ANALYSIS OF YAM MARKETING IN BOSSO LOCAL GOVERNMENT AREA OF NIGER STATE

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A Project Work Submitted To The
DEPARTMENT OF AGRICULTURAL SCIENCE EDUCATION
Niger State College of Education, Minna.

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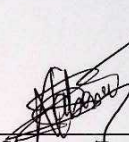
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APPROVAL PAGE

This research project has been read and approved as meeting the requirement of the department for the award of National Certificate in Education (N.C.E) in Agricultural Science Education Department, Niger State College of Education, Minna.

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DEDICATION

This project is dedicated to Almighty God, the creator of the whole universe and our beloved parents.

ACKNOWLEDGEMENT

We wish to express our profound gratitude to Almighty God for spearing our lives and bestowing us with the wisdom, knowledge and courage to complete this programme successfully.

Our sincere gratitude goes to our project supervisor and mentor, Mallam Isah Shehu Nabara for his understanding, patience, endurance, advice and assistance he made towards making this project successful.

We also wish to show our indispensible gratitude to our wonderful parents, our beloved brothers and sisters for their love, prayers and support towards attaining this height and even above in life.

We will also be forever grateful to our course mates and friends for their various advice, contributions and kind gestures. We will really miss you all.

Finally, we also appreciate all our well wishers. May God Almighty continue to bless you all (Amen).

ABSTRACT

The study examined the analysis of yam marketing in Bosso Local Government Area of Niger State, during the 2010 marketing season, using statistic: l tools such as descriptive statistics marketing margin, gini coefficient and regression analysis. Random sampling technique was used to select 80 yam marketers. The results revealed that majority (95.1%) of the marketers were between 21-50 years of age with 6 years and above of marketing experience dominating (90%). However, most of the yam marketers started the business with capital base of #1,000-#20,000. The result also revealed that majority (58.8%) of the marketers were female and within their active age with mean age of 35 years, which goes to show that female can contribute to the responsibility of the family. The results also reveals that majority (77.25%) of the marketers source of capital was from the informal institutions such as personal saving, from friends and relatives, because its easily accessible compared to the formal institutions such as banks and cooperatives which cannot meet that why the marketers prefer the informal source of capital. The study also identified the major construins associated with yam marketers in the study area which hinders the attainment of the full gains of yam marketing, among the construins are: high cost of transportation, high rate of spoilage of yam, theft, price fluctuation, pest and disease.

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CHAPTER ONE

INTRODUCTION

1.1. BACKGROUND OF THE STUDY

Food is the most important out of the three basic needs of man. The other two are shelter and clothing. The provision of adequate food in quantity and quality to everyone goes beyond meeting an obligation to our fellow human beings; it is a contribution to development that can bestow benefits on all. With the growing demand and the accompanying supply response, yam has assumed great importance and Nigeria now ranks the highest producer of yam in the world. Nigeria produces about 31.5million metric tons of yam annually (CBN, 2003). The entire production and marketing chain offers vast employment opportunities. The supply of yam offers prospect for higher income for both the farmers and the marketers. The marketing system, which affects the price received by the farmer and those paid by the consumer, has a profound impact on food security, particularly in augmenting the amount of food available and improving the physical and economic access of masses to it. In predominantly small farm agriculture, the marketing system is required to assemble the small surpluses of the farm (FAO, 2003)

In Nigeria, yam is becoming more expensive and relatively unaffordable in urban area as production has not kept pace with population growth leading to demand exceeding supply (Kushuaha and Polycap, 2001). Although yam production in Nigeria in quite high (Nigeria known to be the largest producer of yam in the world), there is still need for increased production of yam to satisfy domestic and export demand. The performance of agricultural marketing has long been recognized by planners, economists and policy makers as a critical component in the development process (Kushwada and Adam, 2001) According to Abbott (1993), farmers in Africa, Asia and Latin America have made use of agricultural markets, but this use has intensified over the last three

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decades as agriculture has become more market oriented in virtually all developing countries.

Yam production at subsistence level has declined in relative importance because of technological improvement, many producers have more output to sell. Expansion of road, rail and water networks as well as telecommunication system, has made growers more accessible and vulnerable to market forces. The basic feature of agricultural product market in Nigeria comprises of a large number of intermediaries or middlemen operating between producers and consumers. The basic marketing functions are undeveloped and are performed by these middlemen and yam is not an exception (Assiedu, 1992).

According to Olukosi et al. (2007), a good and efficient marketing system accelerates the pace of economic development by encouraging specialization which leads to increased output. If yam marketing is properly harnesses, it will yield the following benefits in the study area and the economy at large.

- Generation of foreign exchange earnings.
- Sustenance of a country's economic growth through the development of an exchange economy
- Provision of income and source of livelihood to the marketing agencies or intermediaries and also increase the standard of living of people involved in the marketing process.
- Encouraging specialization and expansion of output.
- Efficient and effective yam marketing system will locate where there are surpluses of production and bring to where there is shortage.

1.2. STATEMENT OF THE PROBLEM

One of the objectives of production is to create utility for consumers and this is done when what is produced gets to the consumers. It now becomes necessary

to identify the sources of the product and the relative importance of the channels through which consumer's satisfaction is met.

Problem facing food productions are being given more attention when compared to problem of marketing. Considering the place of yam as a traditional food valued in Niger state, its efficient marketing is very important. This research work is set out to examine yam marketing. In order words, the research aimed to provide answers to the following research questions:

1. What are the socio-economic characteristic of the yam marketers in the study area?
2. What is the extent of concentration in yam marketing?
3. What are the marketing channels for yam in the study area?
4. What are the marketing margins for yam in the market?
5. What are the problems of yam marketers in the study area?

1.3. OBJECTIVES OF THE STUDY

The broad objective of the study is to examine the economics of yam marketing in the study area. The specific objectives are to:

i.   Examine the socio-economic characteristics of yam marketers in the study area.
ii.   Determine the extent of concentration in yam marketing
iii. Describe the marketing channels for yam in the study area/
iv.   Estimate the marketing margin for yam in the market
v.   Identify the problems of yam marketers in the study area
vi.   Derive policy implications from the findings of the study.

1.4. STATEMENT OF HYPOTHESIS

H_o: there is no significant relationship between some selected socio-economic characteristics of the marketers and their level of marketing margin.

i.   Marketing is not just a subject of interest to agricultural economist alone but also to society who will prefer moderate increase in food

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price or no increase at all. It is therefore of paramount importance to determine the appropriate marketing system for agricultural products among which yam is prominent in Bosso Local Government Area of Niger state. This marketing structure should be the one to generate incentive in terms of price to the farmers to enable them to continue production and probably increase the production of yams.

ii.   The choice of this topic emanates from the fact that a better system of agricultural marketing is needed to make yam available in every home and prevent yam wastage. Therefore, the search for an optimum marketing system is the major reason for this study.

CHAPTER TWO

LITERATURE REVIEW

2.1. ORIGIN AND DISTRIBUTION OF YAM

Yam belongs to the family Dioscoreaceae (Ogieva, 1998) and to the genus Dioscorea which include about 600 species but only 12 species are of economic significance (Coursey, 1990). Two species, D. rotundata and D. alata growing mainly in Africa and Asia make up about 90% of the world production of yam for consumption (Coursey, 1990).

Yams are annual or perennial tuber-bearing and climbing plant. White Guinea yam and water yams are the most important food yams in terms of cultivation and utilization, (IITA, 2007). Yams are produced on 5million hectares in about 47 countries in tropical and subtropical regions of the world. Yields are about 11 tons/ha in the major producing countries of west Africa. According to FAO statistics, 48.7 million tones of yams were produced worldwide in 2005 and 97% of this was in sub-saharan Africa (IITA)

Research works shows that yams perform better in the south and middle belt areas of Nigeria. Northern parts of the middle belt produce less due to limited rain. Bur kill (1985) described yam as a tropical plant, usually an herbaceous climber with white rhizomes or tubers.

Nigeria is the leading producer with 34million tones followed by Cote d'Ivoire 5million tones, Ghana (3.9million tones) est. Ghana exports the largest quantity of yams (about 12,000tonnes) annually.

Yam is the preferred food in tropical Africa, the Caribbean, and Oceania and to a small extent in south-east Asia (Mayhew, 1988). Average yam consumption per capital per day is highest in Benin (364 kcal), Cote d'ivoire (342 kcal), Ghana (296 kcal) and Nigeria (258 kcal). (IITA, 2007).

2.2. PRODUCTION TREND

International institute of tropical agriculture (IITA, 1994) opined that more than 90% of the world's yam production is in west Africa, mainly from Nigeria. Africa accounts for the bulk of the world average and world production. Yam zones in Africa include Cameroun, Ghana, Togo, Benin, Cote D'Ivoire and Nigeria in particular (FAO, 1994) yam production in Nigeria has experienced an increase in the middle belt and a decrease in the south-western part of the country.

The trend in yam production and yield (Kg per hectare) as reported by food and Agriculture Organization (FAO, 2004) from 1982 to 2000 is presented in table 1.

Table 2.1: Trends In Yam Production from 1982-2000

Year	Production 100hectares	Area 1000hectares	Yield kg/hectare
1982	16,266	1,819	8,943
1983	19,137	2,114	9,052
1984	18,882	2,205	9,562
1985	18,960	2,152	8,809
1986	16,262	1,878	8,661
1987	15,150	1,728	7,857
1988	17,150	1,612	10,640

2.3. CONSTRAINT TO YAM PRODUCTION

Yam cultivation is generally limited by high costs of planting material and of labour, decreasing soil fertility, inadequate yield potential of variety, as well as increasing level of yield and storage pests and diseases associate with intensification of cultivation (IITA, 2007). The labour requirements in yam cultivation from mounding, staking (especially in the forest zone), weeding and

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harvesting exceed those for other starchy staples such as cassava. This account for about 4% of yam production costs while 50% of the expenditure goes to planting materials (IITA, 2007).

The seed yams are also perishable and bulky to transport. If farmers do not buy new seed yams, they must set aside up to 30% of their harvest for planting the next year. Increasing pressure from a range of insect pests (e.g. tuber rot, anthracnose, leaf blight) and viral disease, as well as nematodes contribute to suboptimal yield and the deterioration of tuber quality in storage.

2.4. UTILIZATION AND IMPORTANCE OF YAM

Yam tuber may be eaten with sauce direct after boiling, roasting or frying in oil. The tuber may also be pounded into dough after boiling, processed into flour, or cooked into pottage with added vegetable sauce and palm oil. In addition to their food and market values, yams play a major role in socio-cultural life for a wide range of small holder households especially in the dominant production zones of West Africa. Consumers demand for yam is generally very high in this sub-region and yam cultivation is very profitable despite high cost of production. Commercially food processing equipment foe boiling and mashing of yam into fufu at the press of a button are now available in the market. Yam cultivators, which contain toxic substances such as dioscorene, are first sliced and soaked in salt water for several hours before further processing for consumption.

Yam is industrially utilized as yam flour and starch production. It contains poisonous alkaloids though useful in the pharmaceuticals. Carbohydrate is the major dry matter content of yam though its nutritional components vary with species and cultivators, however, all estimation shows that yam contributes to meeting the basic need (food) of its producers and step up their level of income, yam tubers are also processed into several food products such as the yam flour, which are enjoyed in many parts of the

tropics. Industrial processing and utilization of yam includes starch, poultry and livestock feed, and production of yam flour.

Yam has a socio-cultural and economic influence on the lives of the people in the middle belt particularly. Yam is important in payment of bride price during traditional marriage among many tribes in Nigeria. It is most valued by the tivs and Gbagis in the middle belt of Nigeria. The number of yam stands a faemer plants in a season is a measure of his economic standing in such social system.

2.5. CONCEPT OF MARKET AND MARKETING

A market can be defined as an area in which exchange can take place (Abbott and Makeham 1979). According to Adegeye and Dittoh (1992), market is an area or setting in which price making forces (demand and supply) operate. It could be any arrangement that brings buyers and sellers together.

2.5.1. MARKETING

According to Adegeye and Dittoh (1992), marketing refers to an organization that matches its own human, financial and materials resources with the wants of its consumers. Feral (1985) assert that consumer satisfaction is the major aim of marketing concept and business organization must find out what satisfies the consumer.

Abbott and Makeham (1977) mentioned that marketing is a medium that brings the interpersonal forces of demand and supply together irrespective of location.

2.5.2. AGRICULTURAL MARKETING

Olukosi and Isitor (1990) defined agricultural marketing from both micro and macro points of view. From micro point of view in agricultural marketing could be defined as the performance of all the business which directs the forward flow of agricultural goods and services from the point of agricultural

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production to the hands of the ultimate consumers, in order to achieve the producers' objective. From the macro view point, it refers to the total system of economic activities concerned with the flow of agricultural produce from the producer to the final consumer.

2.5.3. YAM MARKETING AND ITS PREFERENCE

There are no specific standards for yam export, but intending exporters must seek information on the quality and phytosanitary regulations of the importing country as well as the product specifications required by the importer. As a guide, exporters should apply the general requirements for the international OECD Quality standard (Opara, 2001) which issues such as minimum requirement, quality requirements, sizing, tolerance and packaging. These should be interpreted to assist in meeting the specifications agreed with the importer. There are considerable consumer preferences for the different yam varieties among the growing regions. White-fleshed yam which have firm texture (mainly D. rotundata) are the most popular in west Africa while in the south Pacific, D. alata cultivars (water yam, white purplish with loose watery texture) are most common (Opara, 1999). Consumer preferences might account for some of the predominance of certain cultivars in some region, in addition to agro-climatological impacts on the growing attributes of the species. In parts of west Africa, yams, which have loose texture, are often mixed with gari and pounded with gari to prepare fufu of soft texture.

2.5.4 IMPORTANCE OF MARKETING

Abbott and Makeham (1979) identify importance of marketing in agriculture as follows:

i. Marketing becomes important for countries whose products are export-oriented since earnings from such exports are used to finance development programmes.

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ii. Agricultural marketing serves as an indicator of consumer preference through the price they are prepared to pay.

iii. Efficient and effective marketing system in agriculture will locate where there are surplus of produce and bring them to where there are shortages.

iv. Agricultural marketing create employment opportunities and helps to enhance the standard of living of people involved.

v. Agricultural marketing stimulates research into the techniques of food and meat preservation and meet the varying needs of the populace.

2.5.5. MARKETING CHANNELS

According to Olukosi et al. (2007), marketing channels is simply the path of a commodity from its raw form to the finished form or the path of a product as its moves from the producers to the final consumers. Marketing channels are important in evaluating market systems because they indicate how the various market participants are organized to accomplish the movement of a product from the producer to the final consumer. They went further to assert that, marketing channels are in two categories, centralized and decentralized.

Centralized marketing channels is the one in which farmers, products are brought together in large central and terminal markets, which can be purchased by processors, wholesales or commission agents. While decentralized channel does not require elaborate market facilities, rather processors or wholesales purchase either directly from the farmer or at small production area or selling points. In this situation, farmers act as their own salesmen.

Downey and Trocke (1981) stated that different agricultural produce requires different channels to reach their final consumers. Some require

shorter chain while others require long marketing chain. In this regards, marketing channel is a group of interrelated intermediaries who direct the free flow of agricultural produce to the consumers.

2.5.6. MARKETING COST AN MARGIN

Abbott and Makeham (1979) reported that the cost incurred by marketing enterprises are made up of wage and other running cost, overhead costs and fees paid for services. They observed that marketing margin is the difference between the purchase price and the price received on resale. This difference is made up of margins taken by wholesalers and retailers plus transport and other charges.

The margin obtained by marketing enterprises may not always be satisfactory. In case of cooperatives or state enterprises, the margin must cover operating cost, interest on capital and management salaries. However, in the private enterprise there be an acceptable profit. Private enterprise believes that three approaches are used to estimate marketing margin, these are:

a. Representative samples of certain product following through the whole marketing system; prices and charges are noted at each stage and averages are then computed.
b. The gross receipts and outlays of each handler along a marketing channel are divided by the number of volume unit handled.
c. Price at each stage from producer to consumer is averaged for a standard quality over a period of time.

2.5.7. MARKETING EFFICIENCY

Abbott and makeham (1979) mentioned that it is in everybody's interest that marketing should be efficient. The producer looks for efficiency in the auction market or commission agency through which he sells his produce.

They also felt that the consumer expects an efficient service from the retailers. Usman (2006) asserts that marketing efficiency can be evaluated by examining the following:

a. **Structure:** This is determined by the number and size of firms in the market, the degree of product differentiation and the condition for entry of new firms into the market. The number of participants operating in a particular market or related markets can be indicative of the extent of which buying and selling power is concentrated among them. Usman further states that, a few large firms can dominate a market and control price, the concentration which measures the proportion of total sale in a market by a given firm can be indicate the level of concentration of a market share. Monopoly elements in the performance of market functions will not necessary disadvantage consumer or producer. Entry or the ease with which individual can join and leave business is important to a competitive environment and to process of getting a license or professional qualification or to the need of having a minimum amount of capital or other resource in order to operate successfully. Lack of available capital could effectively restrict entry of new firms if a large initial outlay id required. Structure also include the nature of information transfer in the market, which might required an examination of the institutional and other facilities available for acquiring and transmitting market information (Olukosi, 1990).

b. **CONDUCT:-** Market conduct as conceived by Okereke and Anthonia(1998) refers to strategies that firms pursue with regard to pricing product, promotions and the llinkages or relationship among firms. Abbott and Makeham(1979) further emphasized on market conduct as the behavior of firms are they competing? Are they looking for new techniques and do they apply them as early as practicable? Are they looking for new investments opportunities to improve marketing efficiency?

c. **PERFORMANCE:-** this focuses on margin analysis and its end result of adjustment made by the market participants. It assesses how well the process of marketing is carried out and how successfully its aims and objectives are accomplished. Is it produced, assembled and delivered on time without wages? Is it well packed and presented attractively? Is the quality reliable and are contacts kept? Is the consumption of the products increasing and the sales in competitive markets expanding? There are many of such practical indicators of how well certain market is operating.

2.5.8 MARKET FUNCTION

Market functions are specialized services that have to be performed in the process of moving a product from the producer to the consumer. It comprises of exchange function, physical function and facilitating functions (Olukosi and Isitor, 2007). They further maintained that exchange function involves the activities of transfer of owner of commodity. These activities include pricing and exchange, selling and assembling. Physical function involves physical movement and exchange of the commodity itself such as transportation, processing and storage. While facilitating function makes it possible for exchange and physical function to take place. Facilitating functions involve sorting, grading and standardization, packaging, risk bearing and insurance, financing and making intelligence.

2.6 EVOLUTION OF AGRICULTURAL MARKETING

Modern market has evolved from a series of exchange system. Initially people were concerned with production for consumption and inter-household exchange. Such pattern of production was primarily subsistence in nature providing little or no room for specialization for each household had to produce practically all the needs. The existence of marketing is a direct result of specialization of production in the economy. Initially, most farm families were

self sufficient or produced purely to meet subsistence needs. They produce most of the food and crops and livestock products they needed on their small land holdings. For example, they ground their own cereal grains into flour, spun their fibre locally; butchered their meat etc. But with time people discovered that they are limited and specific resource endowment and talent allow them to produce some things better than others. Increase demand for goods and services produced out of the farm made specialization necessary. As the individual farmer specialized, it gave rise to the production of marketable surpluses which could not be exchanged easily for goods and services produced out of the farm.

Trade by batter was popular in the early days but due to it obvious disadvantage such as necessary for doubting coincidence of wants, lack of unit of measure, difficulty of holding large stocks of commodities in storage for future exchange etc. the use of money as a medium of exchange evolved. This marked the beginning of the development of an efficient marketing system. Thus with the development of an efficient marketing system, it becomes possible for consumers to enjoy what they cannot produce irrespective of the distance between them and he producer.

Modern marketing according to spinks (1970 involve) series of exchange systems. Initially people were concerned with production for consumption and inter-household exchanges, such type of production provide little or no room for specialization as each household has to produce practically its needs. He further observed that the existence is a direct result of specialization of production in the economy. Initially, most farm families were self sufficient or produced purely to meets subsistence need, they produce most of the food crop and livestock they need on their small land holdings, with time people limited and specific resource endowment and talent allow them to produce something better than others, increase demand of goods and services out of the farms make specialization necessary. (Olukosi et al 2007).s

This chapter focuses on the study area, the sampling procedure, method used in data collection and the analytical tools used.

3.1 STUDY AREA

The study area is Bosso local government area of Niger state. It came into being on Friday 27th of September, 1991 as a result of the nationwide creation of local governments by the then military administration. The headquarters of local government is Maikunkele. It has a land mass which completely envelops Chanchaga local government Minna metropolis and is bounded to the north and northeast by Paiko local government area. It is geographically located on latitude 9^0 40N and longitude 6^0 31E. It has a population of 147,359 (NPC, 2006). It has a low land type of landscape. It experience an annual rainfall of about 6 months i.e. (April to September) with an average temperature of about 32-35^{0}c. Agriculture is the major traditional occupation of the people of the local government. Besides, they engage in petty trading and few of them in the civil service. The vegetation of this state falls within the guinea savanna zone of the country. The central or heart-beat of Minna town is the commercial center which is located at a valley between Chanchaga and Bosso town.

The main crops under cultivation in Bosso local government are cereals (millet, guinea corn, maize, rice), vegetable, arable crops (yam, cassava, potatoes), melon, groundnut, sugar cane, soya beans and some fruits among others. The state is endowed with the flow of two major rivers (River Kaduna and River Niger) which were dammed at Shiroro and Kanji to generate hydro electric power.

3.2. SAMPLING PROCEDURE

A total sample size of 80 respondents was selected comprising of two categories namely: wholesalers and retailers in the marketing of yam. Four markets from the local government area namely Garatu, Maikunkele, Beji and Gwadabe markets were purposely selected for the study because of their prominence in yam marketing. In each market 20 respondents comprising both wholesalers and retailers were randomly chosen, giving a total sample size of 80.

3.3. DATA COLLECTION

A questionnaire designed in accordance with the objectives of the study was administered with the help of trained enumerators in each of the locations of both wholesalers and retailers in order to gather the necessary information on various aspects of marketing of yam in the study area. Data on the socio-economic characteristics of the respondents, quality and prices of yam purchased and sold by wholesalers and retailers as well as storage and transportation costs were collected.

3.4. DATA ANALYSIS

3.4.1 DESCRIPTIVE STATISTIC

Descriptive statistics like percentage, mean and tabulations was used to outline the socio-economic characteristic of the yam marketers (objective I). Similarly, objective v i.e. identifies the problems of yam marketers in the study area were also achieved using descriptive statistics. A diagrammatic illustration of marketing channel of yam (flow chart) was employed to achieve objective iii.

3.4.2. MARKETING MARGIN

This is the difference between the price paid to the first seller and that paid by the final consumer, sometimes called profit. Marketing margin was employed to achieve objective IV

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3.4.3 MULTI REGRESSION

Multiple regression analysis was used in achieving the hypothesis which states that there is no significant relation between some selected socio-economic characteristic and their level of marketing margin.

The implicit form is given as:

$Y = f(X_1, X_2, X_3, X_4, X_5, X_6, X_7, X_8, X_9, e)$

Where;

Y = Marketing Margin (in naira)

X_1 = Age of respondent (in years)

X_2 = Educational attainment (years of schooling)

X_3, = household Size 9in number)

X_4, = gender of respondent (dummy variable, 1=male, 0=female)

X_5, = marital status (1 if married and 0 if otherwise)

X_6, = Occupation (1 if yam selling is major occupation, 0 if otherwise)

X_7, = Quality of yam handled

X_8, = Retailer (1 if retailer, o if otherwise)

X_9, = Wholesaler (1 wholesaler, 0 if otherwise)

CHAPTER FOUR

This chapter present and discusses the result of the study. Its comprise of the socio-economic characteristics of yam market in the study area.

4.1 SOCIO-ECONOMIC CHARACTERISTICS OF RESPONDENT

This sub-section discusses the socio-economic features of the respondents which is directly or indirectly affect their marketing operation in the study area. The socio-economic characteristics of the respondents such as age, sex, marital status, educational level, household size, year of experience were captured and represented as follows-:

4.1.1 SEX DISTRIBUTION OF RESPONDENTS

The sex distribution of the respondents in the study area is represented in the table 2

Table 2: Sex Distribution of the respondents

Sex	Frequency	Percentage
Male	33	41.2
Female	47	58.8
Total	80	100

Source: Field survey, 2013

Result in table2 indicates that majority (58.8%) of those involve in the marketing of the yam are female, while the remaining 41.2% of the marketers are male. This implies that yam marketing is dominant by a female which will go a long way to increase their income level and also support their husband in term of family responsibilities.

4.1.2 AGE DISTRIBUTION OF RESPONDENTS

This sec reveals the age distribution of respondents in the study area as well as their various frequencies and their percentage.

Table 3: Age distribution of respondent

Age	Frequency	Percentage (%)
21-30	42	52.5
31-40	25	31.3
41-50	9	11.2
51-50	4	5.0
Total	80	100

Mean age =35

Source: Field survey, 2013

Table 3 presents the distribution of respondents according to their age status. As shown in table 3 majorities (52.5%) of the respondent were within the age group of 21-30 years. The age structure ranged from 21-60 years with about 83.6% falling within age group of 21 to 40 years and 16.3% between 41-60years, with a mean age of 35 years. This shows that their marketers are in their active years. This indicates that their respondents can still bear their risk in the case of failure and at the age, they will be able to take sound and decisions with regards their yam marketing.

4.1.3 MARITAL STATUS OF RESPONSE

Marital status of the respondents reveals the number of marketers married, single (not married) as well as those divorced and widow and their respective frequencies.

Table 4: marital status of farmers

Marital status	Frequency	Percentage (%)
Single	15	18.8
Married	61	76.3
Divorced	3	3.8
Widow	1	1.3
Total	80	100

Source: field survey, 2013

Table 4 shows that over whelming majority (76.3%) of the respondents of the marketers are married. This reveals that most marketers in the study area were married. Timely marriage is encourage in the study area because of the nature of the marketing as an occupation that need more than one man's efforts, the result also reveals that a very minute i.e. respondent which represent 1.3% of the respondent was a widow.

4.4 Educational level

The educational attainment of respondents was discussed in table 5 revealing their frequency and percentage

Table 5: Educational attainment of the respondents

Educational Level	Frequency	Percentage (%)
No formal education	36	45.0
Primary Education	18	2.5
Secondary school	21	26.3
Qur'anic Education	1	1.3
Adult Education	4	5.0
Total	80	100

Source: field survey, 2013

Table 5 shows the distribution of marketers according to educational status. As shown in the table 45.0% had no formal education, while 53.8 of the traders had formal education, this depicting a relatively some level of literacy level among the traders. There is no doubt that these yam marketers who are predominantly female, in their active years and with some level of education are better equipped to adopt new marketing innovation and take rational decisions that will enhance the profitability of their business.

4.1.5 Marketing Experience of the Respondents

The distribution of respondents based on marketing experience is represented in table 6.

Table 6 shows that most (90%) of the marketers had been in yam marketing for 6 years and above. Only 10% of the respondents had marketing experience of 5 years or less. The years of marketing experience had a direct relationship with the age of the marketers. Their long years of marketing experience will enable them overcome constrains face in marketing of yam because of the popular say that experience is the best teacher.

Table 6: Distribution of respondents by marketing experience

Years	Respondents	Percentage (%)
1-5	8	10.0
6-10	11	13.8
11-15	19	23.8
16-20	28	35.0
20 years above	14	17.5
Total	80	100

Mean= 32 years

Source: field survey, 2013

4.1.6 HOUSEHOLD SIZE OF RESPONDENTS

The household size determines the number of people living as family members in a household and being fed by a head. It determines the level of family labour contributes to the farming activities i.e. the more the family size, the greater the contribution.

Table 7: Household size of respondents

Household	Frequency	Percentage (%)
0	15	18.8
1-5	16	20.0
6-10	33	41.3
11-15	10	22.5
16-20	2	5.0
20 and above	2	2.5
Total	80	100

Source: field survey, 2013.

Table 7 shows the distribution of marketers according to household status. As shown in table majority (41.3%) of the respondents were within the range bracket of 6 to 10 members, while 2.5% of the respondents range bracket were within 11 to 15 members. This implies that most of the marketers had large family size; this goes further to show that marketers in the study area are predominantly large families. This is due to what it contributes to the total farm labour requirement in marketing.

4.1.7 INITIAL CAPITAL

Table 8 presents the distribution of yam marketers according to their initial capital.

Table 8: distribution of respondent according to initial capital

Initial Capital (#)	Frequency	Percentage (%)
1,000 -20,000	54	67.5
21,000-40,000	16	20.0
41,000-60,000	8	10.0
61,000 above	2	2.5
Total	80	100

Source: field survey, 2013

As depicted in table 8, majority (67.5%) of the marketers started the business with initial capital base of #1,000, #2,000 which indicates that most of them were operating at small scale level, with personal savings and cooperatives standing as the main source of capital for business in the study area.

4.1.8 SOURCE OF CAPITAL

The source of capital in yam marketing in the study area is presented in table 9

Table 9: Distribution of respondents according to source of capital in yam marketing

Source of Capital	Frequency	Percentage (%)
Personal savings	36	45.0
Friends and relatives	26	32.5
Co-operatives	15	18.5
Banks	3	3.37
Total	80	100

Source: field survey, 2013.

As depicted in table 9, majority (77.5%)of the marketers source of capital were from the informal sources while the formal source was accounting for (22-25%), which indicates that most of the marketers were sourcing for Capital from the informal institution such as personal savings, from friends, compared to the formal institution such as cooperatives and banks which gives stringent conditions, such as high interest rate, collateral before disbursement of loans to marketers which marketers often cannot meet that why prefer the informal institution.

4.4. RELATIONSHIP BETWEEN THE SOCIO-ECONOMIC CHARACTERISTICS AND THEIR LEVEL OF MARKETING MARGIN

The result of the regression analysis was used in the determination of the relationship between socio-economic characteristics and their levels of marketing margin in the study area are presented in table 11.

Table 11: Relationship Between the socio-economic Characteristics and their level of marketing margin

Variable	co-efficient	T-value
Constant	12.13454	18.62***
Age	-0.439838	-2.87***
Educational attainment	-0.1727756	-1.79*
Household size	0.1843993	2.78***
Gender	0.0119976	0.11 N.S
Marital status	-0.4204119	-2.11**
Occupation	0.2163396	1.96*
Quantity of yam handled	0.0219525	0.52 N.S
R^2	0.23552	
Adjusted R^2	0.1609	

Source: field survey, 2013.

*=Significant 10%   **=significant 5%

***=significant 1%   N.S= not significant

Double log was chosen as the leading equation on the basis of R^2 value, T-value, F-value as well as the signs on estimated parameters. The result gave an R^2 of 0.235%. this implies that 23.5% of variation in market margin of yam production was explained by the variable included in the model.

The co-efficient of age and household were significant at(<0.01), educational attainment and occupation were significant at(<0.10) also marital status was significant at (0.05%) while the co-efficient of sex, and quality of yam handled were positive but not significant indicating these variable do not contribute to marketing margin of the farmers. The F-statistics was statistically significant at ($p<0.01$) which indicates that the independent variable adequately explained the dependent variable. The co-efficient with positive signs indicates that an increase in the level of these variables would lead to an increase in marketing margin of the respondent ceteris paribus. The co-efficient age, marital status and educational level had negative sign implied that an increase in this inputs would lead to a decrease in the level of marketing margin. This implies that large family size contributes to marketing margin and also a good pay job (occupation) along side with yam marketing will have a significant increase in the marketing margin.

4.5. MARKETING MARGIN OF MARKETERS

The marketing margin for traders is the difference between his buying price or cost price and his selling price. The average cost price and selling price for the traders in the study area is presented in table 12.

Table 12: The Marketing Margin per 100 tubers of yam

Variable	Marketers mean cost (₦)/annum	percentage total cost (%)
Purchase cost	43712	96.28
Transportation cost	955	2.10
Storage cost	574	1.26
Packaging cost	163	0.36
Total cost	45404	100
Total sales (gross income)	75000	
Marketing margin	29596	

Source: Field survey, 2013

Table 12 represents the distribution of respondents according to the marketing margin, transportation accounting for the highest margin closely followed by storage cost this goes to show that a lot of money is spent in the transportation of yam and the implication of this is that the cost will be added to the final amount which will be paid by the final consumer.

4.6. Problems of yam Marketers

The distribution of respondents with regards to the militating against the attainment of full potentials of yam marketing in the study area is presented in table 13.

Table 13: Distribution of respondents according to problems faced in yam marketing

Table 12: The Marketing Margin per 100 tubers of yam

Problems	frequency	percentage (%)
High cost of transportation	47	58.8
High rate of spoilage	38	47.5
Insufficient credit facilities	21	26.3
High storage cost	39	48.8
Price inflation	12	15.0
Pest and disease	43	53.8
Theft	69	86.8
Lack of space for storage	28	35.0
Total		297

Source: Field survey, 2013

*multiple response

The result reveals that theft (86.8%) was the most serious problem. This problem therefore ranked first among the problems of yam marketing, this goes to show that theft is a major constrain that hampers full attainment of yam marketing in the study area and the implication of this is that this could discourage young and aspiring marketers that will want to venture into the business in the study area, this could be cub with adequate and affordable security personnel stationed in the various markets, high cost of transportation

(58.8%) ranked second to theft as a major constrain to yam marketing and the implication of this is that the yam might not get to the end user as at when due which is one of the utility of production, pest and disease infestation was also captured as a major constraint associated with yam marketing and this goes to reduce the quality of yam and in the long run reduces the price value of yam in the market, while high rate of spoilage accounted for (47.5%) ranking 5th in the constrains of yam marketing and this can discourage the involvement in the participation in yam marketing in the study area.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATION

5.1. SUMMARY OF THE MAJOR FINDINGS

The study examined the economics of yam marketing in Bosso Local Government Area of Niger State. The study was carried out to examine the socio-economic characteristics of yam marketers, determine the extent of concentration in yam marketing, describe the marketing channel for yam in the study area, estimate the marketing for yam and identify the problems associated with yam marketing. A total of 80 respondents were selected randomly from four markets in Bosso Local Government area of Niger state, descriptive statistics, gini co-efficient, marketing margin procedure and multiple regression analysis were employed to analyze data collected through questionnaire.

The result revealed that majority of the respondents whose occupation was trading were headed by females, were within the ages of 21-60 years. The mean age of 35years. Over seventy six percent of the respondents were married and their mean family size was 10 persons. It was found that most of the respondents had one form of education or the other which indicates that most of them can read and write which may likely to have positive effect in their business undertakings. Majority of the yam marketers had 6years and above of experience in marketing which clearly showed that most of them can bear the risk and uncertainty surrounding marketing of agricultural products.

In determination of the relationship between socio-economic characteristics of the marketers and their level of marketing margin, seven independent variables namely, age, educational attainment, household size, gender, marital status, occupation and quantity of yam handed. The result of regression analysis showed that age, educational attainment, household

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size marital status and occupation were important In explaining the variation in their levels of marketing margin and socio-economic characteristics of yam marketers.

However, the constraints associated with yam marketing in the study area includes high cost of transportation, high rate of spoilage of yam, theft, inadequate storage facilities, price fluctuation, pest and disease problem and insufficient credit facilities were itemized as main problems in yam marketing in Bosso local government area of Niger state.

5.2. CONCLUSION

The study revealed that majority (95.1%) of the marketers were between 21-50 years of age with 6 years and above of marketing experience dominating (90%). However, most of the yam marketers started the business with capital base of ₦1,000- ₦—20,000. The result also revealed that majority (58.8%) of the marketers were female and with their active age with mean age of 35years, which goes to show that female can contributes to the responsibility of the family. The study also revealed that majority (77.25%) of the marketers source of capital was form the informal sector (institution) such as personal saving, from friends and relatives, because its easily accessible compared to the formal institution such as banks and co-operatives which come with stringent conditions such as high interest rate and collaterals which marketers cannot meet that why the marketers prefer the informal source of capital. Yam marketing is viable in the study area though not 100%, if adequate capital, incentive such as soft loans with low interest rate, good access road and stable price of yam ate made available to the yam marketers in the study area.

5.3 RECOMMENDATIONS

As a result of the findings emanating from this study, the following recommendations were deemed appropriate towards the attainment of full potentials of yam marketing in the study area:

a. Provision Of Transportation Facilities:

There should be adequate provision of transport facilities to enhance the evacuation and proper distribution of yams within the study area. For this to be achieved there is need for government to construct all year round motor able feeder roads to link the villages involved in the production and marketing of yams to urban centres.

In addition to this, government should help in providing mass transit Lorries and vans as we have mass transit busses to reduce transportation cost. This will not only solve the problems of insufficiency of vehicles but also force down the transportation charges of transporters (private). This will go a long way in reducing the size of the marketing margin for yam in the study area.

b. Provision Of Credit Facilities:

Credit is a crucial factor in marketing operations. It helps to expand the business and in the long run lower the operational cost and selling prices for yams. In order to achieve the stated purpose, government should direct the commercial banks to relax their security conditions for yam traders.

c. Provision Of Storage Facilities:

Storing helps in spreading the supply of yam throughout the year as well as in establishing the price. Yam is purely a rain fed crop and to enjoy the stated advantages, it is crucial to evolve strategies aimed at improving the storage of yams.

Government should therefore provide houses for root and tuber crops. In addition to this, government should employ services of agricultural extension workers to teach the traders modern and improved techniques of yam storage and these techniques should be affordable.

d. Provision Of Effective Information Dissemination Process:

The lack of adequate market information to traders is one of the major causes of discrepancies in price received for yams. Rational decision making in the market environment is possible only if adequately market information is made available to the market participants. This can be achieved using the extension workers resident in the study area. The agents should be made to visit the various exchange points to initiate the trader's union members with information need of such group of traders.

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