A RESEARCH PROJECT

BY

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THE EFFECT OF MARKETING FUNCTION ON THE MARKET PRICE OF YAM IN OGBOMOSO, OYO STATE NIGERIA:

A CASE STUDY OF OGBOMOSO SOUTH AND OGBOMOSO NORTH LOCAL GOVERNMENT AREAS.

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CERTIFICATION

This is to certify that this research project was carried out by OYETUNJI, JOSHUA OPEYEMI in the Department of Agricultural Economics, Ladoke Akintola University of Technology, Ogbomoso.

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DEDICATION

This project is dedicated to the Almighty God, the creator and father of all in whom the depth of intuition, inspiration and impartation are unfathomable for seeing me through this phase of my journey on earth. I cannot thank Him enough for His mercy, guidance, and provision during the course of the program. It is by His grace that even this project was successful.

This project work is also dedicated to my parents Mr and Mrs OYETUNJI for their unconditional love and support in all ramifications.

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ABSTRACT

The study investigated the effect of marketing functions on the market price of yam in Ogbomoso, Oyo state. Data were collected from 80 purposively selected marketers of yam from 5 markets in Ogbomoso South and Ogbomoso North local Government areas of the state. Findings show that yam marketing is dominated by females (92.5%), most of whom were married (67.5%). It was discovered that 92.5% had formal education while the mean of marketing experience is 11.56 years. The modal age of respondents was 41 – 50 years with the average been 48 years. The percentage margin was found to be 23.9% which shows that the consumers are not being exploited by marketers. Storage cost (-1.95), age (2.25), years of marketing experience (-1.71), transport cost (3.69), cost of trading materials (-1.74), cost price (19.05) and the quantity of goods sold (5.58) were found to be significant in determining the market price of yam in the study area. It therefore was found that marketing functions had effect on the market price of Yam. The study recommends the provision of more feeder roads to ease the evacuation of yam products from the rural places to the urban centres. It was also recommended that there should be provision of storage facilities in markets to reduce yam spoilage.

CHAPTER ONE

INTRODUCTION

1.1 Background Of The Study

Today, the amount of food available per person on a global basis is 18 percent higher than 30 years ago. Most developing countries benefited from this development with the result that their nutrition has witnessed very tremendous improvement. As impressive as this improvement is, about 800 million people worldwide still suffer from chronic hunger; and one quarter of this population resides in Africa. The situation gets worse every year and can lead to a catastrophe if it is not possible to increase food supply at a rate faster than that at which the world population increases (Asogwa *et al.*, 2013).

Yam is a staple crop in many parts of Africa and South East Asia. It belongs to the genus Dioscorea (family Dioscoreaceae). Of the estimated 300-600 species available, there are just over half-dozen principal species that are grown for consumption, while others are grown for medicinal purposes. Yams originated in the Far East and spread west ward. They have since evolved independently in the eastern and western hemispheres, and today yams are grown widely throughout the tropics. In the West African yam zone which is the principal producer on a global basis, *Dioscorea rotundata* (white yam), *Dioscorea alata* (water yam), *Dioscorea esculenta* (lesser yam) and *Dioscorea cayenensis* (yellow yam) are the most common species.

The West African zone produces more than 90% of the total world yam production with Nigeria alone producing over 70% of the world total (FAO, 2000).

Yams have both economic and social value in many growing areas. Beside their importance as food source, yams also play a significant role in the socio-cultural lives of some producing regions like the celebrated New Yam Festival in West Africa,

a practice that has also extended to overseas where there is a significant population of the tribes that observe it. Yams store relatively longer in comparison with other tropical fresh produce and therefore stored yam represent stored wealth which can be sold all-year-round by the farmer or marketer.

For maximum yield, the yam requires a humid tropical environment, with an annual rainfall of over 1500millimeters distributed uniformly through out the growing season. White, yellow, and water yams typically produce a single large tuber per year, generally weighing 5 to 10 kilograms. Most edible yams reach maturity in 8-11 months after planting. Planting materials include yam seed, seed yam and yam setts.

In many parts of the West African yam zone, mature yams are harvested at the end of the rainy season or early parts of the dry season, which coincides with the end of vegetative growth. Yams for long-term storage (for marketing or seed) are usually harvested during the harmattan period (December - January) in many parts of south eastern Nigeria when the crops have attained maximum growth and maturity. During this period, the soil is generally hard and tuber breakage during harvesting can be an economical problem (FAO, 2003).

Prior to long-term storage and marketing, yams are cleaned (without water) by scrapping off soil and other debris on the surface. A knife or piece of stick is usually used. The root 'hairs' are also removed so that the tuber has a smooth surface. Water must not be used to clean tubers before storage because of increased susceptibility to microbial infection and growth under the ambient humid storage conditions.

The three main conditions are necessary for successful yam storage; aeration, reduction of temperature, and regular inspection of produce. Regular inspection of tubers is important to remove sprouts, rotted tubers, and to monitor the presence of

rodents and other pests. In general, tubers should be protected from high temperature and provided with good ventilation during storage.

Transportation of yam is important since most yams are produced in areas far from where it is consumed.

Storage and transportation affects to an extent the availability of yam to consumers which also affects the market price of yam.

From the foregoing, it could be inferred that if the marketing functions (most especially storage and transportation) of yam is well understood, production could be expanded and the market price can be regulated to the benefit of farmers and consumers.

1.2   Statement Of The Problem

Problems affecting the availability of yam in the market and the subsequent price of purchase to the consumer can be divided into two; Production problems and marketing problems.

Yam production in Nigeria has witnessed increased output yet has not been able to meet the demand of the people (FAO, 2002). Its insufficiency is as a result of an increase in the Nigeria population (Oyaide, 2002). Oyaide noted that the growth rate of the Nigerian population is 3.3percent as against the agricultural growth rate of 2.3percent. So, the gap between domestic supply and demand is still wide in favour of demand.

The production problem according to Parikh *et al.* (1995) can be summarized to include low productivity of the farm lands, production being left in the hands of small-scale farmers, decreasing soil fertility with the limited use of fertilizer, use of unimproved crop varieties, lack of credit, inadequate extension services and the use of

very simple manually operated tools. These problems according to Okwuokenye (2011) are gradually being solved.

Marketing problem also determine the availability of yam in the market. Since yam is bulky and has a high level of perish ability and high risk of spoilage, it requires good storage system and transport system to enhance its availability to the final consumers. These marketing functions (storage and transport) affect the price of yam which therefore reduces patronage by consumers.

1.3 Research Questions

So, the following questions will be answered;

1. What are the socio-economic characteristics of yam marketers?

2. What are the marketing functions that contribute to the size of the market margin?

3. What is the profit margin of the yam marketers?

4. What are the factors affecting market price of yam?

1.4 Objective Of The Study

The overall objective of the study is to unveil how marketing functions affects the market price of yam in Ogbomoso.

The study has the following research-specific objectives;

1. To identify the socio-economic characteristics of the yam marketers in Ogbomoso

2. To identify the marketing functions that contribute to the size of the market margin

3. To assess the profit margin of the yam market in the study area.

4. To analyze factors affecting the market price of yam.

1.5 Hypotheses Of The Study

H_o: The market price of yam is not significantly influenced by the marketing functions.

1.6   Justification Of The Study

Although several research works have been carried out on yam crop but none seem to have been carried out on the effect and impact of marketing functions on the market price of yam especially in Ogbomoso land.

This study seek to highlight the effect of marketing function and its contribution to the large market margin which makes consumers feel they have been exploited and the farmers feel they have been deprived of a substantial part of the consumers' pay.

1.7   Limitations Of The Study

1. Most of the marketers were illiterate and kept no record of their day-to-day transactions

2. Some marketers could not give detailed account of what they sold per day accurately

3. Some of the questionnaires proposed for the study were not rightly answered. There were irregularities in them and therefore inconsistent

4. Problem of costing services rendered: Services such as transportation and storage were difficult to cost because in most cases, other commodities were stored under the same roof by the same market women together with yam, which makes it difficult to attach a particular amount of money to a particular commodity such as yam.

CHAPTER TWO

LITERATURE REVIEW

2.1   Agricultural Market and Marketing

A market place according to Adetunji *et al.,* (2013) refers to a particular geographical location where buyers and sellers meet periodically to transact business. They further stated that the period of meeting could be daily, weekly or any chosen period. It is the comfort of finding exchange partners that makes people to conduct most of their trade activities at a convenient place and time.

A market according to Adetunji (2004) is the process by which buyers and sellers, producers and consumers of goods, come into contact with each other to transact their business. There is no limit of market area in terms of national or geographical boundaries. The need for convenience in exchange has led to the development of physical facilities to facilitate the exchange at the point of concentration. These physical facilities include stalls, roads, electricity, storehouses and many others. A market acts as a point where goods and people amalgamated together and thereby concentrating demand for transport (Hine and Ellis, 2001). Where population are dispersed, markets are also likely to be dispersed with long average distance to market and people less likely to make the trip.

In the 1960s, the term was common in marketing. It says everything starts with consumer's needs and demands. Marketing and market management is the main task of understanding people's need and desire and helping them through the process; a process where resources are exchanged. Society needs are increasing today more than ever, especially with the growing shortage of human and other resources. According to FAO (2002), Marketing system is comprised of a number of elements: the particular

produce, and their characteristics being transferred from producer to consumer; the functions or roles that each participant performs in the market; and the locations, stages, timetable and physical infrastructures involved. Marketing is a social and managerial process by which needs and desires of individuals and groups are provided through the production, supply and exchange of useful goods. According to the American marketing association, marketing is "the process of planning and executing the conception, pricing, promotion and distribution of ideas, goods and services to create exchanges that satisfy individual and organizational objectives".

Marketing according to Okwuokenye *et al.* (2011) is the sum total of all business activities involved in the movement of goods or commodities from production to consumption. He further stated that marketing exist because of the production of surplus from our farms. In solving the marketing problem of food production, Okwuokenye further emphasized on the need of not only production but also on the improved marketing of the products. He stated that this would act as one of the incentives for promoting production. The need for improved marketing becomes necessary because surplus production will lead to wastage as shown in the analysis of the state of Nigeria food losses during marketing.

Studies have shown that efficient marketing system stimulates agricultural production (Awoyinka and Ikpi 2005; Adesope et al, 2005). However, marketing of food in Nigeria has been characterized with a lot of deficiencies. These deficiencies have constrained sustainable agricultural development in one way or the other. In Nigeria, several policy studies (Mayong *et al.,* 2003) have been commissioned to identify potential contributions of agricultural marketing policy to agricultural development, these studies, however, failed to incorporate strategies for combating perennial constraints to effective and efficient food marketing in Nigeria.

The people of developing economies face the problem of food insecurity. In order to solve the problem of food insecurity, there is the need to ensure the supply of basic food stuffs at prices within the reach of the average consumer. Marketing of agricultural produce in most African countries has not yet achieved the necessary degree of competitiveness and transparency to ensure fair market prices for small-scale farmers, processors and consumers (Peterson, 2004).

For many agricultural commodities, three facts dominate the process of marketing (Adeniji *et al.,* 2012). First, agricultural commodities tend to be produced at considerable distance from centre of consumption. Secondly, agricultural commodities are often harvested within a distinct and short time. Thirdly, consumption tends to be evenly spaced in time.

In addition, Hine and Ellis (2001) inferred that one of the most effective ways that farmers have of getting the best price for their produce is for them to sell it themselves directly to the consumers at rural or urban markets, and thus bypass the normal marketing system. Although farmers do not have the economies of scale of travelling wholesalers, it is often recognised by urban dwellers that the keenest prices are often provided by the farmers. Farmers bringing their own produce to the market represent a very important way of limiting the power of marketing cartels. However, there is usually little support by the authorities for this type of 'unofficial' trading and farmers are frequently harassed as they attempt to sell. The duo therefore opined that as far as possible, facilities should be provided at urban markets, at minimum cost, so that farmers can sell their own produce without being disadvantaged or harassed in the process. He further stated that whether farmers rely on travelling wholesalers, traders, parastatal or large private marketing companies, they all reduce the farmers bargaining

power, and critically, it reduces demand for transport services and the supply of vehicles available for rural people.

2.1.1 Marketing Margin

Adeniji *et al.,* (2012) reported that markets and marketing has long been the focus of investigation by the experts who have qualitatively studied it, where in general the producers have been the focus of attention. However, the most important section of marketing lying between the producers and the consumers referred to as "the marketing margin" has been totally ignored.

Marketing margin is an equilibrium entity that is a function of the difference between the equilibrium of retail and farm prices (Wohlgenant, 2001). Marketing margin provides neither a measure of farmers' wellbeing nor of the marketing firms' performance. However, they give an indication of the market structure and efficiency.

Marketing margin can be affected by various factors, whereby the virtue of the degree of influence each factor has over time, it can fluctuate. To have a reasonable marketing margin, important steps are needed, such as orderly and least expensive marketing system. Thus it is necessary to enable the producer to sell their produce at reasonable price and consumers to buy their needs at minimum cost (Maqbool *et al.,* 2005). Fafchamps and Madhin-Gabre (2001) showed that transportation cost forms a large share of total marketing costs. The portion of the consumer's food expenditure that goes to food marketing is referred to as marketing margin. It is in a sense the price of all utility adding activities and functions performed by the food marketing system (Oladapo *et al.*, 2007). The margin must cover the cost of moving the production from one stage to the next and provide a reasonable return to the marketers. Therefore, it is essential that the factors that bring about the changes in the market margin function be

determined and the degree to which each factor affects marketing margin be measured (Mojtaba *et al.*, 2010). There is a strong cumulative effect on the marketing margin resulting from the increasing number of intermediaries involved in marketing process (Motasem *et al.,* 2010). The marketing margin is a general term used to cover all the multitude of costs and profit margins which make up the difference between the price paid for a produce by consumers in retail markets and the price at some earlier point in the marketing chain.

They noted that every category of middlemen earns a sort of margin for the functions performed in the marketing process. The difference is called 'gross marketing margin' or 'total marketing spread'. Marketing margin also includes the profit margins earned by middlemen in the marketing process.

Marketing margin has been influenced in one way or the other by the demographic characteristics of the marketers. Going by the nature of agricultural products in general and yam crop in particular, Okwuokenye (2011) stressed that the bulky nature of agricultural produce contribute highly to the magnitude of their marketing margin. The reason adduced for this according to Okwuokenye (2011) is high transport cost, bulky nature of the products and the marketing functions carried out by the middlemen. Okwuokenye (2011) also noted a higher marketing margin will favour the middlemen and producers often feel they have been deprived of a substantial part of the customers' pay while a low marketing margin will favour the consumers, and the producers often regard it as a proof that the distribution system does not exploit them. The problem of high and low marketing margin as to who should favoured more poses a complex problem to the individuals and government.

The cost of distribution of agricultural produce from producer to consumer is very high, mainly due to high share of middlemen involved at various stages. The extraction of abnormal profit by middlemen reduces the profit of farmers and discourages them to expand the production unit (Motasem *et al,* 2010). The profit share of middlemen also needs to be reduced in order to lower prices at the retail level.

It has also been noted by researchers that low marketing margins could be regarded as a proof that distribution or marketing does not exploit producers and that marketing is efficient. The question often asked is whether the consumers are being exploited or just insatiable?

Okwuokenye and Onemolease (2011) then stated that to resolve this complex problem, knowledge of the demographic characteristics of the wholesalers together with the marketing functions they carry out and their respective contribution to the marketing margin would help people involved in finding solutions to the complex problem.

2.1.2 Marketing Functions and Channels

Marketing functions are the activities performed by marketing system in relation to the characteristics of agricultural produce or products (Adetunji *et al.*, 2013). It can also be defined as any activity that is performed within or during the entire marketing operation. Some of the functions usually performed in agricultural marketing include; transportation, storage, packing and packaging, grading, standardization, market information services, risk bearing and financing. These functions aim at satisfying utility even though there is an eventual increase in marketing costs.

Marketing channel is the simple or complex linkage composed of alternative product flow from the producer to the ultimate consumer and involves variety of firms called middlemen and numerous activities referred to as functions.

There are problems within the marketing system and solutions have one time or the other been proposed.

Marketing scholars have examined the need to forming producer controlled marketing societies. This he proffers becomes necessary as a result of the weakness on the part of the farmer when it comes to obtaining a farm price for his produce. He observed that previous efforts in this line have failed in some parts of Nigeria because the marketing structure is not modified and that farmer will continue to be at the most serious trading disadvantage vis-à-vis the traders.

Wohlgenant (2001) noted that the route from the producer to the consumer is linked by the middlemen. He identified the problem facing marketing of staple crops to be high cost of transportation which may be due to inadequacy of well built and well maintained roads which subsequently control the supply delivered to market. He also attributed risk bearing and uncertainty as constituting great pitfall in the retailer trading since the commodity depreciates, get damaged and easily destroyed by pest. Price fluctuates abnormally, sometimes transport fails, goods get lost or stolen and there are many other problems. He also observed effects of ineffective marketing channels and stressed that "they should be less tortuous and costly to navigate in order to facilitate goods flow from producers to consumers". In a slightly different view, Folayan (2005) identified the role distribution can play in economic development by changing demand and cost functions in favour of development. He also observed that efficiencies in the marketing functions can cause actual loss of product.

2.2   Yam Storage

According to FAO (2003), the three main conditions are necessary for successful storage; aeration, reduction of temperature and regular inspection of produce. Ventilation prevents moisture condensation on the tuber surface and assists in the removing the heat of respiration. Low temperature is necessary to reduce losses from respiration, sprouting and rotting. However, cold storage must be maintained around 12-15°C below which physiological deterioration such as chilling injury occurs. In general tubers should be protected from high temperature and provided with good ventilation during storage. The storage environment must also inhibit the onset of sprouting (breakage of dormancy) which increases the rate of loss of dry matter and subsequent shrivel and rotting of tuber. Both ware yam and seed yam have similar storage requirements.

Notwithstanding cultivar differences, fresh yam tuber can be successfully stored in ambient and refrigerated condition (Table 1). The recommended storage temperature is in the range 12°-15°C. Optimum conditions of 15°C or 16°C at 70-80%rh have been recommended for cured tubers (FAO, 2002). Transit and storage life of 6-7 months can be achieved under these conditions, especially if ventilation is inadequate. To avoid tuber damage, minimum storage temperatures of 10°C, 12°C and 13°C at or below which chilling injury occurs have therefore been recommended.

Table 1: Recommended storage conditions for yams (*Dioscorea spp.*)

Cultivar	Temperature (ºC)	Relative humidity (%)	Length of storage
D. alata, cured	15-17	70	180
D.alata, non cured	15-17	70	150
White yam, Guinea yam	16	80	Several months
Yellow yam	16	80	60 days
Lesser yam, Chinese yam	25	-	60 days
Water yam, Greater yam	30	60	Several months

Source: Opara,(2003)

There are several traditional storage structures used for yam storage including: (a) leaving the tubers in the ground until required, (b) the yam barn, and (c)underground structures (Opara, 2003). Leaving the tubers in the ground until required is the simplest storage technique practiced by rural small-scale farmers. When carried out on-farm, this type of storage prevents the use of the farmland for further cropping. Harvested yams can also be put in ashes and covered with soil, with or without grass mulch until required.

The yam barn is the principal traditional yam storage structure in the major producing areas. Barns are usually located in a shaded and constructed to facilitate adequate ventilation while protecting tubers from flooding and insect attack. In barn storage, yams have a maximum storage life of 6months and are therefore most suitable for long-term varieties (FAO, 2002).

Yams are also stored in underground structures such as pits, ditches and clamps. These are suitable for limited storage periods especially the early varieties that are often harvested before the end of the rainy season.

Well-ventilated, weatherproof, and stronger shelters can be built as to improve the performance of the traditional shelters described above. New features may also be provided to exclude pests and rodents. A typical improved yam barn has sidewall 1.2m high and wire mesh to ward off rodents and birds. Tubers were stored on platforms or shelves. Tubers stored in such improved structures had only 10% spoilage after 5-6months.

2.3   Packaging and Transportation of Yam

After harvest, yam tubers are traditionally placed into woven baskets made from parts of the palm tree or coconut fronds. These are ideal for transporting small quantity of tubers over short walking distance to the market or storage facility. Compression damage is reduced since the basket is able to bend and thereby reduce the amount of force acting on individual tubers (FAO, 2003). However, when large quantities of tuber are harvested, these baskets are not suitable because of their limited size. Packaging tubers in full telescopic firebrand cartons with paper wrapping or excelsior reduces bruising and enables large quantity of tuber to be transported over long distances.

Storing yams in modified atmosphere packaging (MAP) has beneficial effects, particularly using appropriate packaging material with suitable size and number of holes for gas permeation. Sealing yam tubers in polyethylene film bags reduced storage losses due to weight loss and development of necrotic tissue. Coating tubers with Epoleon E10 (a commercial vegetable wax) improved the appearance quality but there was no effect on level

of fungi infection (FAO, 2000). The effect of this treatment on weight loss of tuber was inconsistent.

Adequate and efficient transportation is a cornerstone of our modern marketing system and the wide range of variety of agricultural goods on the farm at all times of the year, it would not be possible without modern transportation. Transportation is a cost to those who use it and the ways to reduce this cost are of great importance both to the producer and the consumer as a whole. The importance of transport system on marketing of yam cannot be overemphasized because the lower the transport costs, the lower the marketing margin and the more the satisfaction derived by the consumer in terms of price payment. Transportation decision does not only affect the financial position of the carriers, but also the incomes of the producers of the transported commodities.

Oyaide (2002) compared marketing cost in Nigeria with that of United States of America (USA), this study revealed that twelve percent of marketing costs goes into transportation in Nigeria; this shows the inefficiency of Nigeria transportation system in marketing of agricultural produce. Factors responsible for high transportation cost include bad roads and lack of good transportation facilities.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1   Study Area

The study was conducted in Ogbomoso, Oyo state. Oyo state has a total landmass of 28,454km². It is an inland state in south-western Nigeria, with its capital in Ibadan. The climate is equatorial, notably with dry and wet seasons with relatively high humidity. The dry season lasts from November to March while the wet season starts from April and ends in October. Average daily temperature ranges between 25°C and 35°C almost throughout the year.

Ogbomoso has five local Governments Areas namely; Ogbomoso North, Ogbomoso south, Oriire, Surulere and Ogo-Oluwa local government areas. Ogbomoso South local government and Ogbomoso North local government areas were used as case study. These local government areas comprises of different villages, which are rural in nature. Ogbomoso is located approximately on the intersection of latitude 8° 08'N and longitude 4° 16'E. It is about 105km North East of Ibadan (state capital), 58km North West of Osogbo, 53km South West of Ilorin and 57km North East of Oyo town. Ogbomoso is regarded as a derived savannah vegetation zone and a lowland rain-forest area. Ogbomoso south local government has its headquarters in the town of Arowomole, while Ogbomoso North local government area has its headquarters in Ogbomoso. Ogbomoso has a population estimated at around 1,200,000 at the 2006 census. The majority of the people are members of the Yoruba ethnic group. Yams, cassava, maize and tobacco are some of the notable agricultural produce of the region.

3.2   Sampling Technique

Purposive sampling was used to select yam marketers in this area. Ogbomoso was chosen for the research due to high production and marketing of yam in this area when compared to other agricultural zones in Oyo state. In these local governments, Arada market, Sunsun market, Akande market, Old Sabo market and New Wazobia market were purposively chosen as the sample because of high concentration of yam marketers in these markets.

3.3   Data Collection

Primary and secondary data were used for the study. The primary data was obtained through the use of a structured questionnaire, copies of which were administered to the respondents selected for the study while the secondary data used include journals and textbooks. The data collected captured the socio-economic characteristics of yam marketers and information on marketing functions involved in the marketing of yam respectively.

3.4   Data Analysis

Data collected were analyzed using both descriptive and inferential statistics. Descriptive statistics include frequency distribution tables and percentages while inferential statistics comprised budgetary analysis and multiple regression analysis.

Marketing margin analysis was used to determine the marketing margin of yam marketing in the study area. The marketing margin or the farm-to-retail price spread is the difference between the farm value and the retail price. It represents payment for all assembling, processing, transporting, and retailing charges added to the farm products.

Marketing margin was computed using the formula (Azogwa *et al*., 2013):

$$\text{Percentage marketing margin} = \frac{\text{selling price} - \text{cost price}}{\text{selling price}} \times 100$$

Nominal Marketing margin = Selling price – Cost price

Where;

Selling price is the retail price at the consumer end

Cost price is the farm gate at the producer end.

For the price of yam to be reasonable, the percentage margin should not be more than 25%. If it is more than 25%, then the customers are been exploited by the marketers (Adetunji *et al.,* 2014).

Some of the factors that influence the market price in the study area was determined quantitatively using the multiple regression analysis.

The linear functional form that was chosen as best fitted is specified as follows:

$Y = a + B_1X_1 + B_2X_2 + B_3X_3 + B_4X_4 + B_5X_5 + B_6X_6 + B_7X_7 + B_8X_8 + B_9X_9 + B_{10}X_{10} + e$

Y = Market price (#)

X_1 = Storage cost (#)

X_2 = Transportation cost (#)

X_3 = labour cost (#)

X_4 = Trading materials cost (#)

X_5 = Commission agents cost (#)

X_6 = Cost Price (#)

X_7 = Age (Years)

X_8 = Level of Education (Years)

X_9 = Marketing Experience (years)

X_{10}= Quantity sold (Number of tubers)

a = intercept

Bi = Coefficient of Xi (i=l-10)

e = Error term

CHAPTER FOUR

4.0   DATA ANALYSIS PRESENTATION AND DISCUSSION OF RESULTS

4.1   Socio-Economic Characteristics of the Respondents

4.1.1   Age of Respondents

Table 2, showed that majority of the sampled marketers (37.5%) were between the ages of 41 and 50 years of age. Furthermore, 19.0% of sampled traders lie within the age bracket of 31-40 years and 19% also lie within the age bracket of 51- 60 years of age. That is to say that 85% of the sampled marketers are within the age range of 31-60 years. This implies that yam marketing enterprise in the markets sampled is dominated by middle-age farmers who are still active with the mean age of 48 years and this has effect on agricultural production, marketing and constitute the working force of the populace to accomplish the tedious task of taking yams from the farm gates to the markets as corroborated by Ogundari and Ojo (2005).

Table 2: Age of Respondents

Age	Frequency	Percentage
<30	1	1.25
31 – 40	19	23.75
41 – 50	30	37.5
51 – 60	19	23.75
>60	11	13.75
Total	80	100

Mean age = 48.075 years

Source: Field Survey, 2015.

4.1.2 Sex of Respondents

Table 3 shows that majority of the respondents (92.5%) were female while 7.5% were male. This implies that yam marketing in the study area is dominated by female gender. The dominance of the females in the business is because males have to go to offices, farms and other places in order to ensure the provision of the capital (money) required for family transactions while the females are engaged in carrying out the marketing of yam(Asogwa *et al, 2013)*.

Table 3: Sex of Respondents

Sex	Frequency	Percentage
Male	6	7.50
Female	74	92.50
Total	80	100.00

Source: Field Survey, 2015.

4.1.3 Marital Status of Respondents

Table 4 indicates that majority of the Yam marketers in the study area were married (67.5%) while 3.75% were single. This suggests that yam marketing in the study area is dominated by married couples. This is attributable to the fact that yam marketing is a profitable venture, which can serve as a reliable source of livelihood for the family.

Table 4: Marital status of Respondents

Status	Frequency	Percentage
Single	3	3.75
Married	54	67.5
Divorced	10	12.5
Widowed	13	16.25
Total	80	100

Source: Field Survey, 2015.

4.1.4 Educational Background

Table 5 shows that 50% of the sampled respondents had primary school education, 37.5% had secondary school education while 5% had tertiary education. This implies that 92.5% of the sampled respondents had formal education while 7.5% of the sampled traders had no formal education. This level of education has implication on gathering information on marketing activities and marketing margin of the respondents. Educated traders are likely to be more responsive to innovation than those with no formal education. Human capital development in agriculture thus holds the key for highly productive and sustainable agriculture (Adeniji *et al.*, 2012). Results show that a good proportion of them are educated. This accounts for why they are been able to manage their finances since education enhances the capacity of individuals to understand, manage and work with new ideas (Ewuola and Ajibefun, 2000).

Table 5: Educational background of respondents

Level	Frequency	Percentage
Primary six	40	50
Secondary	30	37.50
Tertiary	4	5.0
No formal education	6	7.50
Total	80	100

Source: Field Survey, 2015.

4.1.5   Experience of Respondents

Table 6 reveals that 13.75% of the sampled respondents have less than 5 years of experience, 30% have 5-10 years of experience, 26.25% have 10-15 years, and 12.5% have 15-20 years while 17.5% have more than 20 years of experience. This shows that the people are experienced in the trade, a knowledge which would enable the marketers understand the intricacies of the trade and thus know how to cut down on marketing cost while attempting to maximize profit. Also experience has been shown to enhance more efficient use of scarce resources by small holders in Nigeria (Njoku and Odii, 1991).

Table 6: Experience of Respondents

Experience(years)	Frequency	Percentage
<5	11	13.75
5 – 10	24	30
10 – 15	21	26.25
15 – 20	10	12.50
>20	14	17.50
Total	80	100

Mean = 11.56 years

Source: Field Survey, 2015.

4.1.6 Marketing Status

Table 7 shows that most (85%) of the sampled respondents are into full time marketing of agricultural produce most especially yam. This therefore enables full concentration on the art of the business.

Table 8 shows that 76.25% of the respondents market yam and other crops while 23.75% markets yam only.

Table 7: Marketing status

Other occupation	Frequency	Percentage
Yes	12	15
No	68	85
Total	80	100

Source: Field Survey, 2015.

Table 8: sale of other commodities

Other commodities	Frequency	Percentage
Yam and other crop	61	76.25
Yam only	19	23.75
Total	80	100

Source: Field Survey, 2015.

4.1.7 Major Source of Finance

Major source of finance is one of the factors that influence efficiency of yam marketing because personal funds are usually small. Table 9 shows that, high percentage of sampled respondents procure fund through cooperative societies (48.75%) while 22.5% financed their business with their personal savings. A little percentage of them procure fund from banks (3.75%). The respondents claimed they could not collect loans from banks and money lenders, this may be due to collateral requirement, high interest rates charged and also the long processes involved before receiving the money.

Table 9: Major Source of finance

Source	Frequency	Percentage
Bank	3	3.75
Cooperative	39	48.75
Family	8	10
Friends	12	15
Personal saving	18	22.50
Total	80	100

Source: Field Survey, 2015.

4.1.8 Membership OF Association

Businessmen and women normally belong to one marketing association or another. Table 10 revealed that high percentage (98.75%) of the yam marketers belong to yam sellers' association which has three sister bodies in various parts of Ogbomoso namely; Ifesowapo, Abolas and Itesiwaju yam sellers'associations, while 1.25% of the respondents do not belong to the association. The reason adduced for this was that membership of association is a pre-requisite for yam marketing in Ogbomoso.

Table 10: Membership of Yam sellers association

Name	Frequency	Percentage
None	1	1.25
Ifesowapo	42	52.50
Abolas	25	31.25
Itesiwaju	12	15
Total	80	100

Source: Field Survey, 2015.

Table 11 reveals the benefit derived by members of yam seller's association. Most of the respondents (56.25%) claim they enjoy the supply of credit when made available by various tiers of Government and non- governmental organisations, 38.75% only joined the association to gain permission to trade as they maintained they have not had any other benefit apart from that. Only 3.75% of the respondent said they gain the opportunity for better supply.

Table 11: Benefit of association membership

Benefit	Frequency	Percentage
None	1	1.25
Opportunity for better supply	3	3.75
Supply of credit	45	56.25
Permission to trade	31	38.75
Total	80	100

Source: Field Survey, 2015.

4.1.9 Information on Market Price

Table 12 shows that 42.5% agreed that they do have access to free flow of price information in the marketing of yam while 57.5% said they don't depend on the information on market price as the price they sell depends on what they buy. This leads to variation in the yam prices at the market.

Table 12: Information about market price

Information	Frequency	Percentage
Yes	34	42.5
No	46	57.5
Total	80	100

Source: Field Survey, 2015.

Table 13 reveals that the major source of information on market price is from other traders (57.5%), friends and neighbours contribute 32.5% of information while the association contributes 10% of information. It was evident from the data that majority (57.50%) of yam

marketers obtained information about their enterprise from fellow marketers. This result indicates that there is group dynamics among marketers in the yam markets of Ogbomoso.

Table13: Source of Information

Source	Frequency	Percentage
Other traders	46	57.5
Friends/ Neighbours	26	32.5
Association	8	10
Total	80	100

Source: Field Survey, 2015.

4.2 Marketing Functions

4.2.1 Buying

Table 14 reveals that 87.5% of the sampled respondents buy their yam from farms in the village which include Iluju, Kishi, Tewure and Gambari, While 3.75% buy theirs from middlemen and 8.75% buy theirs from wholesales market. This implies that the study area is highly productive in yam production. This to an extent affects the profit margin of the marketers.

Table 14: Source of yam

Source	Frequency	Percentage
Farms in the village	70	87.50
Middlemen	3	3.75
Wholesale market	7	8.75
Total	80	100

Source: Field Survey, 2015.

4.2.2. Selling

The sampled marketers of yam sold through many outlets such as:

(a) Other marketers around them

(b) Direct consumers and other users of yams like fast-food joint and eateries.

4.2.3 Storage of Yam

The yam marketers had no special storage facilities and so were not able to keep their yams for too long a time. Table 15 shows that Majority of the sampled respondents (96.25%) sell their goods immediately while few (3.75%) of them store for future sales.

In table 16, 96.25% of the respondents store their yams for days, 2.50% store for weeks and only 1.25% store for months since they don't have specialized storage facility except for their shop where they store unsold yams.

Table 15: Action taken on purchased yam

Action	Frequency	Percentage
Sell immediately	77	96.25
Store for future sales	3	3.75
Total	80	100

Source: Field Survey, 2015.

Table 16: Length of storage

Period	Frequency	Percentage
Days	77	96.25
Weeks	2	2.50
Months	1	1.25
Total	80	100

Source: Field Survey, 2015.

Due to the delicate and perishable nature of yam as an agricultural produce, it is therefore important to note that loss do occur when yam is stored especially since there is no specialized storage facility. Table 17 reveals that most (15%) of the sampled respondents experience 10% loss of yam in store, 28.75% of them experience 20% loss in store, 2.5% of them experience 30% loss in store and 15% explained that they do not experience loss at all.

Table 17: magnitude of loss in storage

Magnitude (%)	Frequency	Percentage
0	12	15
10	43	53.75
20	23	28.75
30	2	2.5
Total	80	100

Source: Field Survey, 2015.

The loss of yam in store can be said to be due to various factors like pests, diseases, heat, and theft. In table 18, 68.75% of loss was attributed to heat, 17.5% of loss was caused by pest and disease, while theft accounted for 7.50% loss.

Table 18: source of loss in storage

Source	Frequency	Percentage
No loss	5	6.25
Pest	3	3.75
Disease	11	13.75
Heat	55	68.75
Theft	6	7.50
Total	80	100

Source: Field Survey, 2015.

The problem encountered by yam marketers has been ameliorated because alternative use of spoiled yam has been known. Table 19 reveals that most (75%) respondent process spoiled yam into yam flour by peeling and sun drying before offering for sale, 10% use it to feed livestock while 15% dispose the yam. This shows that 85% of them still make effective use of spoiled yam and therefore compensate the loss in store.

Table 19: Alternative use of spoiled yam

Alternative	Frequency	Percentage
Process to yam flour	60	75
Feed livestock	8	10
Dispose	12	15
Total	80	100

Source: Field Survey, 2015.

4.2.4 Transportation

The major means of transportation of yam is the use of motor (95%) as seen in table 20 while 5% of the respondents employ the services of labourers who use wheelbarrows to transport yam to the destination.

Table 20: Means of transportation

Means of transport	Frequency	Percentage
Motor	76	95
Labourer	4	5
Total	80	100

Source: Field Survey, 2015.

Assessment of transportation by sampled respondents in table 21 reveals that 41.25% of them said transportation services in the area is fair, 33.75% concluded that it was good while 17.5% said it was poor. This reveals that there is still room for improvement as a better and improved transport service will increase profit and reduce perish ability of produce.

Table 21: Assessment of Transport

Assessment	Frequency	Percentage
Very good	6	7.5
Good	27	33.75
Fair	33	41.25
Poor	14	17.5
Total	80	100

Source: Field Survey, 2015.

4.2.5 Risk Bearing

The yam marketers bore the changes in yam prices, both in transit and market.

4.2.6 Advertising

This entailed haggling with potential buyers. No particular attempt is made to promote sale or advertise. The attention of purchases is caught by calling the potential customers, saying "customer, come and buy yam of good quality". In some cases, it is just the exposure of the displayed yam that draws the attention of the potential customers.

4.3 Marketing Margin of an Average Yam Marketer

Table 22 presents the marketing margin of an average yam marketer in the study area. The result showed that marketing margin of an average yam marketer in the study area is 24%. This means that #1 sale results to a price spread of 0.24 in the marketing of yam in the study area. Since the percentage marketing margin is less than 25%, this shows that the consumers are not been exploited by the marketers (Adetunji *et al.,* 2014).

$$\text{Nominal margin} = \text{selling price} - \text{cost price}$$

$$= 25{,}400 - 19320 = \#6080.00$$

$$\text{Percentage marketing margin} = \frac{\text{selling price} - \text{cost price}}{\text{selling price}} \times 100$$

$$= \frac{25{,}400 - 19320}{25400} \times 100$$

$$\text{Percentage margin} = 23.9\%$$

Table 22: Marketing margin of an average yam marketer in the study area

Variable	Average value(#)
Selling price	25400.00
Cost price	19320.00
Nominal marketing margin	6080.00
Percentage marketing margin	23.9

Source: Field Survey, 2015.

4.4   Analysis of Factors Affecting the Market Price of Yam

The regression result reveals that R square (R^2) was 0.7015 this implies that 70.15% of the total variation in the price value paid by the consumers is explained by the estimated explanatory variables. The remaining 29.85% not explained is attributed to other variables not included in the model, but present in the error term.

The regression coefficients b_1, b_2, b_4, b_6, b_7, b_9, b_{10}, with respect to storage cost, transportation cost, cost of trading materials, cost price, age, experience and quantity sold were statistically significant. This implies that storage cost, transportation cost, cost of trading materials, cost price, age and marketing experience of yam marketers have significant influence on market price of yam.

From the positively signed coefficients, it implies that variables X_2, X_6, X_7, and X_{10} have direct relationships with revenue/market price, while X_1, X_4, and X_9 have inverse relationships because of the negatively signed coefficients (table 3). Therefore an increase in X_2 (transportation cost), X_6 (cost price), X_7 (age) and X_{10} (quantity sold), will lead to increase in the market price of yam in the study area, while a reduction in storage cost (X_1), cost of trading materials (X_4) and marketing experience (X_9) of yam will lead to increase in market price. Labour cost(X_3) and commission agent cost(X_5) of respondents were found not to be

statistically significant variables affecting the market price. Looking at the finding, one can notice a deviation in a- priori expectation for transportation cost (X_2) and cost price (X_6). This is due to the fact that there is increase in transport Cost (#1200 - #1500) when marketers go to far village farms like Kishi and Tewure where the cost of yam is lower and this therefore increase their profit when transport increases unlike in near village farms like Iluju and Gambari which have lower transport cost (#300 - #500) but more costly yams are purchased when compared to far village farms.

The Regression analysis showed that computed F value (801.39) is significantly high at the 1% level, denoting that the collective influence of these variables on market price of yam is significant, hence the null hypothesis is rejected and the alternative accepted. In other words, the study found that there is a significant relationship between marketing functions and the market price of yam.

Table 23: Multiple Regression Analysis of Factors Affecting Market price of yam

Variables	Coefficients	T – statistics
Constant	-2411.406	-1.72
Storage cost (X_1)	-5.713	-1.95*
Transport cost (X_2)	0.865	3.69***
Labour cost (X_3)	-2.444	-0.88
Trading materials cost (X_4)	-5.670	-1.74*
Commission agents cost (X_5)	2.220	1.34
Cost price (X_6)	0.955	19.05***
Age (X_7)	53.654	2.25**
Level of education (X_8)	24.301	0.11
Marketing experience (X_9)	-255.428	-1.71*
Quantity sold (X_{10})	29.986	5.58***

* Significant at 10%

** Significant at 5%

*** Significant at 1%

R-squared = 0.7015

Adjusted R-squared = 0.7002

Source: Data Analysis, 2015.

The regression equation is:

$Y = -2411.406 - 5.713X_1 + 0.865X_2 - 2.444X_3 - 5.67X_4 + 2.22X_5 + 0.955X_6 + 53.654X_7 + 24.301X_8 - 255.428X_9 + 29.986X_{10} + e.$

5.0   SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1   Summary

The study revealed the effect of marketing function on the market price of yam in Ogbomoso, Oyo state. Ogbomoso North and south local government areas were used as the case study. The objective of the study include; to identify the socio-economic characteristics of the yam marketers in Ogbomoso, to assess the profit margin of the yam market in the study area, to identify the marketing functions that contribute to the size of the market margin, and to analyze factors affecting the marketing price of yam.

The survey carried out revealed that of the eighty respondents that were sampled, majority of them (37.5%) were between the ages of 41 and 50 years of age. The study also shows that majority of the respondents (92.5%) were female while 7.5% were male which implies that yam marketing in the study area is dominated by female gender.

It was also revealed that majority of the Yam marketers in the study area were married (67.5%) while 3.75% were single and this suggests that yam marketing in the study area is dominated by married couples.

The study showed that 92.5% of the sampled respondents had formal education while 7.5% of the sampled traders had no formal education. This level of education has implication on gathering information on marketing activities and marketing margin of the respondents.

The research also revealed that only 13.75% of the sampled respondents have less than 5 years of experience while 86.25% have more than 5 years of experience which shows that the people are experienced in the trade, a knowledge which would enable the marketers

understand the intricacies of the trade and thus know how to cut down on marketing cost while attempting to maximize profit.

It was also noted that, high percentage of sampled respondents procure fund through cooperative societies (48.75%) while 22.5% financed their business with their personal savings, a little percentage of them procure fund from banks (3.75%). The respondents claimed they could not collect loans from banks and money lenders, this may be due to collateral requirement, high interest rates charged and also the long processes involved before receiving the money.

The study further revealed that high percentage (98.75%) of the yam marketers belong to yam sellers' association. Most of the respondents (56.25%) claim they enjoy the supply of credit when made available by various tiers of Government and non- governmental organisations, 38.75% only joined the association to gain permission to trade as they maintained they have not had any other benefit apart from that. Only 3.75% of the respondent said they gain the opportunity for better supply.

It is noteworthy that 42.5% of the respondents agreed that they do have access to free flow of price information in the marketing of yam while 57.5% said they don't depend on the information on market price as the price they sell depends on what they buy. The major source of information on market price is from other traders (57.5%), friends and neighbours contribute 32.5% of information while the association contributes 10% of information.

Furthermore, 87.5% of the sampled respondents buy their yam from farms in the village which include Iluju, Kishi, Tewure and Gambari, While 3.75% buy theirs from middlemen and 8.75% buy theirs from wholesales market.

The yam marketers had no special storage facilities and so were not able to keep their yams for too long a time. It is therefore important to note that loss do occur when yam is stored

especially since there is no specialized storage facility. The loss of yam in store can be said to be due to various factors like pests, diseases, heat, and theft. It was seen that 68.75% of loss was attributed to heat, 17.5% of loss was caused by pest and disease, while theft accounted for 7.50% loss although 85% of them still make effective use of spoiled yam (either by processing it to yam flour or used as livestock feed) and therefore compensate the loss in store.

The major means of transportation of yam is the use of motor (95%) while 5% of the respondents employ the services of labourers who use wheelbarrows to transport yam to the destination. Assessment of transportation by sampled respondents reveals that 41.25% of them said transportation services in the area is fair, 33.75% concluded that it was good while 17.5% said it was poor.

The result showed that marketing margin of an average yam marketer in the study area is 24% which shows that the consumers are not been exploited by the marketers.

The regression result revealed that R square (R^2) was 0.7015 this implies that 70.15% of the total variation in the price value paid by consumers is explained by the estimated explanatory variables. The remaining 29.85% not explained is attributed to other variables not included in the model, but present in the error term.

The regression results showed that storage cost, transportation cost, cost of trading materials, cost price, age, experience and quantity sold were statistically significant which means they have significant influence on market price of yam.

Therefore an increase in X_2 (transportation cost), X_6 (cost price), X_7 (age) and X_{10} (quantity sold), will lead to increase in the price of yam in the study area because they have positively signed coefficients, while a reduction in storage cost (X_1), cost of trading materials (X_4) and marketing experience (X_9) of yam will lead to increase in market price because they have

negative coefficients. Labour cost(X_3) and commission agent cost(X_5) of respondents were found not to be statistically significant variables affecting the market price.

The Regression analysis showed that computed F value (801.39) is significantly high at the 1% level, denoting that the collective influence of these variables on market price of yam is significant, hence the null hypothesis is rejected and the alternative accepted. In other words, the study found that there is a significant relationship between marketing functions and the market price of yam.

5.2   Conclusion

It may therefore be concluded that:

(i)   Majority of the yam marketers were female,

(ii)   the mean age of the yam marketers was 48.08 years of age,

(iii)   the level of education is high as only 7.5% of the yam marketers had no formal education,

(iv)   the main source of capital to the marketers is from cooperative societies,

(v)   average percentage margin per marketer was 23.9%,

(vi)   The problems encountered by the farmers are insufficient capital, lack of proper storage facility and inefficient transport services.

(vii)   The functional acts of the yam marketers included buying, selling, storing, risk bearing, advertising, financing and transportation.

(viii)   Marketing functions have significant effect on the market price of yam

5.3   Recommendations

Based on the findings of the study it is recommended that:

(1) The government and non-governmental organization should make efforts towards improving rural road conditions in Nigeria, and also construct rural feeder roads that will go a long way at reducing marketing costs, reduce the damages caused by poor roads

and also stabilize the price of yam and therefore enhance the marketing of not only yams, but also many agricultural products.

(2) In order to solve the problem of financial inadequacy facing the yam marketers, both formal and informal financial institutions should be encouraged by the Government to provide financial assistance to them so that they can expand and improve their existing business volume.

(3) The government in conjunction with necessary market officials should enhance the availability of sophisticated storage facilities to enhance the availability of yam all year round at to reduce loss of yam in store.

REFERENCES

Adeniji, O.B., Adebayo, C.O., Ajayi, O.P. (2012): "Analysis of marketing margin of yam in selected rural areas of Niger state, Nigeria", Basic research journal of agricultural science and review Vol.1 (3) pp. 58-62.

Adesope, A.A; Awoyinka Y.A. and D.A. Babalola (2005): Analysis of Marketing margins and Efficiency of group marketing in Osun state, Nigeria. ACTASATECH Journal.

Adetunji M.O. (2004): marketing efficiency of cashew nut in Oyo state. Journal of Rural research and information, Vol 1,No 1, pp 21-29.

Adetunji, M.O, Oladejo, J.A., and Ojedokun, I.K. (2013): "market and marketing of agricultural produce". Johnny printing works, Pp40-61.

Asogwa, B.C., Ezihe, J.A.C, and Ater, P.I. (2013): "Socio-economic analysis of cassava marketing in Benue State, Nigeria", International journal of innovation and applied studies Vol.2 No.4 pp. 384-391.

Awoyinka, Y.A. and Ikpi, A. E. (2004): economics of farm income and technical efficiency of resources in Jigawa state industrial sugarcane project, Journal of Economics and Rural development, Vol.14 (2): 1-20.

Christine, M. and Roland, T.R. (1999): "Role of marketing", journal of marketing Vol.63, pp. 180-197.

Ewuola, S.O. and Ajibefun, I.A. (2000). Selected media and socio-economic factors influencing innovation adoption by small-scale farmers: Empirical evidence from Ondo and Ekiti States, Nigeria. *Applied Tropical Agricultural.* PP. 24 - 26

F.A.O, (2000): Food and Agriculture Organization of the Nations Publication (Rome).

F.A.O, (2002): Food and Agricultural Organization. Production Year Book. Trade vol. 46(115): pp. 18– 24

F.A.O, (2003): "Trade liberalization and food security in developing countries", In: Trade Reforms and Food Security-Conceptualizing the linkages; Published by Commodities and Trades Division, Food and Agriculture Organization of the United Nations (FAO), Rome, Italy.

FAO Corporate Document report: Animal feed resources for livestock producers-proceedings. Downloaded from http://www.fao.org/wairdocs/ilri/x5547e/x5547e18.htm

Faf-champs, M. and Madhin-Gabre, E. (2001). Agricultural Markets in Benin and Malawi; Operation and Performance of Traders. IFFU report on the impact of agricultural market reform on small-holder farmers in Benin and Malawi.

Folayan J.A (2005). Economic Analysis of Cocoa Marketing in Ondo and Ekiti States of Nigeria. Unpublished PhD Thesis, Department of Agricultural Economics Federal University of Technology Akure, Nigeria.

Folayan, J.A. (2013): "Assessment of structure and conduct of yam wholesale market in Efon Alaaye local government area of Ekiti state, Nigeria", African journal of food science Vol.7 (2) pp. 14-24.

Hine, J.L. and Ellis, S.D. (2001): "Agricultural marketing and access to transport services".

Malcom, C.B. (1999): "Post – harvest food losses and the World food problem". Department of Food Science and Technology publishing Co., Geneva. PP.31 – 41

Maqbool, A; Hashim,H. A.; Shafique, M; Tanveer, A; Ahmad, M and Mahmood, F (2005). Epidermiology and chemotheraphy of fascioliasis in goats, Indian J.Anion. Res., 34: 33-36.

Mayong, M. N., Ikpi, A. E., Olayemi, J.K., Yusuf, S. A., Omonona, B.T., Okoruwa, V. O. and Idachaba, F. S. (2003): "Agriculture in Nigeria: Identifying opportunities for increased

commercialization and investment," Research Report Commissioned by USAID/IITA/UI, 2003.

Mojtaba A., Farhad S.B., Hussein E. (2001): Efficiency of date marketing system in Sistan and Bluchestan of Iran.

Motasem Al-masad, Ali Al-sharafat and Bassam Al-Deseit (2010): Journal of animal and veterinary advances. Vol 19, pp 1150-1155.

Njoku J.E., Odii MACA (1991). *"Determinants of Loan Repayment under the Special Emergency Loan Scheme (SEALS) in Nigeria; A case study of Imo state". African review of money, finance and banking in Africa, Milano, Italy*.

Ogundari K., Ojo S. O. (2005). The Determinants of Technical Efficiency in mixed crop food production "Proceedings of the 1st Annual Conference on Developments in Agricultural and Biological Science, 21st April 2005. School of Agriculture and Agricultural Technology, Federal University of Technology, Akure, Nigeria. Pp. 159 – 164.

Okwuokenye, G.F., and Onemolease, E.A. (2011): "Influence of socio-economic characteristics of yam sellers on marketing margins among yam wholesalers in Delta state, Nigeria", Journal of agriculture and social research (JASR) Vol.11, No.1.

Oladapo MO, Momoh S, Yusuf S, Awoyinka Y (2007). Marketing Margin and Spatial Pricing Efficiency of Pineapple in Nigeria. *Asian J. Market. 1(1):14-22*

Opara, L.U. (2003): "Yams: Post-harvest operations", Food and Agricultural Organisation (FAO) of the united nations, Rome, Italy.

Oyaide, W.J. (2002). "Agricultural business and finance". A seminar paper presented at the Dept. of Agricultural Economics and Extension, University of Benin, Nigeria. PP.1 – 12

Oyekale, A.S., Awoyemi, T.T. and Jaiyebo, O.I. (2003). Marketing functions and determinants of profits among frozen chickens marketers in Ibadan. African Journal of Livestock Extension. 2(1)

Parikh, A. Alli, E. and Mirkalau, S. (1995). Measurement of economic efficiency in Pakistan Agriculture. *American Journal of Agriculture.* 32(6): 53 – 61

Peterson, E. B. (2004)**:** "A Comparison of Marketing Margins Across Sectors, Users, and Regions", Paper Presented at the 7th Annual Conference on Global Economic Analysis, June 17 - 19, 2004, Washington, D.C.

Robert Aidoo., Fred Nimoh., John-Eudes Andivi Bakang., Kwasi Ohene-Yankyera., Simon Cudjoe Fialor., James Osei Mensah and Robert Clement Abaidoo (2012): "Estimation of margins and efficiency in the Ghanaian yam marketing chain", Asian Journal Agriculture and rural development, Vol.2, No.2, pp. 226-234.

Udele, G.O. (1999). "Marketing margin for cassava and yam in Ijebu-Ode L.G.A., Ogun State". A paper presented at the Dept of Agricultural Economics, University of Ibadan, Nigeria. PP.34 – 36

Wohlgenant KM (2001). Handbook of Agricultural Economics*;* volume 1, edited by B. Gardener and G. Rausser.

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DEPARTMENT OF AGRICULTURAL ECONOMICS

QUESTIONNAIRE ON THE EFFECT OF MARKETING FUNCTIONS ON THE MARKET PRICE OF YAM IN OGBOMOSO SOUTH LOCAL GOVERNMENT AREA OF OYO STATE.

SECTION A (SOCIO- ECONOMIC CHARACTERISTICS)

1. Gender : Male [   ] Female [   ]

2. Age: below 20 years [   ] 20-40 years [   ]40-60 [   ] above 60 [   ]

3. Marital status: single[   ] married [   ] divorced [   ]widowed [   ]

4. Religion: Islam [   ]Christianity [   ]traditional [   ]

5. Household size: ………………

6. Type of seller: wholesaler [   ] retailer [   ] other[   ]

7. Educational level: primary six[   ] secondary school [   ]

    Tertiary institution [ ] others [   ]

8. Do you have any other occupation: (a) Yes[   ] (b) No[   ]

9(a) Do you buy and/or sell any other commodity? Yes [   ] No [   ]

    (b) If yes, list them: (1)……………… (2)……………………. (3)…………………….

    (4)…………………… (5)…………….

10. How long have you been in this business? Below 5 years [   ] 5-10 years [   ]

    10-15 years [   ] 15-20 years [   ] above 20 years [   ]

SECTION B: SOURCES OF YAM

11.   Where do you buy your yam from? (a) Farms in the village [   ], middlemen [   ], wholesale market [   ], others [   ]

12(a)   In what quantity do you buy the yam?

Lorry load [   ], Part lorry load [   ], Pick up van load [   ],

Part pick up van load [   ] limited number of tubers [   ] others [   ]

   (b)   How much?

   (c)   What profit do you make from it?

13.   What do you do with the purchased yam? Sell immediately[   ] store for future sales[   ] family consumption[   ]

14.   How long does your storage of yam last? Days[   ] weeks[   ] months[   ] years[   ]

15.   What is the capacity of your storage? <50 tonnes[   ] 50-100 tonnes[   ] 100-200 tonnes[   ] 200-400 tonnes[   ] others[   ]

16.   How do you source for fund? Banks [   ] cooperative [   ] family [   ] friends [   ]

17.   In what measure do you buy your produce? (a) kg[   ] (b) tonnes[   ] (c) others(specify)………….

18.   What factors determine the price you sell? (a) Bargaining power[   ] (b) trade association[   ] (c) individual seller[   ] (d) others…………..

19(a)   Do you have any prior information on the market price of yam before you arrive at the market? Yes [   ] No [   ]

(b) If yes, through what means? (a)Other traders[ ] (b) friends/ neighbours[ ] (c) Association[ ]

20.   What variety of yam do you usually buy for sale? .... Why? ....

21(a)   Does any commodity lead to a change in yam price? Yes[   ] No[   ]

  (b)   If yes, list them. ……………………………………………………………………

SECTION C (COSTS)

22.   How do you transport your yam from point of purchase to the market? (a) motor[   ] (b) motor cycle[   ] (c) labourer[   ] (d) others[   ]

23.   What is the cost of transportation? ....

24.   How many times do you buy yam per month? (a) 1[ ] (b) 2[ ] (c) 3[ ] (d) 4[ ] (e) 5[ ] (f) 6[ ]

25.   What quantity do you buy per week? ……………..

26.   How would you assess transport in your market? (a) Excellent[ ] (b) very good[ ] (c) good[ ] (d) fair[ ] (e) poor[ ]

27.   Do you have a joint transport facility in the market? (a) Yes[ ] (b) No[ ]

28.   How would you describe your contribution of the existing transportation facilities in the market to your business? (a) Positive[ ] (b) negative[ ]

29.   Do you have storage facility for yam? (a) Yes[ ] (b) No[ ]

30.   What type of storage facility do you use? (a) shed[ ] (b)rented store[ ] (c) barn[ ] (d) others……..

31.   How much do you pay as rent for your store? ....

32.   How much do you spend on the following:

ITEMS	COST/ MONTH	COST/WEEK
Rent		
Storage		
Labour		
Transport		
Trading/marketing materials		
Others (miscellaneous)		

33.   If credit is granted, do you receive credit from people you buy yam from? (a) Yes[ ]

      (b) No[ ]

SECTION D (SALES)

34.   How do you measure yam for sale (a) weight[ ] (b) per tuber[ ] (c) others[ ]

35.   How much do you sell (per tuber/kg)………………………….

36.   What quantity do you sell per day? ……………..

37.   How much do you realise from sales per day? ....

38.   What quantity do you sell per week? ....

39.   What quantity do you sell per month? ………………….

40.   Who do you sell to? (a) consumers[ ] (b)retailers[ ] (c) middlemen[ ]

41.   How profitable is it when you sell directly or after storing it for a while? (a) Highly

      profitable[ ] (b) profitable[ ] (c) fairly profitable[ ] (d) not profitable[ ]

42.   Annual income …………………

SECTION E (ASSOCIATION)

43(i)   Do you belong to any association? (a) Yes [   ] (b) No [   ]

   (ii) If yes what is the name and the association fee for a year? …………………………

   (iii) What do you gain from being a member?

       (a) Buying and selling together [   ] (b) opportunity for better supply of yam [   ]

       (c) Supply of credit [   ] (d) dissemination of information about prices [   ]

       (e) Price fixing [   ] (f) others [   ]

SECTION F (LOSSES)

44.   For how long do you store yam before selling (a) days[   ] (b) weeks[   ] (c) months[   ]

       (d) years[   ]

45.   Do you usually lose any yam in store? Yes [   ], No [   ]

       If yes, what is the magnitude of loss during storage? (How many parts out of ten are

       lost)…………

46.   What are the main sources of loss during storage? (a) Pest[   ] (b) disease[   ] (c) heat[   ]

       (d) theft[   ] (e) others……..

47.   In case of spoilage, what do you do? ....