This may be as a result of matrimonial responsibilities of women and religious belief, which prevent some Muslim women from appearing in public places. The result also shows that (71.2%) of the groundnuts marketers were married, 15.3% were single while 5.8% were divorced and 7.7% were widowed, respectively. The implication of this is that married people were involved mostly due to the fact that they derive more income to support their families. The educational level revealed that (82.7%) of the respondents have attended one level of formal education or the other. The implication of this is that majority of the marketers being literate could be traceable to the fact that the business requires some level of maturity and fair knowledge of handling large amount of capital for proper accountability. The Table also revealed that 46.1% of the respondents have years of marketing experience between 1 – 10 years, while 36.5% had between 11 -20 years. The scale of their operation shows that 38.5% of the respondents are involved in both wholesale and retail, while 26.9% of the respondents were wholesaler and 34.6% were retailers, respectively.

Cost and returns

The result shown of groundnut marketing in Table 2 that there are five variable costs and two fixed cost. The total marketing variable cost per bag (100 kg of unshelled groundnut) is ₦8,945.69 and the fixed cost is ₦313.05. The gross margin per bag also derived from the table is ₦913.04 and the net profit per bag derived is ₦600 that revealed that groundnut marketing business is profitable in the study area, despite the fact that the marketers were faced with some problems.

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Table 1: Frequency distribution of the respondents according to socio-economic characteristics (n = 52)

Variable	Frequency	Percentage
Age		
15 – 24	5	10
25 – 34	15	29
35 – 44	15	29
44 – 54	11	20
55 – 64	5	10
65 and above	1	2
Sex		
Male	34	65
Female	18	35
Marital Status		
Single	8	15.3
Married	37	71.2
Divorced	3	5.8
Widowed	4	7.7
Educational level		
Non-formal education	9	17.3
Primary education	24	46.1
Secondary education	16	30.8
Tertiary education	3	5.8
Marketing Experience (Years)		
1 – 10	24	46.1
11 – 20	19	36.5
30 – 40	7	13.4
41 and above	1	2
Scale of marketing operation		
Wholesale	14	26.9
Retail	18	34.6
Both wholesale and retail	20	38.5

Source: Field Survey (2015)

Table 2: Cost and returns per bag (100 kg of unshelled groundnuts)

Item	Average cost/bag (₦)
Variable cost	
Purchasing cost	8,700.00
Transportation cost	52.00
Loading/ offloading cost	16.00
Taxes	70.00
Storage cost	108.69
Total Marketing Variable Cost (TMVC)	8945.69
Fixed cost	
Depreciation cost	284.97
Rentage	28.07
Total Marketing Fixed Cost(TMFC)	313.05
Total Marketing Cost (TMVC +TMFC)	9,258.74
Total Revenue (TR) per bag	9,858.74
GMI/bag = TR – TVC	
GMI/bag = ₦913.04	
Net Profit/bag = GMI – TMFC	
Net profit/bag = ₦600	

Source: Field Survey (2015)
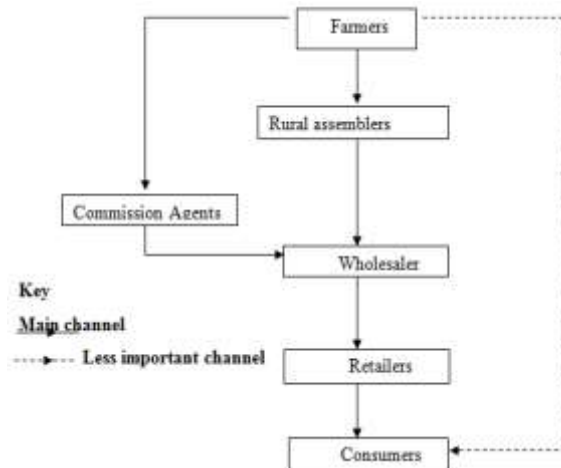
Marketing channels for groundnuts

Marketing channel, according to Olukosi *et al.* (2007) is simply the path of a commodity from its raw form to finished form on the path of product as it moves from producer to final consumers. The results in Table 3 shows that the majority (25%) of the marketers obtained their product from producers, 21.15% obtained theirs from both rural assemblers and commissioned agents while 17.30 and 15.40% obtained their product from wholesalers and retailers, respectively. Farmers usually sells their products through rural assemblers and commissioned agents then to the wholesalers and the retailers will buy from the wholesalers and finally the consumers buy from the retailers. The retailers prefer to buy from the wholesalers because is cheaper to buy from them but because of the little resources they have at their disposal (Fig. 1).

Table 3: Showing marketing channels of groundnuts in the study area

Channels	Frequency	%	Kg/ton
Farmers	13	25.00	20,000
Rural assemblers	11	21.15	13,000
Commissioned agents	11	21.15	25,000
Wholesalers	9	17.30	40,000
Retailers	8	15.40	1,600

Source: Field Survey (2015)

Source: Field Survey (2015)
Fig. 1: The marketing channel for groundnut in Yola north local government area

Problems of groundnut marketing

Problem associated with groundnut marketing in the study area were presented in Table 4. The Table shows that excessive price fluctuation (82%), insufficient capital (74.4%), high cost of groundnut (65.9%) and inadequate transportation (55.3%) were the very serious problems encountered in groundnut marketing in the study area. Other problems encountered were inadequate storage (31.9%), High taxes (14.9%), Lack of market association (8.5%) and low demand for groundnut (4.3%), respectively. The above mentioned may be attributed to bad economy, insufficient rainfall and long marketing channel and lack of credit facilities.

Table 4: Problems encountered by groundnut marketers in the study area

Problems	Serious problem		Problem		Not a problem		Total	
	Frequency	%	Frequency	%	Frequency	%	Frequency	%
Insufficient capital	35	67.3	13	25	4	7.7	52	100
Lack of good feeder roads	27	51.9	19	36.5	6	11.6	52	100
Inadequate storage	15	28.8	15	28.8	22	42.4	52	100
Lack of market association	7	13.5	15	28.8	30	57.7	52	100
High taxes	9	17.3	16	30.8	27	51.9	52	100
Excessive price fluctuation	39	74.9	7	13.5	6	11.6	52	100
Low demand for groundnuts	2	3.8	18	34.7	32	61.5	52	100
High cost of groundnuts	31	59.6	14	26.9	7	13.5	52	100
Lack of Uniform measures	6	11.6	32	61.5	14	26.9	52	100

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Conclusion and Recommendation

The study concludes that marketing of groundnut is profitable in Yola-North Local Government Area of Adamawa State. Most of the marketers were male, with age brackets between 25 to 44 years and most of the respondents were found to be literate having one form of formal education or the other. The result from the analysis shows that, the business is profitable with a gross margin per bag of ₦913.04 and the net profit per bag of ₦600. The major problems that were identified as a challenge affecting groundnut marketing in the study area were: excessive price fluctuation, insufficient capital, high cost of groundnut and Lack of good feeder roads.

The study therefore recommends that, there should be efficient policy formulation and implementation such that to protect both the marketers and producers by educating the traders on good marketing principles through the extension agents to improved groundnut marketing activities in the area. Groundnut marketers in the study area should form cooperative group(s) to have access to loans from bank(s) for better capital base for higher profit. Storage facilities should be provided so that surplus groundnut can be stored to avoid spoilage and loss, governmentshould provide good roads in other to ease transportation problem and also should control the price of groundnut so as to reduce the excessive fluctuation in the price of groundnut in the market.

Conflict of Interest

Authors declare that there is no conflict of interest.

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