GROUNDNUT MARKETING IN A DEREGULATED ECONOMY IN THREE LOCAL GOVERNMENT AREAS OF ADAMAWA STATE, NIGERIA.

AN M.Sc THESIS

BY

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April, 1998.

DECLARATION

I hereby declare that this thesis was written by me and that it is the record of my own work. It has not been presented before in any previous publication for a higher degree. All borrowed ideas have been duly acknowledged by means of references.

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CERTIFICATION

This thesis entitled: "GROUNDNUT MARKETING IN A DEREGULATED ECONOMY IN THREE LOCAL GOVERNMENT AREAS OF ADAMAWA STATE" by WABOLAMANYI JAMES SIMEON meets the regulation governing the award of the degree of Masters of Science of Ahmadu Bello University Zaria, and is approved for its contribution to scientific knowledge and literary presentation.

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DEDICATION

This work is dedicated to my mother Habi Kwabindi, my wife, Ruth J. Wabolamanyi, my daughters Hyelsikya James and Nazzuwa James and my sons Na'ada James and Nachani James for their continued prayers that led to my successful completion of this course. I pray that we shall all reap the benefits of this course, Amen.

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ABSTRACT

Before the deregulation of the economy in 1986 which was an element of structural Adjustment Programme (SAP), the prices of scheduled commodities such as groundnut were fixed by the Federal Government on the advice of the technical committee on producer prices.

After the deregulation of the economy, however, the Nigerian agricultural marketing system for cash crops was left in the hands of private traders. The objectives of this study were to determine the profitability of groundnut production to the farmer under this deregulated marketing system, to study the system of groundnut marketing before and during SAP period and to determine whether the present marketing system is monopolistic or competitive. Other objectives were to compare the marketing margin and marketing efficiency among the three local government areas of study and to identify, the problems, if any affecting the new marketing system.

The data collected were analysed using descriptive statistics, gross margin analysis, marketing margin analysis, marketing efficiency and Gini coefficient analysis.

The study found that farmers got reasonable level of profit in the groundnut production. Also prices were determined by forces of supply and demand in the free market economy as against the fixed price system before the deregulation of the economy.

There was element of domination by small groups of sellers over the majority for both whole-sale and retail markets but with more domination in the whole-sale market.

Farmers were found to have reasonable share of what the final consumer paid for their commodities. The deregulation of the economy has exposed both farmers and merchants to some marketing problems such as transportation, storage, lack of marketing information and large numbers of middlemen and buying agents.

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CHAPTER ONE

1.0 INTRODUCTION

1.1 Groundnut In Nigerian Agriculture

Agriculture from time immemorial has been the source of livelihood of the Nigerian populace. It has until recently been the main-stay of the Nigerian economy as a foreign exchange earner and single largest employer of labour.

With the discovery of oil, however, agricultural sector suffered a set back and declined upto a point that it could only contribute to the provision of food to the teeming population with little or no contribution to foreign exchange earnings. The development of agricultural sector to produce both food and cash crop is vital for sustainable growth and development.

Groundnut Arachis hypogeal which is one of the most important cash crops in Nigerian economy is believed to have originated from south America, Yayock (1978) quoted by Njoku (1981). It is believed to have been brought into West Africa by early Spanish and Portuguese explorers. Groundnut is mainly produced in northern part of the country where climatic and soil factors favour the crop. As far back as 1969/70, Nigeria was the third largest producer of groundnut in the World (Abalu and Harkness, 1978). Table 1.1 shows groundnut production in Nigeria as from 1969/71 to 1994. This duration covers a period before and after the abolition of groundnut marketing board. The groundnut board was abolished in 1986 by

the Federal Government of Nigeria. The area put under cultivation of groundnut witnessed a decline from 1976 to 1986 but realised yearly increase in yield per hectare during the same period probably due to increase in technology in the production of the crop. The year 1993 had the highest yield per hectare with 1250 kilogrammes per hectare.

Adamawa state which is the study area is one of the leading groundnut producing areas in the country. In 1971, for example, over 85 percent of groundnut produced in the country were accounted for by Kano, Kaduna, Gongola (Taraba and Adamawa), Bauchi and Borno states, (Abalu and Harkness, 1978).

Table 1.2 shows data on groundnut production in Adamawa state by local government areas for a period of three years. The contribution of output by the three local government areas, (Hong, Mubi and Maiha) out of the sixteen local government areas of the state were 19.25 percent, 13.90 percent and 9.93 percent of the total production for the years 1992, 1994 and 1995 respectively.

Groundnut which has been one of the country's major sources of foreign exchange earner contributed well over eighty million U.S dollars to Nigeria between 1966-1968. Table 1.3 shows the total quantities in metric tonnes exported by each country and total value in U.S. dollars realised from those exports. Out of the twelve exporting countries, Nigeria accounted for 53.66 percent of the total exports while the remaining eleven countries accounted for 46.34 percent.

Table 1.1: Groundnut production in Nigeria 1969-1994

Year	Area cultivated ('000'ha)	Yield Kg/ha	Production Unshelled ('000'mt)
1969-71	1846	900	1660
1976	920F	543	500F
1997	820*	366	300F
1978	600*	833	500*
1979-81	600	954	573
1984	600*	917	550*
1985	600F	1000	600F
1986	590	1044	616
1991	1046	1166	1219
1992	1200*	1167	1400
1993	1000F	1250	1250F
1994	1048F	1145	1200F

Source: FAO Monthly Bulletin Vol.2 July-August 1979

FAO Monthly Bulletin Vol.10 January 1987

FAO Vol.7 No.2/3/4 1994.

Key: F = FAO Estimate

* = Unofficial figure

Table 1.2: Cropped area of groundnut in Adamawa state 1992-1995

LGA	1992 Area (ha)	Yield (mt)	1994 Area (ha)	Yield (mt)	1995 Area (ha)	Yield (mt)
Madagali	465.78	702.40	1529.04	2562.11	2572.21	6345.45
Maina	1343.04	2218.28	1165.77	1060.06	319.77	964.69
Michika	1307.56	2738.50	1902.78	767.41	2118.71	1392.60
Mubi	1049.31	2180.85	502.85	354.19	864.06	1006.26
Gombi	7624.42	5097.04	6473.82	2710.74	2928.17	4084.97
Hong	3138.42	2720.24	1487.52	1181.44	2690.29	2722.52
Song	2962.53	2907.86	1095.03	217.71	6931.93	5921.78
Fufore	-	-	167.88	161.65	655.38	765.56
Ganye	3712.00	6789.07	2709.73	2370.53	3996.43	9569.01
Jada	2621.45	4423.07	4710.86	4099.40	3576.24	8711.67
M/Belwa	2357.24	7029.56	2683.36	2638.62	1859.27	3620.25
Yola	-	-	704.21	210.09	260.99	127.64
Demsa	103.08	179.31	17.77	4.27	393.21	1168.24
Guyuk	15.00	8.40	16.53	7.95	-	-
Numan	28.18	5.07	106.86	29.17	10.73	2.92
Shelleng	-	-	181.44	30.06	291.64	860.41
Total	26713.01	36991.26	25438.92	18668.45	29469.03	47263.97

Source: Planning, Monitoring and Evaluation (PME) Data Bank, Adamawa Agricultural Development Programme Yola, Adamawa State.

Groundnut also provides rich source of oil and crude protein. It has been found that major groundnut varieties grown in the country have between 47-50 percent oil content. Table 1.4 shows the varieties and their oil content. M25-68 has the highest oil content. The rich oil is used for domestic purposes and the residue is used to feed both man and livestock. Groundnut paste is also used as soup ingredient in most homes in northern Nigeria.

Groundnut can be eaten raw, cooked or roasted. Groundnut haulms constitute a fodder for ruminant animals such as cows, goats and sheep.

1.2 **Problem Statement**

Before the deregulation of the economy in 1986 which was an element of Structural Adjustment Programme (SAP), the prices of scheduled commodities such as groundnut were fixed by the Federal Government on the advice of the technical committee on producer prices. The prices were announced well in advance of the farming season and would reign through out the season irrespective of the world market prices. Purchases of the commodities were carried out through license buying agents (LBAs) who were paid commissions as well as transport allowances.

After the deregulation of the economy, however, the Nigerian agricultural marketing system for cash crops was transferred to the hands of private traders.

Table 1.3: Exports and computed values for shelled groundnut for the free trade model between 1966-1968.

Exporting Countries	Exports (mt)	Total Value (U.S. dollars)
Israel	4290	590090
United States	64387	7940849
South America	12041	1618912
Burna	10787	1019587
China	63533	6405397
Malysia	4878	476044
India	6990	699000
Senegal	301668	38580321
Nigeria	782733	80930900
South Africa	52676	6505486
Kenya	49491	5471725
Sudan	105037	12051945
Total	1458554	162290256

Source: Jellema B. (1972) "Analysis of the World Market for Groundnut and Groundnut Products" North Carolina University at Rallegh

Table 1.4: Nigerian groundnut varieties and their oil content

Varieties	Oil Content Percentage
Samaru 38	47 - 49
Samaru 61	47 - 49
Mk 374	47 - 49
RMP 12	47 - 49
M25-68	48 - 50

Source: G/nut Newsletter, Sept. 1984, P.12.

In a reconnaissance survey conducted by the researcher, some marketing problems were identified which were attributed to the effects of deregulation. These included:

(a) Transportation

(b) Storage

(c) Standardization (quality and quantity control)

(d) Large numbers of middlemen.

(a) Transportation: Due to the absence of license buying agents (LBAs) who used to follow farmers to buy their produce within their domain, farmers had to transport this produce to the market or to any selling centre. Transport has been either inadequate or costly especially with high cost of vehicles/vehicle spare parts and bad rural feeder roads.

(b) Storage: With the deregulation which resulted in price differentials in and between seasons, farmers and traders started to store or hoard their produce to be sold at higher prices sometimes in the season.

(c) Standardization: With the abolition of the groundnut marketing board, the problem of standardization surfaced. Groundnut was no longer graded to standard weight as approved by the defunct groundnut board to check for quantity control and no more aflatoxin infected and broken nuts inspection to check for quality control. There was also distortion of the approved standard "mudu" used for measurement to create expansion of the container

so as to create room for cheating the groundnut sellers who were mostly illiterate farmers.

(d) Large Number of Middlemen: Due to the deregulation, Nigerian markets have been found to harbour large number of middlemen operating between the producers and the consumers.

Mellor (1970) and Jones (1972) viewed the existence and participation of middle men in a deregulated economy in less developed countries as being exploitative, collusive and economically inefficient operating with high profit margin for the traders.

1.3 **Objectives of the Study**

The broad objective of this research is to study the present system (Post - SAP) of groundnut marketing and make some comparisons with the past system (Pre-SAP) of groundnut marketing.

Specific Objectives of the Study

(i) to determine the profitability of groundnut production to the farmer.

(ii) to describe the present system of groundnut marketing in relation to pre - SAP period.

(iii) to analyse the structure of groundnut market in the study area.

(iv) to determine and compare market margin and efficiency for the three local government areas of study.

(v) to identify and describe the problems affecting the present marketing system as against pre - SAP period.

1.4 **Justification for the Study**

The importance of marketing in groundnut production can not be over-emphasised because groundnut is mainly a cash crop with high foreign exchange generating capacity but with high consumption rate among house holds throughout the country because of its rich oil. The crop is mainly produced in the rural areas of the Northern states while consumers are spread in all parts of the country mainly in urban centres. Consumers give value to commodities only if it is delivered to them at the appropriate time, place and in a desired form which are the functions performed by marketing. It is only through marketing that the produce reaches every consumer and it is through it too that the agents involved in marketing earn their living.

Above all, the marketing of groundnut in a deregulated economic system has never been studied in the area under consideration. It is therefore, justifiable to attempt to study the marketing of groundnut in a deregulated economic system and to identify problems that may constitute a stumbling block to increased production of the crop with a view to suggesting solutions to it.

CHAPTER TWO

2.0 REVIEW OF RELATED LITERATURES

2.1 Agricultural Marketing in a Deregulated Economy

Agricultural marketing in a deregulated economy is the buying and selling of agricultural products in a free and competitive manner where there is no government intervention in the determination of prices of the commodities, rather marketing forces of supply and demand determine the prices. This system of marketing differs from that of the regulated economy where government fixes producer prices for the commodities as was the case during the groundnut marketing board system before the deregulation of the economy in 1986.

The abolition of commodity boards and the ban on restrictions on free movement of goods and services has favoured producers of cash crops such as groundnut, cotton, cocoa and so on. as the degree of competition in the marketing system has increased leading to higher prices (Olukosi and Isitor, 1990). It has also made it possible for any producer or manufacturer to transport and sell his goods anywhere and to the highest bidder. This means that goods and services can be transported to areas of high demand at any time and anywhere for higher prices/profit. With abolition of price control on agricultural products in a deregulated economy, farmers can now sell their produce at higher prices which serves as incentives to expand their production.

2.2 Marketing of Crops in Nigeria

In recent years, the Nigerian agricultural marketing system for food crops lies entirely in the hands of private traders and individuals who have been able to supply large urban population with staple foods. Some food items produced and consumed locally are also marketed in the traditional ways. The actual organisation of marketing is partially determined by the physical marketing facilities available to the participants. Those that are important are transport (roads and vehicles), facilities for storage and processing (Nyantang and Apeldoorn, 1991).

The general marketing of food and cash crops in Nigeria involve a large number of middle men operating between the producers and the consumers. The commodity passes through the middle men to the local and urban markets from where the rural and urban population obtain supplies of the commodity. Traders, agents and farmers transport the commodities to urban centres and pass them to wholesalers who take up the job of distribution.

The basic marketing facilities like storage and processing equipment are under developed with a lot of wastage and spoilage involved. The deregulated marketing system in Nigeria include the inter state trade system. The general direction of this inter-state trade system is north-south and south-north. From the North traders take groundnut, groundnut oil, beans and so forth. to the south and bring back

commodities such as kolanuts, palm oil and so forth. to the North.

2.3 Problems of Agricultural Marketing in Less Developed Countries

Since market is an important and indispensable component of any economy, knowledge about its problems or inefficiencies with a view to correcting it is desirable. Agricultural markets in less developed countries - including Nigeria are faced with many problems among which are:-

(i) Lack of market information

(ii) Transportation

(iii) Storage problems

(iv) Lack of standardized measures.

2.3.1 Market Information

Efficient marketing system is dependent on market information. The performance of all marketing functions depend on well informed buyers and sellers. Market information helps them to balance supply and demand in particular markets to avoid groundnut or surpluses with their corresponding price fluctuation (Abbot and Makeham, 1979). The information which is usually made available through market intellegencies is useful in the following ways.

(a) It helps to evaluate the possible alternative marketing channels.

(b) It reveals different ways of performing marketing functions.

(c) It helps producers to understand market potentials for new products.

Markets in many developing countries are imperfect in the economic sense. In other words, most of those engaged in transactions are not well informed about conditions elsewhere in the market or in neighbouring localities.

Typically, prices may be appreciably different in villages not very far apart without any administrative or physical barriers, between them (Hunt, 1969).

2.3.2 **Transportation Problems**

Transport is an essential ingredient in agricultural marketing, because commodities are produced mainly in rural areas while consumers could be thousands of kilometers away. Unfortunately, less developed countries are characterized by inadequate commercial transport, poorly maintained roads or even absence of rural feeder roads linking rural and urban centres to make evacuation of food items possible.

These problems in recent times is further worsened by high cost of vehicles and vehicle spare parts. All these problems result in delays in moving produce to high demand consumption areas resulting in the risk of post harvest loses, theft and spoilage. These problems are not peculiar to Nigeria as a developing nation alone, because an interview

conducted in Ghana in 1970 showed that 58 percent of respondents had difficulties in moving their products to the market due to lack of vehicles, poor or no feeder roads and high cost of transportation (Abdullahi, 1993). Improvements in transportation generally mean reduction in transportation costs and improvements in the nature of quality of services. The most obvious effect of cheap transportation is to make available to a community the goods that produced else where (Locklin, 1972).

2.3.3 **Storage Problems**

Storage is another important activity in agricultural marketing. Agricultural products are seasonal but demand for consumption is evenly spread over the whole year. For the spread of consumption to be possible, storage facilities must be required because these products are easily perishable. Reported losses in storage vary widely from one farmer to another. It was found that storage facilities at selling points, especially in the market places were very scarse or sometimes absent (Nyantang and Apeldoorn, 1971). According to Adesuyi and Cornes (1977) about 25 percent of Maize produced in Nigeria is lost in stores due to insects, rodents and micro-organisms.

The farmer loses about 5 percent of his beans to bruchid bettles before his beans enters traders' stall where the loss increases to about 30 percent (Anyahuru, 1994). Lack of

storage facilities even discourage farmers to undertake large scale agricultural production. Even those who attempt to produce in large scale have no alternative than to sell their produce early when prices are very low. This causes food insecurity due to a cyclical period of heavy post harvest scarcity and a near starvation period.

Unless storage facilities are made available to the rural farmers; road links and transport facilities to the rural areas aimed at encouraging large scale production, the marketing of farm produce will continue to have problems resulting in very high price range between the pre-harvest and post harvest periods.

2.3.4 **Lack of Standardized Measures**

Variations of unit of measurements, which varies from one part of the country to another is a common phenomena in markets of less developed countries. Some local government in the federation have however, introduced standard measure called "Tiya" which all traders are expected to use (Olukosi and Isitor, 1990). The use of uniform weights and measures and accepted quality specification are required for efficient marketing system (Abbot and Makeham, 1979). However, despite the introduction of standard measures by some local government in the federation, most traders have been found to distort the measure creating room for cheating in the form of quantity or weight manipulation, underpayment and hence results in low

income to the farmer.

Some of the problems of agricultural marketing in less developed countries such as Nigeria is connected with the "Popular views" about the role of intermediaries. Several allegations of malpractices have been levelled against the middle men involved in marketing of groundnut since the abolition of groundnut marketing board.

A popular view about them in developing countries is that, they are exploitative, collusive, economically inefficient and operating with high profit margin for the trader (Mellor, 1970; Jones, 1972).

The farmers' illiteracy coupled with poverty with very weak bargaining power make them easily liable to exploitation by middle men through underweighing of their produce, manipulation of measures and misreporting of market information. It is also alleged that there are too many redundant intermediaries in the marketing system in developing countries which increase marketing cost and earn high profit margin in the process (Jones, 1972). This kind of malpractices by traders and middlemen make them have excessive profits at the expense of the producers.

2.4 **Theoretical FrameWork for Analysing Marketing Problems**

There are five major approaches to the analysis of marketing problems. These are functional approach, Institutional approach, commodity approach, behavioural system

approach and structure, conduct and performance approach.

However, of relevance to this study are:-

(i) Functional approach

(ii) Institutional approach

(iii) Structure, conduct and performance approach.

2.4.1 **Functional Approach**

The functional approach attempts to understand marketing through classifying the activities which occur in the marketing process by breaking them into functions. The marketing function is referred to as "a major specialised activity performed in accomplishing the marketing process".

Marketing functions have been classified into:-

(i) exchange functions which implies buying and selling

(ii) physical functions which involves transportation, processing and storage and

(iii) facilitating functions which include sorting, grading and standardization, risk bearing and insurance and finally market intelligence (Khols and Downey, 1972).

The marketing functions have been further broken down into "major and subsidiary" functions. The major functions involve assembly and distribution, while subsidiary functions comprise processing, packaging, grading, storage, risk bearing and use of market information.

2.4.2 **Institutional Approach**

This involves various agencies and business structures which perform marketing functions. It tends to answer the question "who does what in marketing?" "who" in this case refers to the agency or Institution and "what" refers to the function that is being performed.

It has been observed that marketing institutions have a "wide variety of business organization which have been developed to operate the marketing machinery (Olukosi and Isitor, 1990).

The Institutional approach considers the nature and character of the various middle men and all other intermediaries in the marketing processes who carry out marketing functions and offer marketing services.

The middle men have been classified into four categories namely merchant middle men, speculative middlemen, Agent middlemen and processors and manufactures.

Of importance to this study are the first three categories of middlemen.

(i) Merchant Middlemen

This group of middlemen take title to and own the goods they handle. They buy and sell for their own gain, they include rural buyers, whole salers and retailers.

(ii) Speculative Middlemen

This group of middlemen buy the products with the aim of selling them at a time when prices rise and therefore bear the

risk associated with any unfavourable market conditions that may arise. They often earn their profits from short run fluctuations in price a process known as arbitrage. Other names given to speculative middlemen are hoarders and spreaders.

(iii) Agent Middlemen

This group of middlemen sell their services to their clients and act as their representatives. They do not normally take title to, and therefore do not own the products they handle. Their rewards are in form of fees and commissions. The agents could be commission Agents or brokers and do not normally bear marketing risk.

2.4.3 **Structure, Conduct and Performance Approach**

The most popular approach to market analysis in a free market economy is the structure, conduct and performance approach.

According to Olukosi and Isitor (1990), "market structure suggests the number, and size and distribution of firms, degree of product differentiation and barrier, to entry". Organizational characteristics of the market determine the relationship among and between buyers and sellers and potential new entrants (Bain, 1968; Abdullahi, 1993). In agricultural product market, number of buyers are usually more than number of sellers.

2.4.3.1 **Market Structure**

Market structure includes all the market participants engaged in particular marketing channel.

There are four factors that determine market structure. These are number and relative size of buyers and sellers, degree of product differentiation, ease of entry and exit of buyers and sellers into and out the market, and status of knowledge about cost, prices and market conditions among the participants in the markets (Okereke and Anthonio, 1988).

(i) <u>The number and relative size of buyers and sellers</u>.

A single large seller, lacking any close competitor and offering a highly desired product to many small competing buyers has the capacity to set a high price.

Similarly a single buyer (monopsonist) is likely to set a buying price lower than if several other buyers were competing with him.

The characteristics most emphasized in market structure are the number of independent buyers and seller; the degree of buyer and seller concentration and the condition of entry into the market.

The variables have, however, been found to be unsuitable in analysing the market structure in developing countries (Ejiga, 1979).

(ii) The Degree of Product Differentiation:

Where products are standardized (homogenous), most buyers feel that the products of one seller is virtually not different from those of other sellers. Where differentiation exists, then it is possible for the firm selling differentiated products to act like small monopolist.

iii) Ease of Entry and Exit of Buyers and Sellers into and out of the Market

Barriers to entry into the market may sometimes exists with protection from the government to those already in the market, for example, the defunct groundnut and cotton board or some products that are patent which can only be sold by firms that hold the license for the period of times given to them.

iv) Status of Knowledge about Cost, Prices and Market Conditions among the Participants in the Market

Sometimes buyers and sellers make more rational market decisions if they have the desired information at their disposal concerning prices in different markets and the quality and quantity of the various products sold in the market.

In various market structures, market power or control increases from pure competition to pure monopoly as seen in Figure 2.1.

Description of the type of Competition

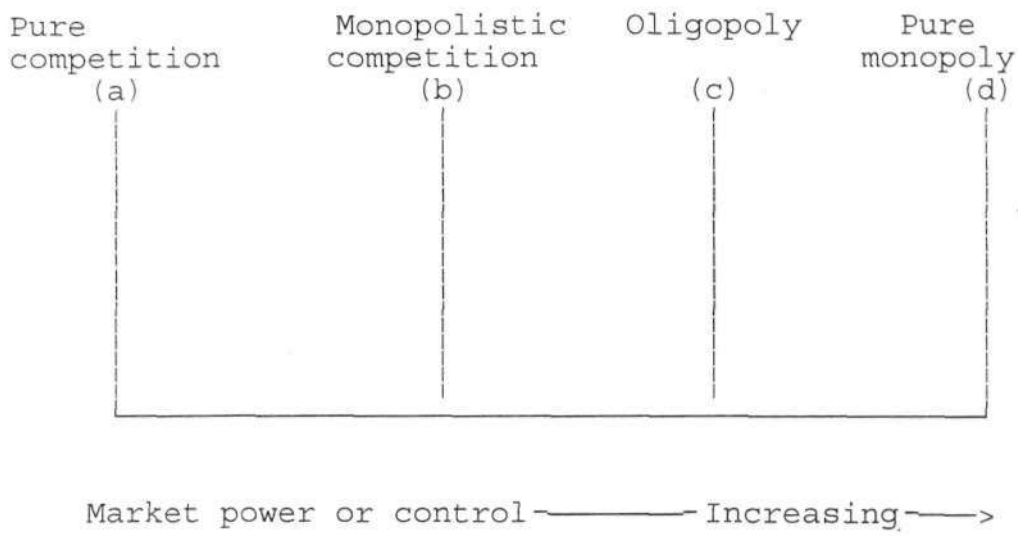
a. Pure Competition: This is a situation where there are many firms on the seller side of the market that produce and or sell a product which is standardized in the eyes of the buyers. There is no barrier to entry or exit.

b. Monopolistic Competition: It is a situation where there are many firms selling differentiated products. It is a state of competition because many sellers are involved in selling differentiated goods that are a little bit different in the eyes of the buyers e.g. Maize and guinea corn, they are all brands of cereals but may differ in taste. Since the product is differentiated the firms normally engage in advertisement and sales promotion. Since the product are differentiated each firm sets its own price and are therefore price makers, not price takers.

c. Oligopolistic Competition: This type of competition involves few buyers and sellers in the market. One market feature of oligopoly market structure is the interdependence of the few buyers and few sellers, such interdependence could lead to collusion. Pricing tends to be a delicate issue in oligopoly market because of the fewness of firms participating in the market. Any move by one firm such as price cut could erode the market share of other rivals and may result in price war. Oligopolistic firms are price makers when they have

differentiated products. Entry into the market is difficult.

d. Pure Monopoly: This is a market structure in which a single firm is selling a unique product. A monopoly is characterized by completely blocked entry conditions and the continued effort to keep the market to itself.



Source: Olukosi and Isitor (1990)

Fig.2.1: Market Structure Showing the Direction of Market Power or Control

2.4.3.2 **Market Conduct**

Market conduct relates to the behaviour of the firms or the decisions that firms make relating to their pricing, output, sales promotion policy, policies that are directed at altering the nature of the product sold and various selling tactics that are employed to achieve specific market results. The most important factors used in assessing market conduct are methods of determining price and output, sales promotion policy, the presence or absence of exclusionary tactics directed against established rivals and potential entrants, (Olukosi and Isitor, 1990).

2.4.3.3 **Market Performance**

Market performance is the end result of market adjustments engaged in by buyers and sellers. It includes returns to capital whether excessively high or low, whether all potential economies of scale of the industry are being exploited and whether prices are optimum (Bain, 1968).

2.5 **Marketing Channels**

This is the path of product as it moves from the producer to the final consumer. Marketing channels are important in evaluating marketing system because they indicate how the various participants are organized to accomplish the movement of a product from the producer to the final consumer.

There are two types of marketing channels.

i. Centralized channel and

ii. Decentralized channel.

A centralized marketing channel is one in which the farmers products are brought together in larger central and terminal markets where they are purchased by the processors or wholesalers from commission men and brokers who act as the farmers' selling agents. A decentralized channel, on the other hand, is one that does not use such established market facilities; rather, whole-salers and processors purchase directly from the farmers. The marketing channel for agricultural products in Nigeria is mainly the decentralized type.

2.6 **Marketing Margin**

Marketing margin is the difference in the price between what the farmer (producer) receives for a certain product and the amount the consumer pays for an equivalent amount of that product. It includes the costs and profits of all middlemen including the transportation costs (Mortenson, 1977). Since marketing margin is the difference between the price paid by consumers and that received by producers, the marketing margin differs from one product to another because the marketing services needed such as processing, transportation, bulkiness, delicacy in handling and so forth differs (Olukosi and Isitor, 1990).

Products that need to be processed into different forms as desired by consumers usually attract higher marketing margins.

Marketing of perishables such as a fruits and vegetables is usually more costly than marketing of non perishables because of expensive handling which may require expensive refrigerators to transport it. Seasonal crop like groundnut which is harvested once in a season may require longer storage leading to greater storage and handling costs. Marketing margin is represented by equation:

$$\text{Marketing Margin} = \frac{\text{Selling price - supply price X 100}}{\text{selling price}}$$

where selling price is retail price and supply price is the farm level or producer prices.

2.7 **Efficiency Definition and Measurement**

Marketing efficiency can be defined as maximization of the ratio of output to input.

There are two types of marketing efficiency namely: Operational or technical efficiency and pricing efficiency. Operational or technical efficiency measures the productivity of performing marketing services e.g. sales per worker-hour (output per man-hour).

Pricing efficiency on the other hand measures physical input - output relationships, for example, how effectively

prices reflect the costs of moving the outputs through the marketing system. The prices that consumers pay for goods delivered should adequately reflect all marketing and production costs. The efficiency concepts measures the ratio of benefits to costs.

The formular for measuring marketing efficiency is

$$M.E. = \frac{\text{Value added by marketing X 100}}{\text{cost of marketing services}}$$

The higher the efficiency ratio, the higher is the marketing efficiency. The marketing efficiency for two or more markets can be compared by comparing their individual marketing efficiency ratios.

2.8 **Marketing Costs**

Marketing costs are the actual expenses incurred in the performance of the marketing functions as a commodity moves from the farm to the ultimate consumers. It includes the cost of transportation and handling, marketing charges, cost of assembling, processing, distribution, cost of packaging, sales promotion and advertisement and other costs such as taxes, levies and excise duties.

Marketing costs consists of fixed and variable costs.

Fixed costs are costs incurred irrespective of distance covered e.g. loading and off loading charges.

Variable cost are costs incurred in moving products from producing to consuming areas. Charges depend on the distance

covered.

Finally, the tools of analysis used by authors in the relevant literatures reviewed were adopted for the analysis of data discussed in this thesis. Prominent among such tools are marketing margin, Ginni coefficient, Gross margin and Marketing efficiency.

References from other authors about marketing problems in other counries were also cited and comparisons made with that of Nigerian markets. For instance, Ghana and Nigeria have common transportation problems due to poor feeder roads and high cost of vehicles/spare parts. These marketing problems are prevalent in Adamawa State which is the study area.

CHAPTER THREE

3.0 RESEARCH METHODOLOGY

3.1 The Study Area

This study was conducted in three local government areas of Adamawa state. The state lies between latitude 10°55′ and 75°28′N and longitude 11°30′ and 13°45′E with a total land area of 42159 square kilometers. The state has a population of 2,124,049 people (1991 provisional census figure) with 233,415 farming families (Adamawa - Agricultural Development Programme Extension Diary, 1995). The state has a tropical climate marked by dry and rainy seasons. The rainy season commences in April/May and ends in October with an average of 759mm rainfall in the North (where the study took place) and 1011mm in the southern part.

The study took place in three out of the sixteen local government area in the state namely Hong, Maiha and Mubi local government areas.

Hong local government lies between latitudes 10°36′ and 10°48′N and longitudes 12°01′ and 12°25′E with a population of 126,272 and farming families of 13,399.

Maiha local government lies between latitudes 10°19′ and 10°36′N and longitudes 12°03′ and 12°31′E with a population of 95,599 with 3,954 farming families.

Mubi local government lies between 10°33′ and 10°48′N and longitudes 12°01′ and 12°42′E with a population of 243,414 with 14,487 farming families.

Choice of the three local government areas as study area was based on:-

i. concentration of farmers involved in groundnut production as a major crop.

ii. has active market opportunities for groundnut.

iii. nearness to the researcher for easy visitation.

3.2 **Study Sample**

Four main groups of respondents were involved in the study sample namely groundnut farmers, wholesalers, retailers and buying agents.

The sample sizes of each category of respondent in each of the three local government area is presented in Table 3.1. The four categories of respondents are those involved in either production, buying or selling of groundnut in the study areas.

Whole salers and retailers operated independently while wholesalers and buying agents worked jointly. Each wholesaler has his buying agent.

A total sample size of one hundred groundnut farmers was obtained from a list of three hundred groundnut contact farmers supplied by Agricultural Development Programme (ADP) offices situated in local government areas of study. Fifty five wholesalers and fifty retailers were sampled out of seventy five regular wholesalers and one hundred and eighty regular retailers obtained from revenue offices in the local government areas of study. Twenty five wholesaler were obtained from each local government area of study. Seventy,

fifty five, fifty five retailers were obtained from Mubi, Hong and Maiha local government areas respectively.

3.3 **Sampling Method**

Five village extension workers (VEWs) from Adamawa Agricultural Development Programme under the supervision of the researcher made a random selection of one hundred out the total list of three hundred contact groundnut farmers supplied by ADP offices in the local government areas of study. The names of one hundred farmers obtained in each of the local government ADP offices were written (one name on each paper) on small sheets of papers and each paper was folded and displayed. The required sample size to be interviewed in each local government area (Table 3.1) was randomly picked and their names listed.

The same system of selection was used to sample fifty five out of seventy five wholesalers.

Systematic method of sampling (names picked at regular intervals of counts) was used in each local government area to select a sample size of fifty retailers from the list of one hundred and eighty retailers.

3.4 **Sources of Data Collection**

Primary data were collected directly from the respondents through direct interviews and questionnaire. There were also secondary data obtained from Ministry of Agriculture, Agricultural Development Programmes and Libraries.

Table 3.1: Sample size by Local Government Area

LGA	Groundnut farmers	Wholesalers	Retailers	Buying agents
Hong	35	20	20	20
Mubi	35	20	15	20
Maiha	30	15	15	15
Total	100	55	50	55

Source: Survey Data, 1997.

3.5 **Types of Data Collection**

Data were collected on the following.

3.5.1 **Production**

i. Types of inputs used in groundnut production
ii. Sources of inputs (whether purchased or from stock)
iii. Sources of finance (loans or personal savings)
iv. Quantity of outputs realised from production per hectare.
v. Quantity of inputs used in production per hectare.

3.5.2 **Marketing**

i. Processing activities
ii. Producer price in naira per tonne of groundnut
iii. Storage costs in naira per tonne of groundnut
iv. Transportation costs per tonne of groundnut.
v. Quantity of purchases in tonnes.
vi. Quantity of sales in tonnes
vii. Market charges or levies by local government authorities.

3.6 **Analytical Tools**

Three analytical tools were employed in this study namely:

i. Simple descriptive statistics
ii. Gross margin and marketing margin
iii. Gini coefficient

3.6.1 Simple Descriptive Statistics

Analytical tools used under this technique include percentages, means, range and frequency distribution.

3.6.2 Techniques Used for Measuring Farmers Profitability and Market Performance

i. Gross Margin

Gross margin is a useful tool of analysis of profitability of farm enterprise, when fixed cost is assumed to be negligible. The limitation of the tool is that while it shows enterprise profitability, it does not give the point where profits are maximized.

The gross margin is defined as:

GM = GI - TVC; where

GM = gross margin

GI = gross income

TVC = total variable cost

This tool was used to achieve objective number one.

ii. Marketing Margin

Marketing margin shows the fraction of the consumers expenditure on a commodity that is recieved by the producer and each of the marketing agents. It allows comparison between the benefits recieved by each of the market participants in relation to their costs.

This technique was used to determine the benefit or profit received by both the retailers and wholesalers and was

used to determine marketing margin in objective number four.

The marketing margin is expressed in percentage and is given by:-

$$M.M = \frac{SP - CP}{SP} \times 100$$

SP = selling price (retail price)

CP = Cost price.

iii. Marketing Efficiency

Marketing efficiency can be defined as the maximization of ratio of output to input. In monetary terms, the efficiency ratio becomes a ratio of costs to benefits.

The formular for measuring marketing efficiency is

$$M.E = \frac{b - a}{c} \times 100$$

where

M.E = marketing efficiency

b = average selling price per tonne (obtained by dividing total sales or value in naira by the number of tonnes sold).

a = average purchase price per tonne (also obtained by dividing total amount spent in purchase by the number of tonnes purchased)

c = average cost of marketing one tonne (which is summation of storage cost, transport cost, local government revenue charge and commission agent charge all per tonne)

The equation $M.E = \frac{b - a}{c} \times 100$ can be expressed:

$$M.E = \frac{\text{value added by marketing}}{\text{cost of marketing services}} \times 100$$

This gives coefficient of marketing efficiency.

This technique was used to compare the coefficient of marketing efficiency of one tonne of groundnut in each of the three local government areas studied. This technique was used to achieve marketing efficiency in objective number four.

3.6.3 **Techniques for Measuring Market Structure**

The Gini coefficient along with Lorenz curve were used to measure the level of buyer and seller concentration in the market in order to determine the degree of competition or monopoly in the market.

Since the determination of market structure requires the involvement of a larger number of market participants than sample from a single market can provide, this research intended to use the three local government area as a unit of study area. The sample of wholesalers and retailers from each local government area of study were considered as representative samples of market participants in the study areas to form a larger sample size. The sample size of fifty five wholesalers and fifty retailers could reflect a better picture of market behaviour in the study area in particular and the state in general than that from a single market.

The Gini coefficient is given by:

G = 1-ΣXY where

G = Gini coefficient

X = percentage of sellers per period of study

Y = cumulative percentage of the sellers sales per period of study.

Σ = summation sign.

G has a value ranging from 0 to 1 expressing the extent to which market is concentrated.

G = 0 when there is perfect equality in the size of distribution of buyers and sellers.

G = 1 when there is perfect monopoly in the market. This tool was used to achieve objective number three.

3.7 **Limitation of the Study**

i. Data for this study were obtained mainly through interviews. This means that reliance on the data is highly determined by respondents memory recall abilities as some of them did not keep adequate records of their business activities.

ii. The accuracy of the information supplied by some respondents also largely depended on their honesty and willingness to reveal sensitive information about their businesses such as number of bags obtained, actual prices per bag and so forth.

CHAPTER FOUR

4.0 RESULTS AND DISCUSSION

4.1 Profitability of Groundnut Production

Groundnut, one of the earlier most important cash crops in the Nigerian economy and one of the country's major sources of foreign exchange earners is being produced by mostly small scale farmers in the rural areas of the country.

With the recent effort by the federal government of Nigeria to restructure and diversify the productive base of the economy in order to reduce dependence on the oil sector and on imports, groundnut production may restore its past glory.

Since groundnut is regarded more as a cash crop than food crop by a groundnut farmer, this research attempted to find out the profitability of the crop so as to establish the justification for the continued production of the crop by the farmer.

The more the profitability level of the crop, the more likely farmers are encouraged to increase production. The profitability level was estimated as the difference between gross income and total variable costs of production per hectare.

Gross income was estimated as yield per hectare in kilogrammes times unit price in naira while total variable costs is the sum of total costs of production per hectare which included land preparation, planting,fertilization,weeding and so

forth.

Table 4.1 shows the average cost of production in naira per hectare of groundnut.

The variable cost of production presented in the table does not show seed which is an important input in the production of groundnut. This was because most farmers interviewed claimed that they used seeds from their stock and did not measure it before planting.

Transport and processing costs have been considered as variable costs because these are part of the costs a farmer incurred before presenting a bag of shelled groundnut to a merchant in the market.

The data in Table 4.1 also show that labour is more scarce in Maiha and Mubi local government areas than in Hong local government area which led to more charges for land preparation, planting, weeding and harvesting.

Transport fares paid by farmers in both Mubi and Maiha local government areas were more than that paid by farmers in Hong local government area because of bad rural feeder roads in both Mubi and Maiha local government areas.

Average yield of groundnut obtained per hectare was expressed in both bags and kilogrammes Table 4.2. A standard bag used in the areas contained an average of 46 mudus and a mudu which was commonly used has an average weight of 2.40 kilogrammes. Hong local government had low yield per hectare probably because the farmers under utilized some of the vital inputs in production such as fertilizer and herbicides.

Table 4.1: Average variable cost of production in naira per hectare by local government areas.

Activities	Mubi	Hong	Maiha
Land preparation	1000.00	700.00	1181.00
Planting	400.00	350.00	500.00
Fertilizer	878.00	750.00	850.00
Weeding	1800.00	1300.00	2000.00
Herbicides	2400.00	756.00	2450.00
Harvesting	800.00	565.00	1000.00
Transport	455.00	356.00	570.00
Processing (shelling)	390.00	450.00	368.66
Total	8123.00	5227.50	8919.66

Source: Survey Data, 1997.

Table 4.2: Average yield of groundnut per hectare by local government areas.

LGA	Bags	Kilogrammes
Mubi	9.52	1051.01
Hong	8.68	958.27
Maiha	10.10	1115.04

Source: Survey Data, 1997.

Average producer prices per kilogramme in all the local government areas were calculated by dividing the producer prices per bag by the number of kilogrammes contained in the bag. This was because groundnut was sold in bags rather than in kilogrammes.

Hong local government was found to offer the least price per kilogramme and Mubi had the highest as presented in Table 4.3. The average producer price for the three local government areas is ₦20.06 per kilogramme.

Average gross margin per hectare of groundnut computed by local government areas between 1993-1995 shows that there is reasonable level of profit to justify the continued existence of farmers in the local government areas concerned to remain in groundnut production. Mubi has the highest average gross margin per hectare with ₦14,096.72 as its gross margin while Hong has the least with ₦13,005.31 as its own gross margin. The average gross margin for the three local government areas stood at ₦13,499.57 as presented in Table 4.4. On the average, profit level stood at 64.52 percent while cost incurred amounted to only 35.48 percent of the gross income.

4.2 Past and Present System of Groundnut Marketing in Adamawa State.

This study considered the system of marketing that existed before the introduction of Structural Adjustment Programme (SAP) and the abolition of groundnut marketing board. It further attempted to find out the nature of groundnut marketing under the present economic system in Adamawa state.

Table 4.3: Average prices per kilogramme of groundnut in naira by local government.

LGA	Producer Price/Kg
Mubi	21.14
Hong	19.02
Maiha	20.01
Average	20.06

Source: Survey Data, 1997.

Table 4.4: Average gross margin per hectare of groundnut by local government areas between 1993 - 1995

LGA	Average Total Variable Cost (₦)	Average Gross Income (₦)	Average Gross Margin (₦)
Mubi	8123.00	22219.72	14096.72
Hong	5227.50	18232.81	13005.31
Maiha	8919.66	22316.30	13396.64
Average	7423.37	20922.94	13499.57

Source: Survey Data, 1997.

4.2.1 Past System of Groundnut Marketing

Before the inception of Structural Adjustment Programme (SAP), the main participants in groundnut marketing were farmers who were producers as well as sellers and license buying agents (LBAs) and groundnut board as buyers.

The license buying agents were licensed by the board to undertake the actual procurement and internal movement of groundnut (Njoku, 1981).

They were responsible for purchasing the produce from the farmers at official prices. They were also responsible for assembling, grading, packaging and transporting the produce to designated points. In return, they were paid a fixed fee per tonne of the produce they purchased.

The license buying agents were the only legally authorized buyers for the board. They purchased groundnut at buying stations at official prices after inspection of the groundnut in accordance with produce inspection laws and bagged to standard weight. The board also financed all purchases and arranged for delivery to the depots, it had also monopoly of exports.

Since prices were uniform in this system of marketing, there was minimum hoarding by farmers, and other selling agents who served local consumers.

4.2.2 **Present System of Marketing**

The main participants in the present system of groundnut marketing are the farmers, who are producers as well as sellers, buying agents and merchants (wholesalers and retailers) as both buyers and sellers while consumers as sole buyers. The present system of marketing is not restricted to authorized individuals or bodies but is open and prices are determined by marketing forces of supply and demand.

Anybody who has the means can get into the groundnut business. It is characterised by large numbers of buying agents and middle men.

This study found that groundnut merchants employed the services of buying agents otherwise known as commission agents to source and purchase groundnut from various villages of the farming rural areas.

The agents were given money to purchase, took charge of handling and transported it to their factor's stores.

The agents sometimes employed sub-agents to assist them in carrying out their assignments. The sub-agents are those that have not yet won enough confidence and trust as to be fully employed by the merchants. These buying agents received a commission of between ₦25-₦50 per 100 kg bag bought out of which they gave between ₦5-₦10 per bag to the sub-agents.

Other agents found in the present system of marketing were the "brokers" who earned their commission through locating groundnut sellers and helping them to enter into

contract with the buyers. They normally received their commission from both sellers and buyers and did not physically handle the product.

With the absence of barrier to entry into this system of market, any merchant can purchase and export the commodity.

Hoarding by both farmers and merchants is a regular practice in this system of marketing because of price differentials over both space and time.

4.2.3 Marketing Channels for Groundnut Marketing in Adamawa State in Both the Pre SAP and Post SAP Periods.

Agricultural marketing channels describe the movement and stages of transfer of farm produce from the farmers to the final consumers. Marketing channels is useful in understanding the marketing system and the relationship of marketing agencies, sources of supply and outlets to each other.

Marketing channel in the pre-SAP showed that apart from the marketing board purchases and sales which had its destination overseas through exports, there were some local dealers that supplied local consumers at home, Fig. 4.1. There were local wholesalers who also purchased their groundnut from some farmers and supplied retailers who in turn supplied both local processors (who processed into oil and cake) and local consumers.

Marketing channel after structural adjustment programme

(i.e after marketing board) is a bit more complicated. Three categories of buyers, namely, wholesalers, buying agents and retailers had direct link with the farmer. Buying agents are employees of the whole salers and indicated by broken lines. Local processors could get their supplies from both buying agents and retailers while local consumers had their own supplies from both retailers and local processors as presented in Figure 4.2.

Buying agents were understood during the study to bear responsibility in case of losses of the groundnut purchased by them while still in their possession.

The buying agents also sold some of the groundnut purchased for their clients (in their absence) to local processors and made some profits. They would either repurchase from farmers at lower prices for their clients or return part of the balance of cash to the clients.

4.3 Market Structure in the Present System of Marketing in Hong, Maiha and Mubi Local Government Areas of Adamawa State.

Market structure can be defined as those characteristics of the organisations of a market which seem to influence the nature of competition and pricing within the market. It tends to consider whether the number of sellers selling a product is large and are of equal sizes or dominated by small groups. It is also concerned with whether entry for new firms into the market is easy or difficult and whether purchases of the product is in a competitive manner or not.

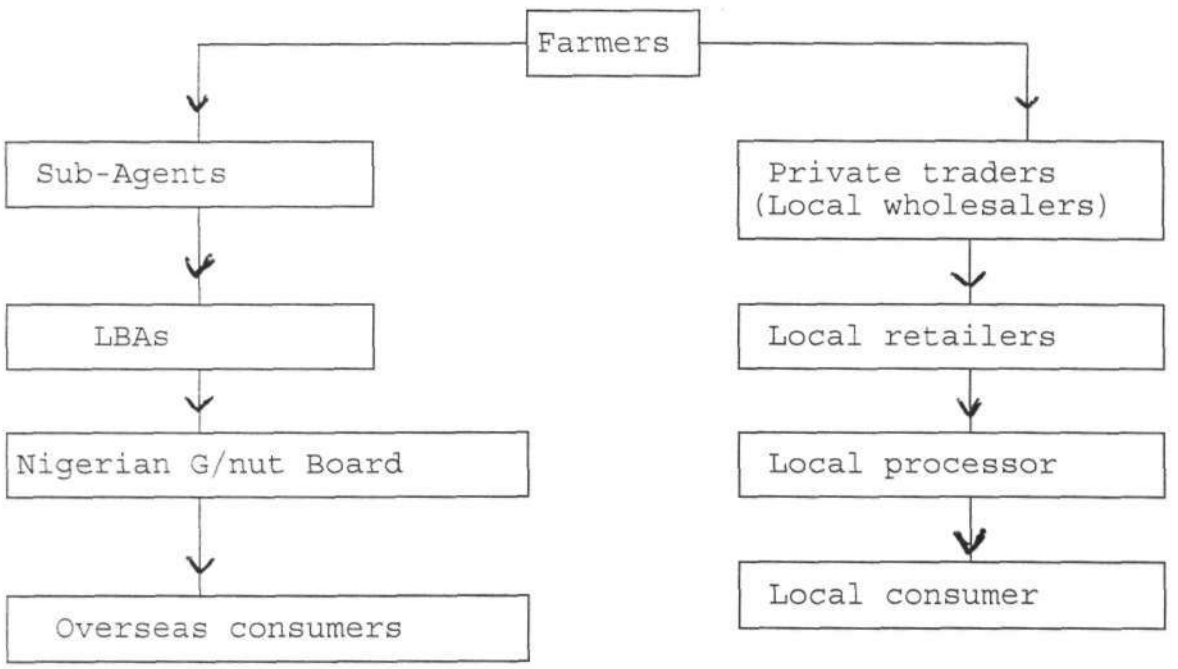


Fig. 4.1: Marketing channel for groundnut in Adamawa State in the pre-SAP period.

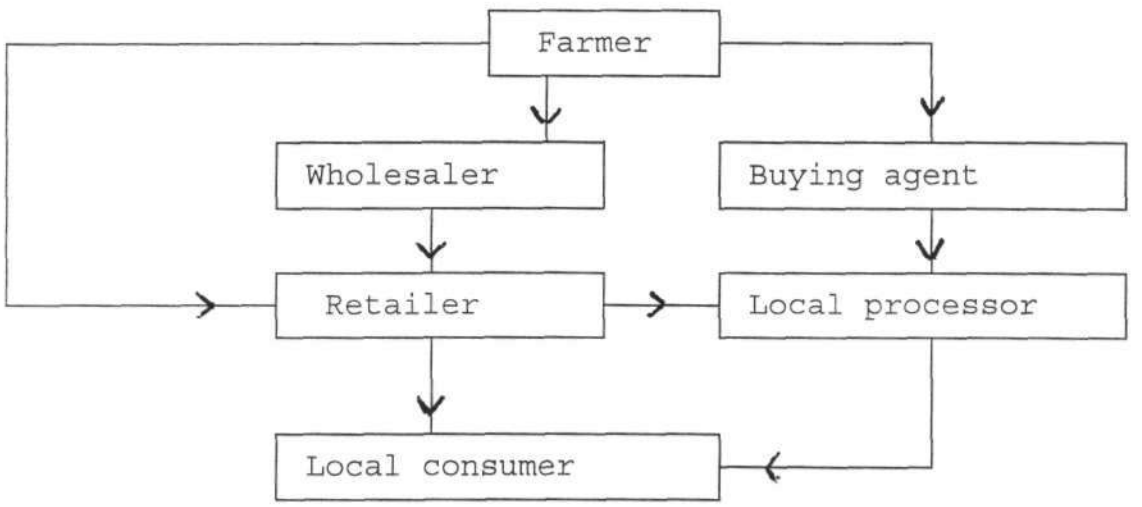


Fig. 4.2: Marketing channel for groundnut in Adamawa State in the post SAP period.

In this study, the following factors were considered important in determining the market structure.

i. the number and relative size of sellers
ii. the degree of product differentiation
iii. the ease of entry and exit of sellers and buyers into and out of the market
iv. status of knowledge about costs, prices and market conditions among participants in the market.

4.3.1 **Number and Relative Size of Buyers and Sellers.**

Observation during the study indicated that there were large numbers of sellers and buyers for both whole-sale and retail sales. Many wholesalers were seen displaying their groundnut in sacks and retailers exhibited theirs in open containers for sale. Many buyers were also seen bargaining with the groundnut merchants for the purchase of the commodity.

4.3.2 **Degree of Product Differentiation**

This study confirmed that groundnut was considered homogeneous in the eyes of buyers.

Most buyers felt that the product of one seller was virtually not different from those of other sellers except for slight differences in size and colour which was due to differences in varieties of the crop.

Due to the homogeneity of the product, both wholesalers

and retailers solicited for buyers' patronage by calling their attention to the sacks of groundnut stacked in the stalls (in case of wholesalers) or groundnut exhibited in open containers (in case of retailers).

4.3.3 Ease of Entry and Exit of Sellers and Buyers into and out of the Market

There was relative freedom of entry into and out of the market. There was no monetary barrier to becoming a groundnut seller as some wholesalers interviewed claimed that, they started the groundnut business with a capital of as low as ₦300.00 and have steadily risen to become wholesalers. There were enough stalls for wholesalers and enough open spaces for retailers. There was no legal restriction by government on the sale of groundnut. Buyers were free to purchase as much quantities as they could afford.

Any seller could enter or leave the market as he or she so wished.

4.3.4 Status of Knowledge About Costs, Prices and Market Conditions Among Participants in the Market.

This refers to the information available to buyers and sellers that enables them to take decisions in the market environment in which they operate.

This study has found that price information had been speculative as prices depended very much on supply and demand.

The study found out that the true market price was only known on the market day which was normally determined by number of visitors (buyers) from neighbouring states such as Borno State and there was no guarantee that the next market day would carry the same price. This meant that farmers and traders were left in doubt as to how much they expected from their produce and stock, which some of them said affected their planning.

4.3.5 **Analysis of Market Structure**

The analysis of market structure is aimed at determining the level of seller concentration in both the wholesale and retail markets for the three local government areas of study in particular and the state in general. Since the determination of market structure involves many buyers and sellers than sample from a single market can provide, sample sizes of whole salers and retailers from each of the three local government areas served as representative sample for the three local government areas of study (now regarded as a unit of study area). The larger sample size formed from the representative samples would give a meaningful conclusion about the level of concentration of wholesalers and retailers in the study area, which gives a picture about nature of market structure in Adamawa State.

The average quarterly sales of groundnut by both wholesalers and retailers were found and the sales range

obtained. The sales range of retailers were obtained by listing the average number of bags each of the 50 retailers sold in a quarter in all the local government areas studied. The smallest was found to be 20 bags and the highest 100 bags. Eight classes of retailers were obtained by using class interval of 10 bags. Frequency distribution of retailers for each range and each class was obtained as presented in Table 4.5. The same method was adopted to determine sales range of 55 wholesalers whose least average of bags sold in a quarter was 40 and highest 262.

Eight classes were also formed with class interval of 30 bags as presented in Table 4.6. Percentages of both wholesalers and retailers were found for each class and their cumulative percentages as presented in both Tables 4.5 and 4.6.

The value of bags of groundnut in Naira for each range and each class interval for retailers were quantified by multiplying average number of bags times average price per bag (₦3646.37) for both lower and upper class limits of each class intervals. This gives sales range for retailers and is presented in Table 4.7. The total value of sales for retailers were obtained by summing up total sales in each range for each class intervals as presented in Table 4.8. The Gini coefficient which determines the level of seller concentration is computed by finding the sum of the product of

Table 4.5: Sales range in bags of groundnut by retailers

Range	No of retailers	% of retailers	Cumulative %
0 - 19	0	0	0
20 - 30	13	26.00	26.00
31 - 40	8	16.00	42.00
41 - 50	9	18.00	60.00
51 - 60	11	22.00	82.00
61 - 70	4	8.00	90.00
71 - 80	2	4.00	94.00
81 - 90	1	2.00	96.00
91 -100	2	4.00	100.00
Total	50	100.00	

Source: Survey Data, 1997.

Table 4.6: Sales range in bags of groundnut by wholesalers

Range	No of wholesalers	% of wholesalers	Cumulative %
0 - 39	0	0	0
40 - 70	17	30.90	30.90
71 -100	11	20.00	50.90
101-130	7	12.73	63.63
131-160	3	5.46	69.09
161-190	4	7.27	76.36
191-220	6	10.90	87.26
221-250	3	5.46	92.72
250-280	4	7.28	100.00
Total	55	100.00	

Source: Survey Data, 1997.

Table 4.7: Distribution of quarterly sales range of groundnut by retailers in Hong, Maiha and Mubi local government areas between 1993-1995

Sales Range (₦)	No of retailers	% of retailers (X)	Cumulative %
0-69281.03	0	0	0
72927-109391	13	26.00	26.00
113037-145854	8	16.00	42.00
149501-182318	9	18.00	60.00
185964-218782	11	22.00	82.00
222428-255246	4	8.00	90.00
258892-291710	2	4.00	94.00
295355-328173	1	2.00	96.00
331819-364637	2	4.00	100.00
Total	50	100.00	

Source: Survey Data, 1997.

Table 4.8: Total sales of groundnut in each range by retailers

Total Value of sales(₦)	% of total sales	Cumulative % (Y)	ΣXY
1236119.43	14.46	14.46	0.03760
1035569.08	12.11	26.57	0.04251
1513243.55	17.70	44.27	0.07970
2213346.59	25.88	70.15	0.15433
969934.42	11.34	81.49	0.06520
550601.87	6.44	87.93	0.03520
320880.56	3.75	91.68	0.01834
711042.15	8.32	100.00	0.04000
8550737.65	100.00		0.47288

Source: Survey Data, 1997.

Key: ΣXY = Summation of Product of (X) and (Y) columns in Percentages.

G = I - ΣXY = 0.52712

the percentage of sellers and cumulative percentage of their sales revenue (represented by ΣXY) and subtracting it form one. The difference represents Gini coefficient. A Gini coefficient of near zero implies near equality in the distribution of sales and near unity implies higher degree of inequality and hence higher concentration. The Gini coefficient of retailers was found to be 0.527 which implies inequality in the distribution of sales and hence higher concentration (domination of sales by small group of sellers). The mean value of quarterly sales by retailers was found to be ₦171,014.75.

In the case of wholesalers, the average price in Naira per bag of groundnut was ₦3243.04 which was multiplied by number of bags in both lower and upper class limits of each class interval to give sales range for whole-salers as presented in Table 4.9. The total value of sales for wholesalers were also obtained by summing up total sales in each range for each class interval as presented in Table 4.10. The Gini coefficient for wholesalers was found to be 0.586 which implies higher degree of inequality and higher concentration than that of retailers with 0.527. This means that domination by small groups of wholesalers over the majority of wholesalers is higher in wholesale than in retail market.

Table 4.9: Distribution of quarterly sales range of groundnut by wholesalers in Hong, Maiha and Mubi local government areas.

Sales Range (₦)	No of wholesaler	% of wholesalers (X)	Cumulative %
0-126478.56	0	0	0
129721-227013	17	30.90	30.90
230255-324304	11	20.00	50.90
327547-421595	7	12.73	63.63
424838-518886	3	5.46	69.09
522129-616178	4	7.27	76.36
619420-713469	6	10.91	87.27
716711-810760	3	5.46	92.73
814003-908051	4	7.27	100.00
	55	100.00	

Source: Survey Data, 1997.

Table 4.10: Total sales of groundnut in each range by wholesalers.

Total Value of sales(₦)	% of total sales	Cumulative % (Y)	ΣXY
30646772.80	14.02	14.02	0.04332
2927222.08	13.38	27.40	0.05480
2574973.76	11.78	39.18	0.04988
1423694.56	6.51	45.69	0.02495
2292829.28	10.49	56.18	0.04084
3930564.48	17.99	74.17	0.08092
2305801.44	10.55	84.72	0.04626
3340331.20	15.28	100.00	0.07270
21858089.60	100.00		0.41367

Source: Survey Data, 1997.

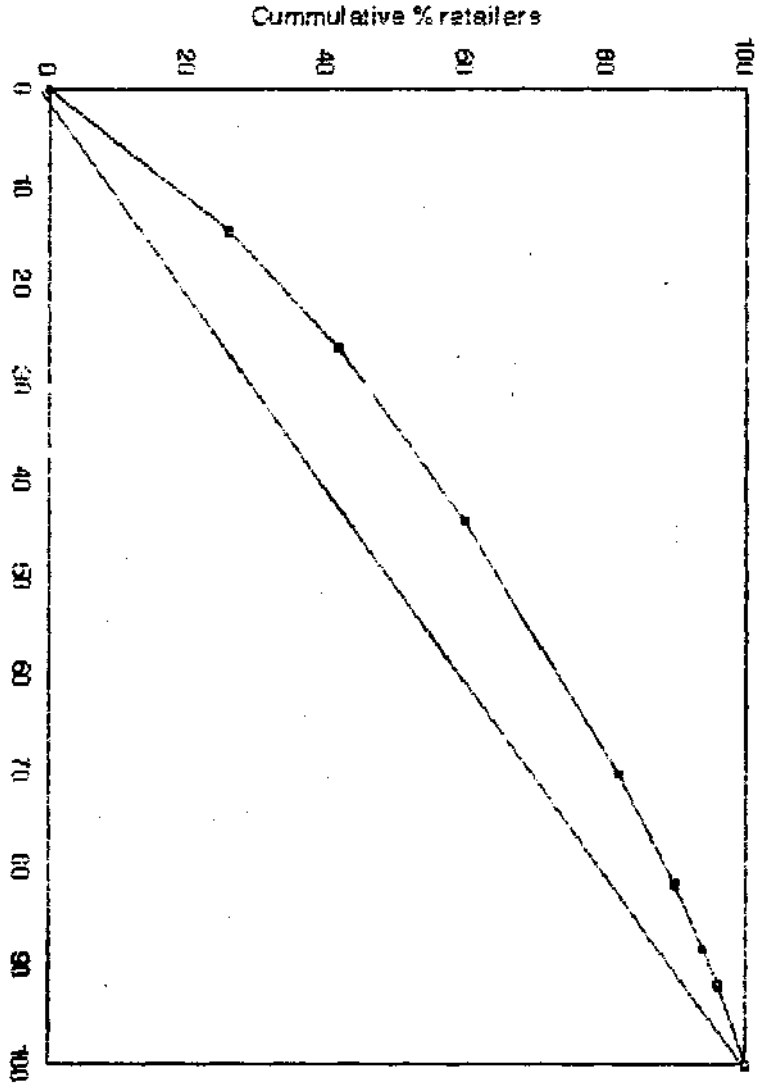
Key: ΣXY = Summation of Product of (X) and (Y) columns in Percentages.

G = I - ΣXY = 0.58633

In the retail market Tables 4.7 and 4.8, 60 percent of retailers found in the first three classes accounted for only 44.27 percent of total sales while the remaining 40 percent of retailers accounted for 55.73 percent of the total sales. Also for the wholesale market Tables 4.9 and 4.10. 51 percent of wholesalers found in the first two classes accounted for only 27.40 percent of the total sales while the remaining 49 percent of wholesalers accounted for upto 72.60 percent of the total sales. These show that there is more concentration in the wholesale market than in the retail market.

Lorenz curve: Lorenz curve also explains the level of concentration in the market. Although the Lorenz curve presents a much more distinct picture visually, it is not a precise measure of concentration because it only determines the level of concentration by the distance of the curve away from the 45° line.

However, when there is perfect equality of size distribution of sellers in the market, the curve coincides with the 45° line. The farther away the curve from the 45° line the greater is the level of concentration in the market. The Lorenz curve was obtained by plotting the cumulative percentage of each category of sellers arranged in order from the smallest to the largest, against the cumulative percentage of their sales.



Dig. 4.3: Lorenz Curve showing inequalities in the distribution of retailers' sales

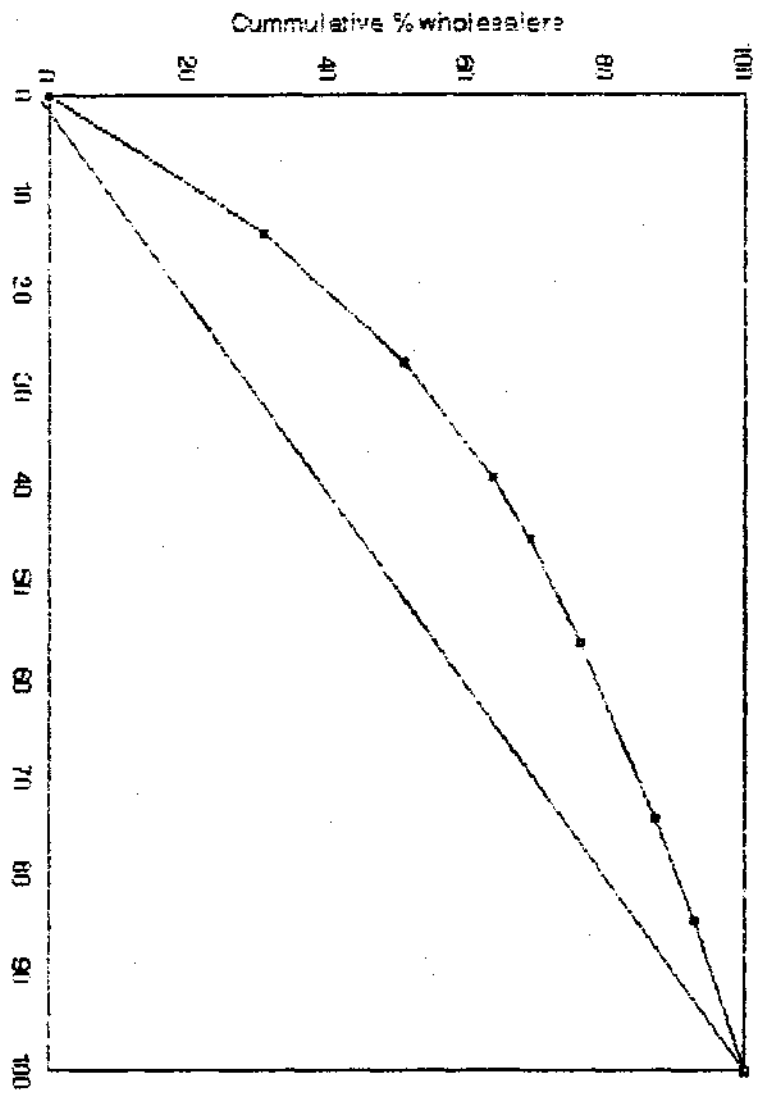


Fig. 4.4: Lorenz Curve showing inequalities in the distribution of wholesalers' sales

4.4 Marketing Margin and Efficiency for Mubi, Hong and Maiha Local Government Areas

4.4.1 Marketing Margin

Marketing margin is the difference between the prices paid by consumer for a certain product and that received by the producer for an equivalent amount of that product at different stages of marketing system. Since marketing involves an element of time, the difference between the price prevailing at the time of first purchase and the price prevailing at the time of last sale of the product would provide a proper basis for the measurement of marketing margin.

The marketing margin includes costs and profits of all middle-men participating in the market. All the marketing costs (storage, commission agent, transport and local government charges) were incurred by wholesalers as retailers bought groundnut in bits, at most a bag at a time and exhibited it in open container in the same market. The summary of the quarterly average marketing costs and prices received by market participants per tonne of groundnut for each of the local government areas between 1993-1995 is presented in Table 4.11. The retailers were found to have more patronage as low income earners could buy smaller quantities in mudus for their daily consumption while wholesalers preferred to sell in bags.

Maiha and Mubi markets are closer to the Cameroun border where smuggling of the commodity is highest, both foreign and indigenous marketers converged and competed for the commodity so prices per tonne in the areas were found to be higher than in Hong local government that is far away from the border.

4.4.2 **Size of Marketing Margin**

The magnitude of "marketing margin" or the "price spread" for each of the local government areas were found to be low. This is probably because of the low level of marketing functions that were performed as the product passed through the marketing system.

The product attracted low marketing margin probably because the product did not need to be processed into different forms before it was finally purchased by consumer. The more work that must be done in changing the form of a product and providing services to satisfy the consumer, the greater the marketing charges will be. Table 4.12 (p.65) shows that the farmer received an average of 60.75 percent of what the final consumer paid, the wholesaler received an average of 25.05 percent of the consumers naira and only 11.07 percent went to the retailer.

This shows that more of the consumer's Naira went to the farmer because less services were performed in marketing the product and therefore lesser marketing costs were involved.

Table 4.11: Quarterly average prices and costs per tonne of groundnut in Naira by local government areas between 1993-1995.

Price/Cost	Hong	Maiha	Mubi
Producer price	19026.80	20013.90	21141.30
Storage cost	150.90	203.30	175.20
Commission agent charge	267.00	471.50	353.70
Transport cost	371.80	511.20	433.20
Local govt. charge	55.00	50.00	70.00
Wholesale price	27470.80	30067.30	30587.90
Retail price	31003.40	33690.50	34392.20

Source: Survey Data, 1997.

Table 4.12: Quarterly average marketing margin per tonne of groundnut in percentage for Hong, Maiha and Mubi local government areas between 1993-1995.

Market Participant	Hong	Maiha	Mubi	Average
Producer share	61.37	59.41	61.47	60.75
Marketing cost	2.73	3.67	3.00	3.13
Wholesaler's share	24.51	26.17	24.47	25.05
Retailers share	11.39	10.75	11.06	11.07
Consumers price	100.00	100.00	100.00	100.00
Market margin	38.63	40.59	38.53	39.25

Source: Survey Data, 1997.

This explains why Hong and Mubi farmers had greater share of the consumer's Naira because their marketing costs were lower than that of Maiha local government area.

4.4.3 Marketing Efficiency for Mubi, Hong and Maiha Local Government Areas Between 1993-1995.

Marketing efficiency is the maximization of the ratio of output to input. Marketing inputs or costs include the resources used in providing marketing services such as the resources used in settling cost of storage, commission agent charges, transportation charges and local government revenue charges.

Marketing output, on the other hand, is a measure of consumer satisfaction which include time, form, place and possession utilities which the consumer derives from marketing the product. It is quantified in terms of the price a consumer is willing to pay in the market for the product with different levels of marketing utilities.

In marketing, consumer satisfaction is met through transportation by having products available at the right place, through storage by having the product at the right time and through processing by having the product in the desired form as demanded by consumer. A consumer is willing to pay more for the product with different levels of marketing utilities.

In the study, groundnut was found to have high market value in its raw and unprocessed form. It did not need to be

processed into different forms to attract high prices. The groundnut did not need to be advertised to customers. This meant that there were no costs such as advertisement and packaging cost and so forth that would have added to marketing costs as is the case with some marketable agricultural commodities such as processed fruit, milk and so forth. Some groundnut merchants revealed during the study that they sometimes sold a bag of groundnut and realised as much as twice the purchase price after just 2-3 months of storage with little or negligible marketing costs incurred.
This shows that marketing cost of groundnut as compared to its market value is not much .

The marketing efficiency per tonne of groundnut was estimated by subtracting the producer price from the retailer price to get the value added and dividing it by cost of marketing services per tonne of groundnut times one hundred. This gives coefficient of marketing efficiency (popularly called marketing efficiency).

Cost of marketing services included price differential over space and time and other official charges. For example, price differentials over space is equal to costs of transportation and overtime is equal to cost of storage.

Table 4.13 shows marketing efficiency per tonne of groundnut for whole sale market. The prices, costs and value added are expressed in Naira while the coefficient of marketing efficiency is in percentage.

Table 4.13: Marketing efficiency per tonne of groundnut for wholesale market.

Cost/price	Hong	Maiha	Mubi	Average
Producer price(₦)	19026.80	20013.90	21141.30	20060.67
Storage cost (₦)	150.90	203.30	175.20	176.47
Commission agent charges(₦)	267.00	471.50	353.70	364.07
Transport charges(₦)	371.80	511.20	433.20	438.73
Local government revenue (₦)	55.00	50.00	70.00	58.33
Wholesale price(₦)	27470.80	30067.30	30587.90	29375.33
Value added(₦)	7599.30	8817.40	8414.50	8277.07
Cost of marketing(₦)	844.70	1236.00	1032.10	1037.60
Marketing efficiency (%)	899.60	713.40	815.28	809.43

Source: Survey Data, 1997.

The marketing efficiency for Hong, Maiha and Mubi, wholesale markets is 899.60, 713.40 and 815.28 percent respectively, Since the higher the efficiency ratio, the higher is the coefficiency of marketing efficiency, Hong market is found to be the most efficient followed by Mubi, and lastly Maiha.

The average marketing efficiency for the three local government areas is 809.43. This means that for every ₦100.00 incurred as marketing cost, the value added to the merchant is ₦809.43. This means that the marketing cost as compared to the benefits of marketing is almost negligible.

Any change in the marketing process which reduces the input cost of accomplishing a particular marketing service without reducing the consumer satisfaction is an improvement in marketing.

On the other, any change in the marketing process which reduces cost and also reduces consumer satisfaction may reduce marketing efficiency.

4.5 Identification and Description of Problems Affecting the New Marketing System as Against Pre-SAP

The problems which affect the new marketing system (which mostly affected farmers as primary seller) are:-

i. Lack of market information

ii. Transportation problems

iii. Storage problems

iv. Lack of standardized measures.

v. Large numbers of middle men and buying agents.

This research paid more attention to the problems of farmers as primary sellers who stayed longer with the products before sales to merchants.

4.5.1 **Lack of Market Information**

Before the abolition of groundnut board in 1986, price of groundnut was announced well in advance and would prevail through out the season. This meant that farmers and traders were not left in doubt as to how much they expected from their produce. These measures created room for effective planning for whatever project needed to be executed by them. After the abolition of the groundnut board, however, price information became speculative as its price depended very much on supply and demand. All buyers and sellers interviewed complained that they were only operating in doubt as the true market price was only known on the market days which was normally determined by number of visitors (buyers) mostly from Borno state.

The more the number of visitors, the higher the market price of groundnut on that market day and there was no guarantee that the next market day would carry the same price. So buying agents that operate between days in the week sometimes gained by buying at relatively lower price than it would obtain the preceeding market day but they could also incur losses.

4.5.2 **Transportation**

Another problem affecting the new marketing system is transportation. With the price differentials over space in the present system of marketing, farmers and traders transported their produce from areas of low demand to areas of high demand to attract better prices for their commodities. Before the abolition of the groundnut board there was not much price difference between seasons or spaces and therefore there was little need to transport the commodities elsewhere.

The sample sizes of 35 farmers each from Mubi and Hong and 30 farmers from Maiha local government areas were interviewed on the mode of transport they employed in transporting their produce from their farms to their homes and subsequently to the market. Their responses are presented in Table 4.14. Transportation by motor vehicles was found to be more common than by other modes of transport.

From the total number of farmers interviewed, it could be deduced that some farmers made use of more than one mode of transport. However, it could be seen that 51.43, 85.71 and 83.33 percent of farmers used motor vehicles to transport their produce to the market in Hong, Mubi and Maiha respectively. Only 8 percent of the total farmers interviewed used animals as means of transporting their commodities to the market.

With an average of 73.00 percent farmers in the areas studied using motor vehicles as a means of transporting their

produce, there is need by the government to maintain the deplorable rural feeder roads and to construct more rural roads to areas without it to ease evacuation of farm produce from rural to urban centres.

4.5.3 **Storage**

Before the abolition of groundnut marketing board, storage of groundnut was mainly carried out by house holds to ensure the continued consumption of the commodity through out the year but not to attract higher prices later since the same price was maintained throughout the season. With the abolition of groundnut board which created price differentials over time, farmers and traders stored their products in order to take advantage of higher prices during the period of scarcity.

This is because consumers are willing to pay more for a product some months after harvest than at harvest time. The distribution of farmers according to length of time they stored their groundnut is presented in Table 4.15. The study shows that upto 90 percent of farmers stored their produce at least for a month before disposing of it, and only 10 percent of farmers disposed their produce immediately after harvest. This shows that farmers also hoard their produce to take advantage of higher prices for their commodities during period of scarcity.

Due to the involvement of farmers in storage, they

encounter some storage problems such as insecurity (theft and fire), damage by pest and inadequate and unconducive storage facilities.

Most of the farmers complained about unconducive place to store their produce. They also complained of poor storage system.

The distribution of farmers according to where they stored their groundnut is presented in Table 4.16. The table shows that a total of 60 percent of farmers stored their produce in bags, 17 percent in granary (rumbu) and 23 percent on bare floor.

This crude method of storage exposed most of them to men of the underworld and storage pests. The storage problems farmers encountered as a result of the crude method of storage is presented in Table 4.17. A total of 35 percent of the farmers incurred losses due to storage pests, 11 percent lost their produce to thieves and fire and 55 percent generally complained of unconducive storage facilities.

4.5.4 **Lack of Standardized Measures**

Before the abolition of the groundnut board, there were standardization of both quality and quantity of the produce. The groundnut was graded to standard weight to check for quantity control and aflatoxin infected and broken nuts

Table 4.14: Mode of transport by farmers

Mode of Transport	Hong	Mubi	Maiha	Total
Motor vehicle	18	30	25	73
Motor cycle	5	10	14	29
Bicycle	12	11	4	27
Animals	1	5	2	8
	36	46	45	137

Source: Survey Data, 1997

Note: Multiple Responses

Table 4.15: Distribution of farmers according to length of time they stored groundnut

Storage period	Hong	Maiha	Mubi	Total	Relative freq. %
No storage	3	4	3	10	10.00
1-3 months	8	6	10	24	24.00
4-6 months	18	17	16	51	51.00
7-9 months	6	3	6	15	15.00
Total	35	30	35	100	

Source: Survey Data, 1997

inspection to check for quality control. This study, however, found that the present system of marketing does not enforce standardization as farmers have the right to sell any type of quality of groundnut depending on the prices paid to them. Where quantity control measures were tried to be effected in some local government areas of the state by introducing standard mudus called "tiya" some traders were found to frustrate such efforts by distorting their measures thus creating more expansion of the mudu so as to create room for cheating the sellers who are mostly illiterate farmers, but use the undistorted while reselling to either retailers or consumers, so most groundnut merchants in the state have been found to operate with two types of measures.

4.5.5 **Large Numbers of Middlemen and Buying Agents**

The present agricultural marketing system encourage the participation of large number of middlemen and buying agents at various types of markets and exchange points where the marketing services of assembly, storage and transportation are performed.

This process is highly dependent upon the structure of production, which is characterized by many widely scattered small farmers who each has small quantities to market. The marketing system is required to assemble these small quantities and transport them to the nearest outlet for sale to urban centres.

Table 4.16: Distribution of farmers according to where they stored their groundnut.

Place of storage	Hong	Mubi	Maiha	Total	Relative freq. %
On bare floor	4	8	11	23	23.00
In granary (rumbu)	8	3	6	17	17.00
In bags	23	19	18	60	60.00
Total	35	30	35	100	100.00

Source: Survey Data, 1997

Table 4.17: Storage problems encountered by farmers

Problems	Hong	Mubi	Maiha	Total	Relative freq. %
Insecurity (theft/fire)	3	5	3	11	11.00
Damage by pest	13	10	12	35	35.00
Unconducive storage facilities	19	15	20	54	54.00
Total	35	30	35	100	100.00

Source: Survey Data, 1997

Buying agents, some of whom went to rural markets to purchase participated in this regard.

Due to the services performed by middle men from the time the produce leaves the farm until they are finally purchased by consumers, costs of services are involved which are transferred on to the consumer which finally brings the consumers' price to an escalated level.

The number of middlemen and their services in the market were minimal before the abolition of groundnut marketing board.

Farmers as primary sellers, however, had mixed feelings about the existence of middlemen in the market. While other farmers regarded their existence in the market as being exploitative and acussed them of beating down the prices of their commodities especially when they are eager to sell their produce or when they are met in their rural market or homes, other regarded their participation in the market as beneficial and yet others felt indifferent about their existence. Some farmers who argued in their favour claimed that, the possibility of exchanging their produce for money at any time they are in need is of immense importance to them. They further argued that the existence of buying agents makes quick disposition of their produce by following them to their rural homes to purchase the produce. Also some villagers who bring their produce to the market are normally assisted by the buying agents by leading the villagers to potential buyers of

their produce, usually their clients. In other words, buying agents made it possible for some illiterate farmers to quickly identify buyers especially for those who might not be conversant with the market or direction of groundnut buyers stalls.

Responses by farmers on the activities of middlemen is presented in Table 4.18. The table shows that a total of 62 percent of farmers regarded the activities of middlemen as being exploitative (who take un-due advantage of their illitracy and poverty to cheat them), 16 percent of them supported their participation and 22 percent felt indifferent about their participation.

Table 4.18: Responses by farmers on the activities of middlemen by local governemt areas

Responses	Hong	Mubi	Maiha	Total	Relative Freq. %
They are exploitative	22	22	18	62	62
They assist in quick disposition	5	4	7	16	16
Indifferent about their existence	8	9	5	22	22
	35	35	30	100	100

Source: Survey Data, 1997.

CHAPTER FIVE

5.0 SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS:

5.1 Summary of Findings.

This chapter presents the summary and conclusions arising from main findings of the study. Recommendations for improvement of the groundnut marketing system are also discussed.

The research attempted to find out the profitability of groundnut production and to establish the justification for the continued existence of some farmers in groundnut production. The profitability level was estimated as the difference between gross income and total variable costs of production. Part of the variable costs such as labour and transport were found to be more expensive in Mubi and Maiha than in Hong local government area.

The gross margin analysis also shows that there was reasonable level of profit to justify the continued existence of farmers in the areas of study to remain in groundnut production. On the average, profit level stood at 64.52 per cent while costs incurred amounted to only 35.48 percent of the gross income.

The study also looked at past and present system of groundnut marketing in Adamawa state. It considered the system of marketing that existed before the introduction of Structural Adjustment Programme that is, before the abolition of groundnut marketing board and after introduction of SAP.

It was found that the main participants in groundnut

marketing before the introduction of SAP were farmers who were producers as well as sellers and license buying agents and groundnut board as buyers. The license buying agents were found to be responsible for purchases, assembling, grading, packaging and transporting to designated points. They were also the only legally authorised buyers. They were paid a fixed fee per tonne of the produce they purchased.

It was also found that the main participants in the present system of groundnut marketing are farmers who are producers as well as sellers, buying agents and merchants as both buyers and sellers and consumers as sole buyers. It was found that the present system of marketing is not restricted to individuals or bodies but open and prices were determined by only marketing forces of supply and demand. The market was also found to be characterized by large numbers of buying agents and middlemen. The buying agents were given money to purchase, took charge of handling and transported to their client factor's store. The buying agents were found to receive between ₦25-₦50 per bag of groundnut they purchased. Other agents found in the present system of marketing were "brokers" who earned their commission through locating groundnut sellers and helping them to enter into contract with the buyers. Their commission usually came from both sellers and buyers. Hoarding was found to be a regular practice in this system of marketing.

Market structure, defined as those characteristics of the

organisation of a market which seem to influence the nature of competition and pricing within the market was considered in this study. It tended to study the size and distribution of sellers, whether entry for new firms is easy or not and whether purchases is in a competitive manner or not.

The groundnut wholesaling and retailing in the market of areas studied was found to have high market concentration of sellers. The Gini coefficient of more than 0.5 in each of the two categories confirmed the high concentration of sellers in the market. Also the Lorenz curve obtained in the study further confirms the high concentration of sellers in the market for both wholesalers and retailers.

Marketing margin which is the difference between the prices paid by consumer for certain product and that received by the producer for an equivalent amount of that product at different stages of marketing system was also investigated. Table 4.12 shows that the farmer received an average of 60.75 percent of what the final consumer paid, the wholesaler received an average of 25.05 percent of the consumer's Naira and only 11.07 percent went to the retailer. This shows that more of the consumer's Naira went to farmer because less service was performed in marketing of the product and therefore less marketing cost involved.

Marketing efficiency is the maximization of the ratio of output to input. It was estimated by subtracting the producer price from the retailer price to get value added and divided

by cost of marketing services times hundred.

The empirical findings show that Hong market was more efficient followed by Mubi and lastly Maiha.

Some problems identified in the present system of marketing were;

(i) lack of market information about the prices and conditions operating in the market. Price information was found to be speculative as the purchase and selling price depended on supply and demand and true market price was known only on market days.

(ii) Transport was another problem identified. With price differentials over space in the system of marketing, farmers transported their produce to high demand areas for higher prices.

Transportation by motor vehicles was found to be more common.

(iii) Storage problems was also identified in this system of marketing. Farmers stored their produce to take advantage of higher prices during period of scarcity. In the process of storing their produce, many farmers incurred losses due to pest, theft and fire.

(iv) Lack of standardized measures has been found to be another problem. There was absence of standardization for both quality and quantity in the present system of marketing. This lack of quality and quantity control had exposed some farmers to exploitation by middlemen who

were found to distort their measuring containers to create expansion of the containers to cheat farmers and other sellers.

(v) Middlemen and buying agents have been found to be in large numbers in the present system of marketing. While some sellers accused them of malpractice, others ruled in their favour and yet others felt indifferent about their existence.

5.2 Conclusion

i. The gross margin analysis shows that there is reasonable level of profit to justify the continued existence of farmers in the areas of study to remain in groundnut production.

ii. It was found that the main participants in groundnut marketing before the introduction of SAP were farmers who were producers as well as sellers and license buying agents and groundnut board as buyers. The license buying agents and the groundnut board were the only legally authorised buyers. The price of groundnut was fixed.

iii. It was found that the main participants in the present system of groundnut marketing are farmers who are producers as well as sellers, buying agents and merchants as both buyers and sellers and consumers as sole buyers. Marketing of groundnut is not restricted to individuals or bodies but is open and prices are determined by marketing forces of supply and demand.

iv. Storage was found to be a regular practice in this system of marketing.

v. The groundnut wholesaling and retailing in the market of areas studied was found to have high market concentration of sellers with Gini coefficient of more than 0.5 in each of the two categories of sellers.

vi. The analysis of the marketing margin shows that more of the consumers Naira went to the farmer because less services were performed in marketing the product and therefore less marketing cost involved.

vii. The marketing efficiency analysis shows that Hong market was more efficient followed by Mubi and lastly Maiha.

viii. Some problems identified in the present system of marketing are those of lack of information about prices and conditions operating in the market, transportation, storage, lack of standardized measures and large number of buying agents and middlemen.

Finally, the identification of problems associated with the present system of marketing and subsequent recommendations that will lead to its improvement, these measures if adapted would form a effective ingredient for formulation of an appropriate agricultural policy.

Agricultural policy is aimed at safe guarding the interest of both producer and consumer. The producer has to be assured of reasonable return for his produce and the consumer too, has to be safeguarded against excessive rise in

prices of commodities. This objective can only be achieved by ensuring that services of market participants are made available at reasonable costs.

5.3 **Recommendations**

(i) With an average of 73 percent of farmers using motor vehicles to transport their produce to the market, there is need for the rehabilitation of some deplorable rural feeder roads to ease transportation.

(ii) Since efficient marketing is dependent on market information, there is need for such information to be made available to both buyers and sellers to help them to evaluate possible alternative marketing channels and to help them understand market potentials for their products.

(iii) Farmers should endeavour to seek for loans from financial institutions to purchase improved storage facilities to reduce enormous losses suffered by them during storage.

(iv) More states and local government areas should be encouraged to introduced standard measures as already practiced by some local government areas. Regular inspection of the standard measures should be made to ensure that the shape of the container is maintained and any defaulter should be brought to book.

(v) The middlemen that are engaged in the distribution of goods and services should ensure that their services are made available at affordable costs.

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APPENDICES

APPENDIX I

7.0

FARMERS QUESTIONNAIRES

A. Production Information

1. For how long have you been growing g/nut?

   (a) 1-5 yrs (b) 5-10 yrs (c) Above 10 yrs

2. Have you been adopting improved techniques?

   (a) Yes (b) No

   (b) If yes, which of the techniques?

   (i) Spacing (ii) Timely weeding (iii) Timely planting

   (iv) Herbicide application (v) Timely fertilizer application (vi) Crop protection (vii) Other (specify)

3. What were your sources of seeds?

   (i) From my own store

   (ii) From the market

   (iii) From government stores

   (iv) Others (specify) .....

4. Did you weigh the seed before planting?

   (a) Yes (b) No

   (b) If yes, how many kilogrammes of seed per hectare did youplant.....

5. Did you use fertilizer?

   (a) Yes (b) No

(b) If yes, what were your sources of fertilizer?

(i) Reserve from last year

(ii) Bought from the open market

(iii) Bought from government stores

(iv) Others (specify) .....

6. What were sources of money you used to finance your farm operations.

(i) Personal savings

(ii) Borrowed from banks

(iii) Borrowed from friends and relations

(iv) Borrowed from g/nut merchants

(v) Others (specify) .....

B. Output, Costs and Prices

1. How many bags of groundnut did you produce in each of the following years? (indicate whether shelled or unshelled)

Year	Qty in bags	
	unshelled	Shelled
1993	---------	-------
1994	---------	------
1995	---------	------

2. What were the approximate sizes of field in the respective years where you produced the g/nut (to the nearest hectare).

Year	Area in (ha)	
1993	---------	-------
1994	---------	------
1995	---------	------

3. How much did you spend on the following farm operations per hectare in the respective years?

Operations	1993	1994	1995
(i) Land clearing ₦	--------	--------	--------
(ii) Land preparation ₦	--------	--------	--------
(iii) Planting ₦	--------	--------	--------
(iv) Weeding ₦	--------	--------	--------
(v) Harvesting ₦	--------	--------	--------
(vi) Transportation ₦	--------	--------	--------

4. How much did you send on inputs in the respective years?

Year	Fert.	Seeds	Herbicides	Insecticides	Other(specify
1993 ₦	-----	-----	----------	----------	----------
1994 ₦	-----	-----	----------	----------	----------
1995 ₦	-----	-----	----------	----------	----------

5. Did you pay for the storage of your groundnut before selling?

(a) Yes **No**

(b) If yes, how much did you pay as cost of storage for the following years?

Year	Cost/year			
	(a)	(b)	(c)	(d)Others(specify)
1993	₦300.00	₦250.00	₦350.00	₦ .....
1994	₦250.00	₦150.00	₦300.00	₦ .....
1995	₦350.00	₦200.00	₦250.00	₦ .....

6. Did you shell your groundnut before selling?

(a) Yes No

If yes, how much did you pay per bag?

Year	Cost/year			
	(a)	(b)	(c)	(d) Others (specify)
1993	₦ 60.00	₦ 70.00	₦ 80.00	₦ .....
1994	₦ 65.00	₦ 75.00	₦ 70.00	₦ .....
1995	₦100.00	₦ 80.00	₦ 60.00	₦ .....

7. In which quarter did you sell your g/nut during the following years? (tick appropriately)

Year	Jan-March	April-June	July-Sept.	Oct.-Dec.
1993	---------	----------	----------	---------
1994	---------	----------	----------	---------
1995	---------	----------	----------	---------

8. What was the average quarterly prices per bag of shelled or unshelled groundnut/ (note D=other specify)

Year 1993	Shelled ₦	Unshelled ₦	Shelled ₦	Unshelled ₦	Shelled ₦	Unshelled ₦	Shelled ₦	Unshelled ₦
Jan-March	800.00	350.00	1000.00	450.00	1500.00	500.00	.....	.....
April-June	1200.00	550.00	1300.00	600.00	1800.00	700.00	.....	.....
July-Sept.	1500.00	700.00	1700.00	750.00	2000.00	800.00	.....	.....
Oct.-Dec.	1000.00	400.00	1200.00	500.00	1400.00	600.00	.....	.....
1994 Jan-March	800.00	350.00	1000.00	450.00	1500.00	500.00	.....	.....
April-June	1200.00	550.00	1300.00	600.00	1800.00	700.00	.....	.....
July-Sept.	1500.00	700.00	1700.00	750.00	2000.00	800.00	.....	.....
Oct.-Dec.	1000.00	400.00	1200.00	500.00	1400.00	600.00	.....	.....
1995 Jan-March	800.00	350.00	1000.00	450.00	1500.00	500.00	.....	.....
April-June	1200.00	550.00	1300.00	600.00	1800.00	700.00	.....	.....
July-Sept.	1500.00	700.00	1700.00	750.00	2000.00	800.00	.....	.....
Oct.-Dec.	1000.00	400.00	1200.00	500.00	1400.00	600.00	.....	.....

C. <u>Other Questions for Farmers</u>

1. Did you store your groundnut after harvest?

(a) Yes No

(b) If yes, how long before sales?

(i) 1-3 months

(ii) 4-6 months

(iii) 7-9 moths

(iv) 10-12 months

2. Where did you store your groundnut?

(i) In bags

(ii) In granary (rumbu)

(iii) On bare floor

(iv) Others (specify) .....

3. What storage problems have you experienced?

(i) Insecurity

(ii) Damage by pests

(iii) Inadequate storage facilities

(iv) None

(v) Others (specify)

4. Where did you sell your groundnut?

(i) Urban market

(ii) Village market

(iii) In the house

(iv) On the farm

(v) Other (specify)

5. What have been your means of transport?

(i) By mortorcycle

(ii) By animals

(iii) By motor vehicles

(iv) By bicycles

(v) Other specify)

6. Have you ever had marketing problems from the buyers?

(a) Yes No

(b) If yes, what type of problem?

APPENDIX II

MERCHANT QUESTIONNAIRES (Wholesaler/Retailers tick appropriately)

A. Purchase and Sales Information

1. For how long have been in the groundnut business?

(i) 1-3 yrs (ii) 4-6 yrs (iii) Above 6 yrs

2. What major operations do you form in the groundnut business?

(i) Purchase (ii) Storage (iii) Transportation

(iv) Others (specify) .....

3. What categories of assistance, if any, did you employ for the purchase of the g/nut?

(i) Buying agents (ii) Full time employees

(iii) My children (iv) None

(v) Other (specify) .....

4. Do you purchase g/nut only when brought to the market or do you follow sellers to othwer destinations?

(b) If to other destinations, where?

(i) Their homes (ii) Their farms

(iii) Local markets (iv) Others (specify).....

5. Do you have your own transport to assist you?

(a) Yes **No**

(b) If yes, what?

(i) Bicycle (ii) Motor cycle

(iii) Motor vehicles (iv) Others (specify) .....

6. Have you ever experienced problems from buying agents?

(a) Yes No

(b) If yes, what types of problem?.....

(c) How did you solve it? .....

7. Who bears the responsibilities in the case of losses (e.g theft, fire etc.) g/nut while still in the possession of your buying agents.

(i) The agent (ii) We share responsibilities

(iii) I forgive him (iv) Others (specify).....

8. How long have you been storing your groundnut beforre selling? (Indicate to the nearest month).

(i) 1-3 months (ii) 4-6 months

(iii) Above 6 months (iv) I do not store before sales

(v) Other (specify) .....

9. What were the sources of money you used to finance your g/nut business?

(i) Personal savings (ii) Loan from the bank

(iii) Loan from friends/relations

(iv) Others (specify) .....

10. What problems have you been facing in your g/nut business?

(i) Low profit (ii) Insufficient g/nut to buy

(iii) Inadequate funds (iv) High transport charges

(v) Others (specify) .....

B. Purchase, Sales and Cost Information

Wholesalers/Retailers (tick appropriately)

1. How many bags of g/nut did you purchase in the last three years? (Indicate total quantities purchased against each quarter).

Year		Jan-March (Qty)	April-June (Qty)	July-Sept (Qty)	Oct-Dec (Qty)
1993	Shelled	---------	----------	---------	-------
	Unshelled	---------	----------	---------	-------
1994	Shelled	---------	----------	---------	-------
	Unshelled	---------	----------	---------	-------
1995	Shelled	---------	----------	---------	-------
	Unshelled	---------	----------	---------	-------

2. What were the average quarterly prices you paid per bag? (Prices in No.8 farmers questionnaires is applicable to the merchant).

3. Did you use commission agents to assist you to buy the groundnut? Yes **No**

(b) If yes, how much did you pay as commission per bag?

	(a)	**(b)**	**(c)**	(d) Others (specify)
1993	₦ 70.00	₦ 40.00	₦ 30.00	₦ .....
1994	₦100.00	₦ 50.00	₦ 40.00	₦ .....
1995	₦ 80.00	₦ 45.00	₦ 40.00	₦ .....

4. Did you store your g/nut before selling?

Yes No

If yes, what were the total annual costs incurred including chemicals, security charges and store charges?

	(a)	(b)	(c)	(d) Others (specify)
1993	₦150.00	₦200.00	₦250.00	₦ .....
1994	₦300.00	₦250.00	₦150.00	₦ .....
1995	₦400.00	₦300.00	₦180.00	₦ .....

5. Did you sell your g/nut at the designated area assigned to you in the market or did you transport to other market to sell?

(a) Transport Not transported

(b) If you transported your produce to other markets, what were the total costs of transportation incurred in the following years?

Year Total costs

	(a)	(b)	(c)	(d) Others (specify)
1993	₦1000.00	₦1500.00	₦2000.00	₦ .....
1994	₦1500.00	₦2000.00	₦2500.00	₦ .....
1995	₦1800.00	₦2000.00	₦2800.00	₦ .....

6. What were the local government authority charges per month for using market facilities or market premises in the respective years?

Year ₦/month

	(a)	(b)	(c)	(d) Others (specify)
1993	₦ 50.00	₦100.00	₦ 80.00	₦ .....
1994	₦ 70.00	₦120.00	₦200.00	₦ .....
1995	₦ 60.00	₦ 80.00	₦150.00	₦ .....

(b) What extra charges if any did you encounter per month (specify)

Year	Types of charges	₦/month
1993	----------	-------
1994	----------	-------
1995	----------	-------

7. What were the total quantities of g/nut sold in each quarter in the respective years shelled or unshelled in bags? (Wholesalers only)

Year		Jan-March (Qty)	April-June (Qty)	July-Sept (Qty)	Oct-Dec (Qty)
1993	Shelled	---------	----------	---------	-------
	Unshelled	---------	----------	---------	-------
1994	Shelled	---------	----------	---------	-------
	Unshelled	---------	----------	---------	-------
1995	Shelled	---------	----------	---------	-------
	Unshelled	---------	----------	---------	-------

8. What were the average quarterly prices you received per bag of shelled or unshelled g/nut. (D=other specify) (For wholesalers only).

	(a)		(b)		(c)		(d)	
Year	Shelled	Unshelled	Shelled	Unshelled	Shelled	Unshelled	Shelled	Unshelled
1993	₦	₦	₦	₦	₦	₦	₦	₦
Jan-March	1000.00	500.00	1200.00	600.00	900.00	480.00	.....	.....
April-June	1500.00	600.00	1600.00	650.00	1000.00	490.00	.....	.....
July-Sept.	3000.00	700.00	3400.00	800.00	2800.00	600.00	.....	.....
Oct.-Dec.	2000.00	1000.00	2500.00	1200.00	1500.00	1000.00	.....	.....

1994								
Jan-March	1200.00	500.00	1500.00	650.00	3000.00	1500.00	.....	.....
April-June	1800.00	600.00	2200.00	700.00	3200.00	1300.00	.....	.....
July-Sept.	3200.00	700.00	3800.00	1000.00	3500.00	1500.00	.....	.....
Oct.-Dec.	3000.00	1600.00	2800.00	1400.00	2400.00	1500.00	.....	.....
1995								
Jan-March	1000.00	500.00	1200.00	600.00	1300.00	700.00	.....	.....
April-June	1500.00	700.00	1800.00	800.00	2000.00	850.00	.....	.....
July-Sept.	2500.00	1000.00	3000.00	1200.00	4000.00	1200.00	.....	.....
Oct.-Dec.	1500.00	700.00	2000.00	800.00	2200.00	800.00	.....	.....

9. What were the total quantities of g/nut you sold (in bags) in the respective quarters shelled or unshelled? (For retailers only)

Year		Jan-March (Qty)	April-June (Qty)	July-Sept (Qty)	Oct-Dec (Qty)
1993	Shelled	---------	----------	---------	-------
	Unshelled	---------	----------	---------	-------
1994	Shelled	---------	----------	---------	-------
	Unshelled	---------	----------	---------	-------
1995	Shelled	---------	----------	---------	-------
	Unshelled	---------	----------	---------	-------

10. What were the average quarterly prices you received per bag (of 100 Kg) in the respective years (Retailers only)

	(a)		(b)		(c)		(d)	
Year	Shelled	Unshelled	Shelled	Unshelled	Shelled	Unshelled	Shelled	Unshelled
1993	₦	₦	₦	₦	₦	₦	₦	₦
Jan-March	1500.00	800.00	1600.00	830.00	1800.00	850.00	.....	.....
April-June	2000.00	800.00	2300.00	900.00	2500.00	900.00	.....	.....
July-Sept.	4200.00	1600.00	4300.00	1800.00	4000.00	1500.00	.....	.....
Oct.-Dec.	2800.00	700.00	2200.00	650.00	2000.00	600.00	.....	.....

1994								
Jan-March	1600.00	700.00	1400.00	600.00	1500.00	700.00	.....	.....
April-June	2200.00	900.00	2300.00	950.00	2400.00	1000.00	.....	.....
July-Sept.	4300.00	1300.00	4000.00	1500.00	3800.00	1200.00	.....	.....
Oct.-Dec.	2600.00	900.00	2500.00	920.00	2000.00	600.00	.....	.....
1995								
Jan-March	1800.00	750.00	2000.00	800.00	1900.00	800.00	.....	.....
April-June	2300.00	850.00	2600.00	900.00	2800.00	1000.00	.....	.....
July-Sept.	4000.00	1500.00	3800.00	1300.00	4200.00	1500.00	.....	.....
Oct.-Dec.	2700.00	800.00	2600.00	1200.00	2300.00	950.00	.....	.....

(For Retailer only)

11. Did you incur transportation cost in the pursuance of your marketing activities. Yes No

(b) If yes what were average cost you incurred per bag in the respective years?

Year	Average costs/bag (₦)			
	(a)	(b)	(c)	(d) Others (specify)
1993	₦ 60.00	₦ 80.00	₦ 90.00	₦ .....
1994	₦100.00	₦ 90.00	₦120.00	₦ .....
1995	₦100.00	₦ 95.00	₦110.00	₦ .....

12. Did you incur storage costs Yes No

(b) If yes, what were the total storage costs for the following years?

Year	Total costs/bag (₦)			
	(a)	(b)	(c)	(d) Others (specify)
1993	₦150.00	₦200.00	₦250.00	₦ .....
1994	₦200.00	₦300.00	₦120.00	₦ .....
1995	₦150.00	₦230.00	₦160.00	₦ .....

13. What were local government levels per year for the

respective years?

Year	Local govt. levies/year (₦)			
	(a)	(b)	(c)	(d) Others (specify)
1993	₦100.00	₦ 80.00	₦ 90.00	₦ .....
1994	₦120.00	₦ 75.00	₦100.00	₦ .....
1995	₦150.00	₦200.00	₦140.00	₦ .....

APPENDIX III

Information for Buying Agents

1. How long have you been in the produce buying business?

(i) 1-3 yrs (ii) 4-6 yrs (iii) Above 6 yrs

2. What are your main responsibilities in the business?

(i) To liase between my client and the sellers.

(ii) To purchase for my client when he is not around.

(iii) To purchase for my client even when he is around.

(iv) Others (specify) .....

3. Who supplied fund for the purchase of the g/nut?

(i) My client (ii) Myself to be refunded later

(iii) Others (specify) .....

4. Who takes responsibilities for any loss of g/nut while still in your possession?

(i) My client (ii) Myself (iii) Both of us

5. How many bags of g/nut did did you buy in each of the following years.

1993..... 1994 ..... 1995.....

6. How much were paid to you as commission in each of the following years?

1993..... 1994 ..... 1995.....

7. For the participation of brokers, who pays for their commission and at what rate per market?

(i) The buying agent (ii) The master seller

(iii) The seller (iv) All parties mentioned in (i)-(iii)

(v) No commission paid

Amount paid as commission per market per agent ₦.....