

THE STRUCTURE AND CONDUCT OF THE
MARKET FOR COOKING BANANAS IN KAMPALA CITY,
UGANDA

BY

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A thesis submitted in part fulfilment for a degree
of Master of Science of the University of Nairobi

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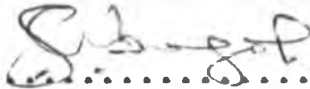
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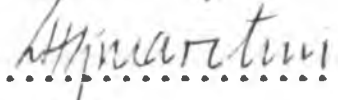
DECLARATION

I, Wilber Nigayo Ainebyona, declare that this Thesis is my original work and has not been presented for a degree in any other University.

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C O N T E N T S

Page

Abstract	vii
Chapter 1. Introduction and problem formulation	1
1.1. Introduction	1
1.2. Banana Production in Uganda	5
1.3. The Problem	11
1.4. Objectives of the Study and the Hypotheses tested	13
Chapter 2. Literature review and theoretical framework for the analysis	17
Chapter 3. Methodology	26
3.1. Area of study and location in the Country	26
3.2. Population of the area	26
3.3. Types of data and their sources	26
3.4. Sample selection and field data collection	27
3.5. Problems experienced during the data collection period	29
Chapter 4. Presentation and interpretation of the Research Findings	30
4.1. The structure of the Market for cooking bananas in Kampala	30
4.1.1. Market Concentration	30

	<u>Page</u>
4.1.2. Market transparency	34
4.1.3. Market entry	39
4.2. The Conduct of the Market for cooking bananas in Kampala	45
4.2.1. Market retailers	46
4.2.2. Market wholesalers	48
4.3. Hypotheses Testing	51
4.4. Modes of Transport involved in the marketing of cooking bananas in Kampala	54
4.5. Proportions of the retail price per bunch of cooking banana that are received by the grower, transporter, wholesaler and retailer.	57
Chapter 5. Conclusion and recommendations	60
5.1. Conclusion	60
5.2. Recommendations	63
References	66
Appendices	69

LIST OF TABLES

	<u>Page</u>
1. Relative contribution of bananas to the daily staple diet in Uganda, 1984.	2
2. Levels of Yield (Tonnes per Ha) of cooking bananas in Uganda, 1971/1979.	9
3. Aggregate Price indices of cooking bananas in Kampala City markets 1982/1987	24
4. Number of retailers involved in banana marketing in five selected markets in Kampala, February 1987.	33
5. Methods used by wholesalers to obtain price information	37
6. Methods used by retailers to obtain price information	38
7. Ages of wholesalers involved in marketing of cooking bananas	40
8. Level of capital requirement by the wholesalers for starting the business of banana marketing.	41
9. Level of capital requirement by different retailers for starting their business	43

	<u>Page</u>
10. Retailers' opinion on what attracts buyers.	46
11. Wholesalers' opinion on what attracts buyers	49
12. Quantities of cooking bananas supplied to the five selected Kampala markets by sources	53
13. Modes of transport used in the marketing of cooking bananas in five selected markets in Kampala city.	55
14. Ownership of transport involved in the marketing of cooking bananas in Kampala city.	56

LIST OF FIGURES

	<u>Page</u>
1. Area and production of cooking bananas in Uganda, 1971-1985.	7
2. Schematic representation of a marketing system for cooking bananas showing the possible distribution channels	19
3. Average monthly retail prices of cooking bananas in Kampala markets, 1982-1987	23
4. Lorenz concentration curve	35

LIST OF MAPS

1. Uganda, showing the location of Kampala City and the agro-ecological Zones	3
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LIST OF APPENDICES

	<u>Page</u>
1A. Banana Area and Production 1971/75	69
1B. Banana Area and Production 1976/80	71
1C. Banana Area and Production 1981/85	73
2. Weights attached to various food items in Uganda in terms of their contribution to the staple diet	75
3. Average retail prices of cooking bananas in Kampala markets.	76
4. Market variables	77
5. Quantities of cooking bananas supplied to Kampala markets by source areas	79
6. Questionnaire for wholesalers	80
7. Questionnaire for retailers	82
8. The concentration of the banana trade in five selected markets in Kampala city.	84
9. The list of markets which were selected from different groups of markets in Kampala City for the Study.	88
10. The major urban markets of Kampala	89
11. Transport costs versus markups of cooking bananas.	90

ABSTRACT

Cooking bananas are the most important staple food crop in Uganda with 33 percent of the population in the country depending on them. There has been an outcry of rising banana prices. For example, the retail price for a bunch of cooking bananas in Kampala City was found to be the same as the minimum official wage rate in November 1986.

Since the prices of cooking bananas are not controlled by the government and marketing system of this commodity is entirely in the hands of private sector, an understanding of the system for marketing cooking bananas is important from a policy point of view. High retail prices of cooking bananas could greatly affect the living standards of those people whose staple diet is mainly composed of cooking bananas. Hence the need for this study.

The objectives of the study were to examine the structure and conduct of marketing system for cooking bananas in Kampala City, with a view to understanding the problems underlying the system. Market structure

was evaluated in terms of market concentration, transparency and barriers to market entry. Market conduct of both the wholesalers and retailers was examined. The study also tried to establish the supply areas and the modes of transport used in the marketing of cooking bananas, so as to be able to assess or understand the relationship to prices.

The study relied on both primary and secondary data. Secondary data were obtained from publications and reports of the Ministries of Agriculture and Forestry and Planning and Economic Development. Primary data were obtained through interviews of traders at different market places in Kampala

The results of the study indicated that:-

1. Many traders are involved at wholesale level in the marketing of cooking bananas.
2. Transparency in the market for cooking bananas was poor.
3. No serious barriers to entry exist in the market for cooking bananas.
4. Both the wholesalers and the retailers were determining the prices of cooking bananas through bargaining.

5. The banana market was characterized by collusive tendencies.
6. Transportation in the marketing of cooking bananas involved hired lorries.
7. Masaka District was found to be the main supplier of cooking bananas to the Kampala markets.

It is recommended that price information should be disseminated to all those involved in the marketing of cooking bananas. There is need to introduce some measures of standards for grading of cooking bananas. This is because the results of the study indicated that there was no basis for the comparison of bunches of cooking bananas, other than mere observation. Evaluation of pricing efficiency was very difficult particularly because no uniform weights and measures were used in the marketing process.

Lastly, it was recommended that farmers who produce cooking bananas should be encouraged to form co-operative societies, so as to increase their bargaining power. This would enable them to market their bananas directly to the retailers, and also benefit from any cost savings related to large turnovers, especially from transportation.

THE STRUCTURE AND CONDUCT OF THE MARKET

FOR COOKING BANANAS IN KAMPALA CITY, UGANDA

CHAPTER ONE

INTRODUCTION AND PROBLEM FORMULATION

1.1 INTRODUCTION

Agriculture plays a major role in the Ugandan economy. Most of the production takes place in the smallholder sector. The Agricultural sector gives a livelihood to over 80 percent of the population. One of the key objectives of the agricultural sector in Uganda is to increase national food security (Uganda, 1984, p.1).

The main staple food crops grown in Uganda are bananas (Musa Spp.), cassava, fingermillet, maize, sorghum and sweet potatoes. Bananas are the most important staple food crop, with 33 percent of the population in the country depending on them (Table 1)

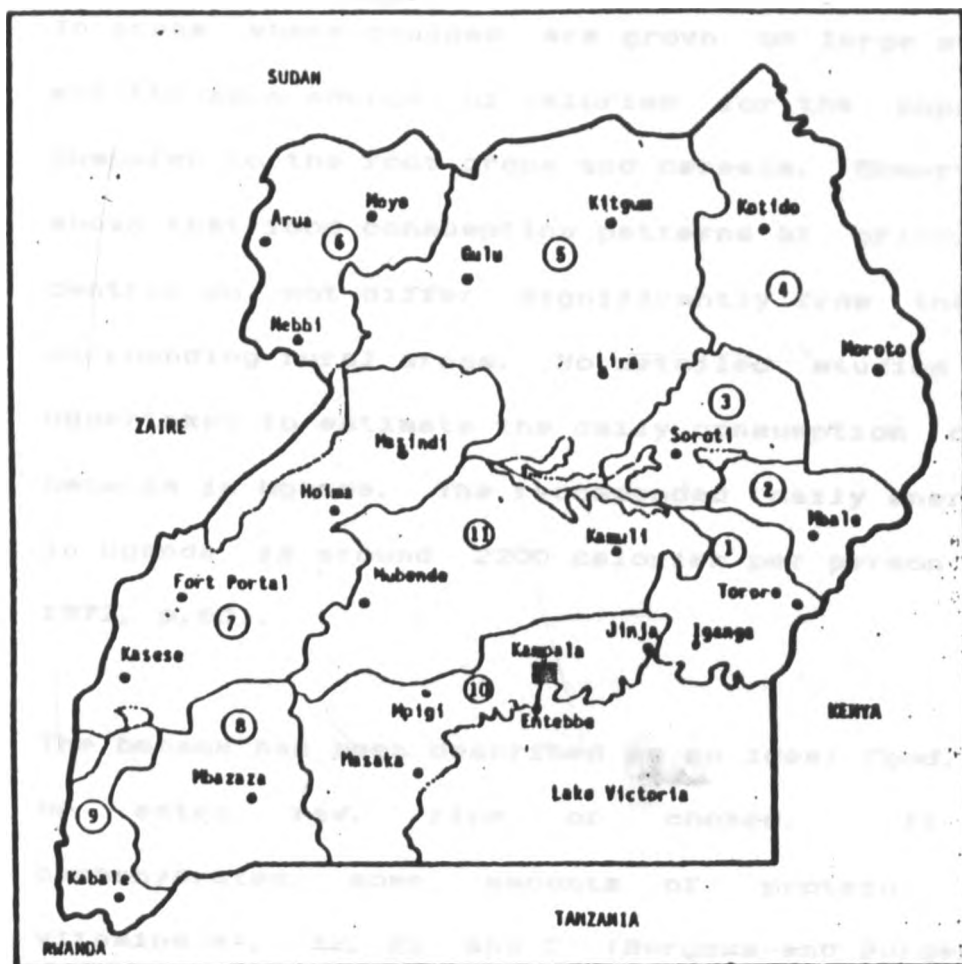
Table 1. Relative contribution of bananas to the daily staple diet in Uganda, 1984 (in Percent)

ZONES	BANANAS	CASSAVA	SWEETPOTATO	CEREALS
1. Busoga/Bukedi	25	10	15	50
2. Bugisu/Sebei	40	5	15	40
3. Teso	-	25	5	70
4. Karamoja	-	55	-	45
5. Lango/Acholi	-	45	5	50
6. West Nile/Madi	-	50	5	45
7. Bunyoro/Toro	15	45	10	30
8. Ankole	50	5	5	40
9. Kigezi	15	5	20	60
10. L. Victoria Crescent (including Kampala)	60	15	5	20
11. N. Buganda	60	15	5	20
Uganda	33	20	8	39

Source: Republic of Uganda, 1984. Towards a National Food Strategy Vol. 1. p.13. MOA.

Although the table shows that cereals contribute 39 percent to the staple diet, cereals comprise maize, finger millet, sorghum and rice and when taken individually their percentages consumed fall below that of bananas. On zonal basis, consumption of bananas assumes a more predominant role in Lake Victoria Crescent and North Buganda zones as well as in Ankole and Bugisu/Sebei zones where the consumption is over 40 percent of the staple diet. These zones are given in Map 1.

MAP 1. UGANDA: SHOWING THE LOCATION OF KAMPALA CITY AND THE AGRO-ECOLOGICAL ZONES.



- | | |
|-------------------------|----------------------------|
| Zones: 1. Busoga/Bukedi | 7. Bunyoro/Toro |
| 2. Bugisu/Sebei | 8. Ankole |
| 3. Teso | 9. Kigezi |
| 4. Karamoja | 10. Lake Victoria Crescent |
| 5. Lango/Acholi | 11. Northern Buganda |
| 6. M.Nile/Madi | |

Source: Republic of Uganda. 1984. Towards a National Food Strategy.
Vol. 1. Page 26. Ministry of Agriculture, Entebbe.

In areas where bananas are grown on large scale, they are the main source of calories for the population as compared to the root crops and cereals. Observation has shown that food consumption patterns of principal urban centres do not differ significantly from those of the surrounding rural areas. No detailed studies have been undertaken to estimate the daily consumption of cooking bananas in Uganda. The recommended daily energy intake in Uganda is around 2200 calories per person (Mc Crae, 1972, p.60).

The banana has been described as an ideal food. It can be eaten raw, ripe or cooked. It contains carbohydrates, some amounts of protein, fats and vitamins A1, A2, B2 and C (Burgess and Burgess, 1972, p.55.). In computation of the cost of living index in Uganda bananas are given the heaviest weight of 20 and other staple food crops take up a very small proportion (see Appendix 2).

The daily consumption of cooking bananas in Buganda where Kampala city is located was quoted as 2.25 - 2.7 kg per person per day (Purseglove, 1983, p. 346). Since every 100 g. of the edible portion of cooking bananas

contains 100 calories of energy (Burgess et al, 1972, p.55), it can be deduced that the amount of energy obtained from the consumption of cooking bananas is around 2250 -2700 calories per person per day. Therefore, cooking bananas which is the predominant staple, provides an adequate source of energy for the local population in Kampala City. The present study examines the structure and conduct of the market for cooking bananas in Kampala City.

1.2. BANANA PRODUCTION IN UGANDA

Climatic Conditions in Relation to Banana Production

Production of bananas requires a reliable and continuous water supply. The length of the dry season influences their production (Jameson, 1970, p.139). The most favourable areas for banana production in Uganda are those around Lake Victoria and any other areas which receive over 900 mm of rainfall annually. Banana production requires relatively little labour and the lack of any marked dry season ensures an all year food supply (Oloya and Poleman, 1972, p.6). However, bananas are liable to damage by strong winds. Therefore exposed sites have to be avoided. Otherwise it would be necessary to provide a windbreak.

Varieties of bananas grown in Uganda

In Uganda, four major groups of varieties of bananas have been identified (Jameson, 1970, p.141). These are cooking, beer, roasting and dessert bananas.

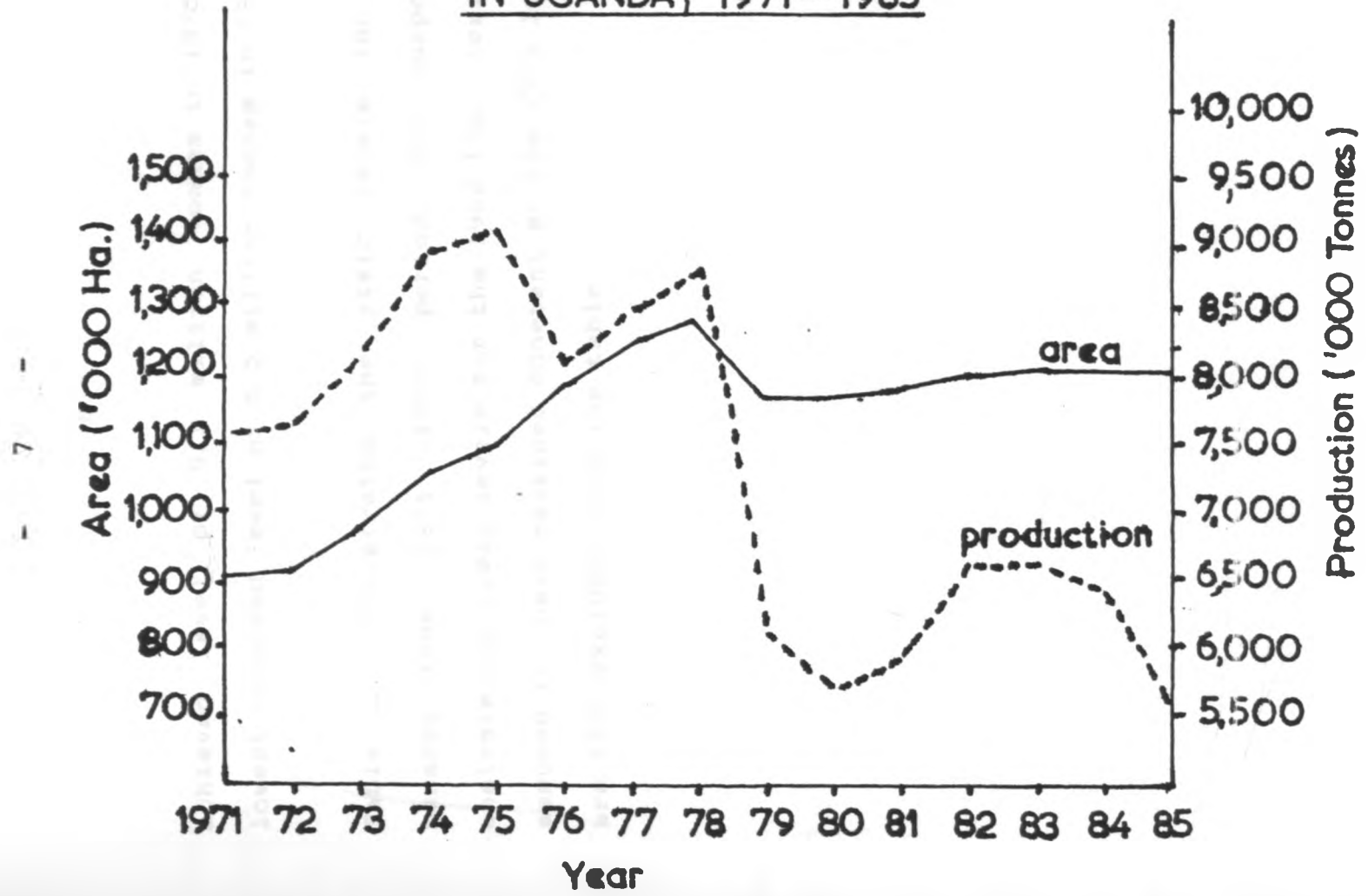
1. Cooking bananas are by far the most widely grown group of bananas. The fruit is normally cooked by steaming. The green fruit is occasionally roasted while the ripe fruit may be eaten uncooked, but such usage is quite rare.
2. Beer bananas are mainly used for local beer brewing.
3. Roasting bananas are mainly used for roasting. Quite often they may be boiled when green or ripe before being consumed.
4. Dessert bananas their ripe fruits are usually eaten uncooked

Trends in Production of bananas in Uganda

Figure 1 shows developments in the area devoted to the cultivation of cooking bananas in Uganda, including the level of production, over the 1971 - 1985 period (see also Appendix 1). Although the area under cooking bananas has remained close to 1.2 million hectares, production has declined sharply from the highest

FIGURE 1. AREA AND PRODUCTION OF COOKING BANANAS

IN UGANDA, 1971-1985



Source: Statistics section, Ministry of Agriculture and Forestry, Entebbe.

achieved level of 9.1 million tonnes in 1975 to the lowest recorded level of 5.5 million tonnes in 1985.

Table 2 illustrates the yield levels for cooking bananas from 1971 -1979 period. For purposes of analysis, the yield levels for the 1980-1985 period were assumed to have remained constant at the 1979 level and are thus excluded from the table.

Table 2. Levels of Yield (Tonnes per Ha) of cooking bananas in Uganda, 1971-1979.

Zone	Y E A R								
	1971	1972	1973	1974	1975	1976	1977	1978	1979
1. Busoga/Bukedi	6.51	5.77	6.54	6.56	6.49	5.13	5.23	5.34	3.57
2. Bugisu/Sebei	5.10	4.51	5.11	5.04	5.07	4.19	4.24	4.27	2.87
3. Teso	2.39	2.18	2.40	2.40	2.17	3.34	3.34	2.01	1.90
4. Karamoja	NA	NA	NA	NA	NA	NA	NA	NA	NA
5. Lango/Acholi	2.33	2.09	2.34	2.45	2.05	5.02	4.86	5.08	1.95
6. W.Nile/Madi	5.69	4.90	5.56	5.44	5.35	9.10	4.91	5.03	3.10
7. Bunyoro/Toro	7.81	7.06	8.00	8.00	7.98	6.60	6.66	6.71	3.98
8. Ankole	11.10	15.22	11.09	11.06	11.02	9.13	9.21	9.28	5.46
9. Kigezi	5.20	4.62	5.20	5.20	5.18	4.20	4.33	4.33	4.39
10. L.V.Crescent	9.10	8.04	9.09	9.10	8.82	7.53	7.61	7.66	7.22
11. N. Buganda	8.82	7.78	8.80	8.81	8.78	7.27	7.33	7.39	4.35
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Uganda	6.41	6.22	6.41	6.41	6.29	6.15	5.77	5.71	3.88
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Source: Calculations based on figures in Appendix 1; Statistics Section, Ministry of Agriculture and Forestry, Entebbe, Uganda.

Notes: NA - Indicates that the figures were negligible.

The Yield figures were obtained by dividing the production figures by the area given in Appendix 1.

Research has established that yields of non-fertilised bananas in pure stands growing under favourable weather conditions average 8-12 tonnes per Ha. Under fertilised conditions, yields of 15-20 tonnes per Ha or higher can be obtained. In drier areas, yields are about 2.3 tonnes per Ha. (Uganda, 1984, p.29)

Although the yields of cooking bananas in Uganda have been declining generally for all zones and the whole country, those in the Lake Victoria crescent zone where Kampala City is located have remained fairly high. These areas have thus remained an important source of cooking bananas for the urban centres especially Kampala City. The decline in production and yields of cooking bananas has been associated with increased infestations of the plantations by nematodes and weevils. This problem requires that the husbandry practices in the banana plantations be improved, with increased level of fumigation to minimize the pest populations (Uganda, 1984, p.29).

The Marketing System for Cooking Bananas

The link between the consumers, such as those in urban areas, and the supply sources of cooking bananas is the market. Some surplus production of cooking bananas in Uganda bananas has been reported in a number of districts, such as Masaka, Mukono and Nbarara (Uganda, 1984 p.104).

This surplus production finds a ready market in urban centres. Kampala, being the capital city of Uganda, offers the largest market.

1.3 THE PROBLEM

Staple foods, though abundant at the national level, are often insufficiently available to low income people especially in the urban centres (Uganda, 1984, p.16).

This has been observed to be the case for cooking bananas, and may take place because wholesale traders often buy cooking bananas at low prices in the surplus areas, and sell them at high prices in urban areas, sometimes at prices beyond the reach of the urban poor. For instance, the average retail price for a bunch of cooking bananas in Kampala in November 1986 was U.Shs 15,000, while it could be purchased in rural areas at a price as low as U.Shs.1000 (Uganda Nov. 1986).^{*} The average retail price in urban areas was the same as the minimum official wage rate in 1986 (Uganda, Oct. 1986).

* It should be noted that in May 1987, there was a currency reform exercise in Uganda. After that period a new Uganda shilling was introduced. Hence, throughout this text, the monetary values indicated are old Uganda shillings.

From Table 1, it can be observed that 60 percent of the staple diet in Kampala city is composed of cooking bananas. The prices of cooking bananas are not controlled by the government (Uganda, 1984, p.4). The marketing system of this commodity is entirely in the hands of the private sector. For a commodity whose price is not controlled, the price levels are usually influenced by two major factors:-

- 1) The supply level of the commodity.
- 2) The level of competition amongst the traders.

During the period when the supply is low, the prices tend to shoot up. Similarly inadequate competition amongst the traders tends to push up the prices.

Apart from the information generated by studies undertaken earlier by Mukvaya (1962) and Oloya and Poleman (1972), little is known about the marketing of cooking bananas in Kampala city. An understanding of the structure and conduct of this marketing system is crucial in identifying the bottlenecks affecting the trade. It was therefore considered that this study would be useful through its contribution to information on the cooking bananas market in Uganda, and this could be useful to policy makers.

1.4 OBJECTIVES OF THE STUDY AND THE HYPOTHESES TESTED

The purpose of the study was to examine the structure and conduct of the market for cooking bananas in Kampala City. Market structure refers to those organizational characteristics of a market which influence relations of buyers and sellers and exert strategic influence upon price and the character of competition (Haritia, 1982) Elements of Market structure are market concentration, information and entry into the business. Market conduct involves pricing mechanisms, forms of competition by the traders and occurrence of any collusion tendencies. These concepts are reviewed further in chapter two. The specific objectives were:-

1.4.1 To examine the structure and conduct of the market for cooking bananas in Kampala City, with special attention being paid to the volume of trade and the number of retailers and wholesalers involved in the business.

1.4.2 To establish the supply areas of cooking bananas, modes of transport used and transport costs in order to gauge the price differences between the buying price in the supply areas and the selling price at wholesale level, with a view to assessing the margins accruing to

THE HYPOTHESES AND HOW THEY WERE TESTED

With regard to objective 1.4.1, two hypotheses were tested.

1) There is no single wholesaler that is controlling the market. This hypothesis was tested by estimating the wholesalers Lorenz concentration curve for the cooking banana trade and by examining the volume of the trade controlled by the largest 10, 20, 50 and 80 percent of the wholesalers. If the business is concentrated within a few traders, they can easily influence the retail prices through the monopoly tendencies. Even if the supply is adequate, the wholesalers, through monopoly tendencies, can push up the prices to the disadvantage of the consumers. If on the other hand there is free competition, none of the wholesalers would be able to influence the selling price.

2) The retail price of cooking bananas is influenced by the levels of producer prices. This hypothesis is tested by trying to establish whether the producer price had any significant influence on the level of retail prices of cooking bananas. For purposes of the analysis, the wholesalers' purchase will be assumed to be the producer or farmgate price. A simple regression analysis will be carried out and

the Student's t-Statistic will be used as a basis for establishing the level of significance of the influence of producer price on the level of the retail price.

The regression equation to be estimated is :

$$X_2 = a + bX_1$$

where,

X_2 = consumer or retail price

X_1 = producer price

If the producer prices have a significant influence on the level of retail prices, then this would suggest that the wholesalers are likely to be influencing the retail prices.

With regard to objective 1.4.2, two hypotheses were also tested:

- 1 . The areas around Kampala City are no longer the main source of Cooking bananas for the city markets. The areas around Kampala City which used to be the main source of cooking bananas in the 1960's and 1970's were located in Mukono District. According to studies carried out by Mukwaya (1962) and Oloya and Poleman (1972), Mukono District alone used to account for 80 percent of the cooking bananas supplied to the Kampala City markets, while Masaka District came second with about 10 percent of the quantities supplied. The other 10 percent came from various minor sources, such as Mbale and Mbarara Districts. The present study is to establish if the same situation still exists.

2. Price markups for the cooking banana wholesalers are influenced by the transport costs. A simple regression analysis will be carried out and the level of significance for this hypothesis will be established by using the Student's t-Statistic.

The regression equation to be estimated is:

$$X_2 = a + bX_1$$

where,

X_2 = price markup

X_1 = transport cost

If the price markups are significantly influenced by the transport costs, then this could be an indicator that the wholesalers may have some collusive tendencies in the determination of wholesale prices for cooking bananas.

CHAPTER TWOLITERATURE REVIEW AND THEORETICAL FRAMEWORK FOR THE ANALYSIS

The theoretical framework adopted in the analysis of data is based on the concept of the structure and conduct of the market for any given product. Kariungi (1976), Schmidt (1979) and Maritim (1982) used the Structure, Conduct and Performance method to study the system of maize marketing in Kenya. Mbugoh (1976) used the same method to study the marketing system for Irish potatoes in Kenya. The Structure and Conduct method was adopted for this study in order to understand the marketing system for cooking bananas in Kampala City.

In this method, the market structure is primarily analysed in terms of market concentration, transparency (information) and barriers to market entry. Market concentration involves the study of the number and size of the market participants (wholesalers and retailers). If there are few traders in the business, then they can influence the prices by say withholding supplies; but if the traders are many, then it provides for competitive conditions. Market transparency refers to information flow within the marketing system which aids both the producers and the traders in their decision making process. Market information can be disseminated through

the mass media, such as newspapers and the radio. The study of market entry involves the examination of various barriers which prohibit traders from entering a marketing system. They include managerial know-how, lack of capital, legal barriers, such as licensing, and aggressive reactions to newcomers by those already in business.

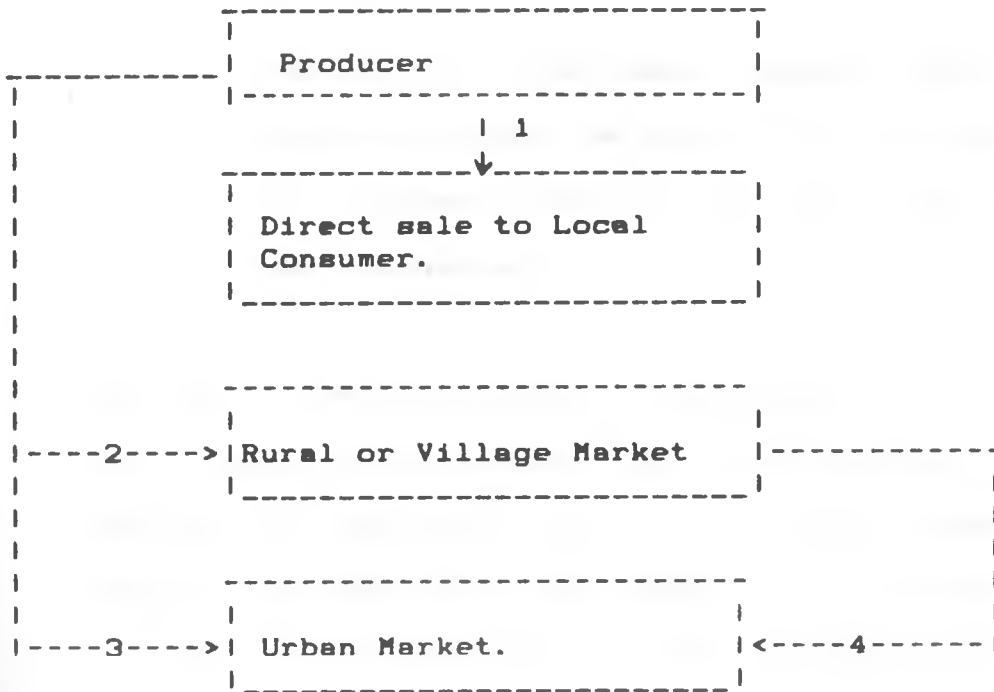
Analysis of market conduct involves the examination of the buying and selling behaviour of the traders (both the wholesalers and retailers), forms of payment, level of activity and actions to avoid competition by, say, collusion and other unethical practices.

There is little information available in connection with the marketing system for cooking bananas in Kampala or Uganda in general. The following literature will however highlight some areas of interest in the current study.

Three types of channels exist for the marketing of food crops in Uganda (Uganda, 1984, p. 57). The Produce Marketing Board (PMB) and the Co-operative Unions mainly handle dry produce. The third channel, consisting of private traders, is the one mainly engaged in the marketing of cooking bananas. Hays (1975, p. 10) has reviewed the marketing system for food grains in Northern Nigeria, showing the possible distribution

channels. Figure 2 illustrates the system described by Hays (1975) and this is similar to that for cooking bananas in Uganda.

Figure 2. Schematic representation of a Marketing system for cooking bananas showing the possible Distribution Channels.



Source: Adapted from Hays (1975).

According to Figure 2 there are four possible channels of distribution for cooking bananas from the producer to the final consumer.

Channel 1 indicates trading between households at the farm level

Channel 2 involves moving cooking bananas from the farmers to the rural market. The farmer may sell the cooking bananas himself or may sell to a middleman who also sells to the wholesalers.

Channel 3 illustrates cases where cooking bananas may be bought directly from farmers and transported by the wholesalers to the urban markets.

Channel 4 illustrates cases where cooking bananas may also be moved from the rural markets (or assembly points) to the urban markets by the wholesalers.

Mukwaya (1962, p. 643-666) reviewed the production, collection, transportation and distribution of cooking bananas in Kampala City. He found that the lorry traders provided their own money for this business from the time of harvest to the time of distribution in the final markets in Kampala City. He reported that Kampala City had just over 20 markets where bananas were sold at both wholesale and retail levels. No single market was solely for retail or wholesale trade nor was any significant quantity of bananas sold in shops. In these markets, the bananas were sold while laid out on bare ground, either spread out or heaped together. Most of these markets were found to have permanent roofs and

could be locked up at night. Oloya et al (1972, p.47) reported that the number of markets in Kampala City had risen to 49 by 1972, which had resulted into more selling points for the cooking bananas.

A study on the marketing of bananas as a subsidiary staple food in Dar-es-Salaam carried out by Mascarenhas and Mbilinyi (1968) indicated that the bananas had first to be channeled through the Kariokoo city market for the Dar-es-Salaam consumers.

However, the studies by Mukwaya (1962) and Oloya et al (1972) indicated that cooking bananas could be supplied directly to any market in Kampala City, without going through an assembly point or market.

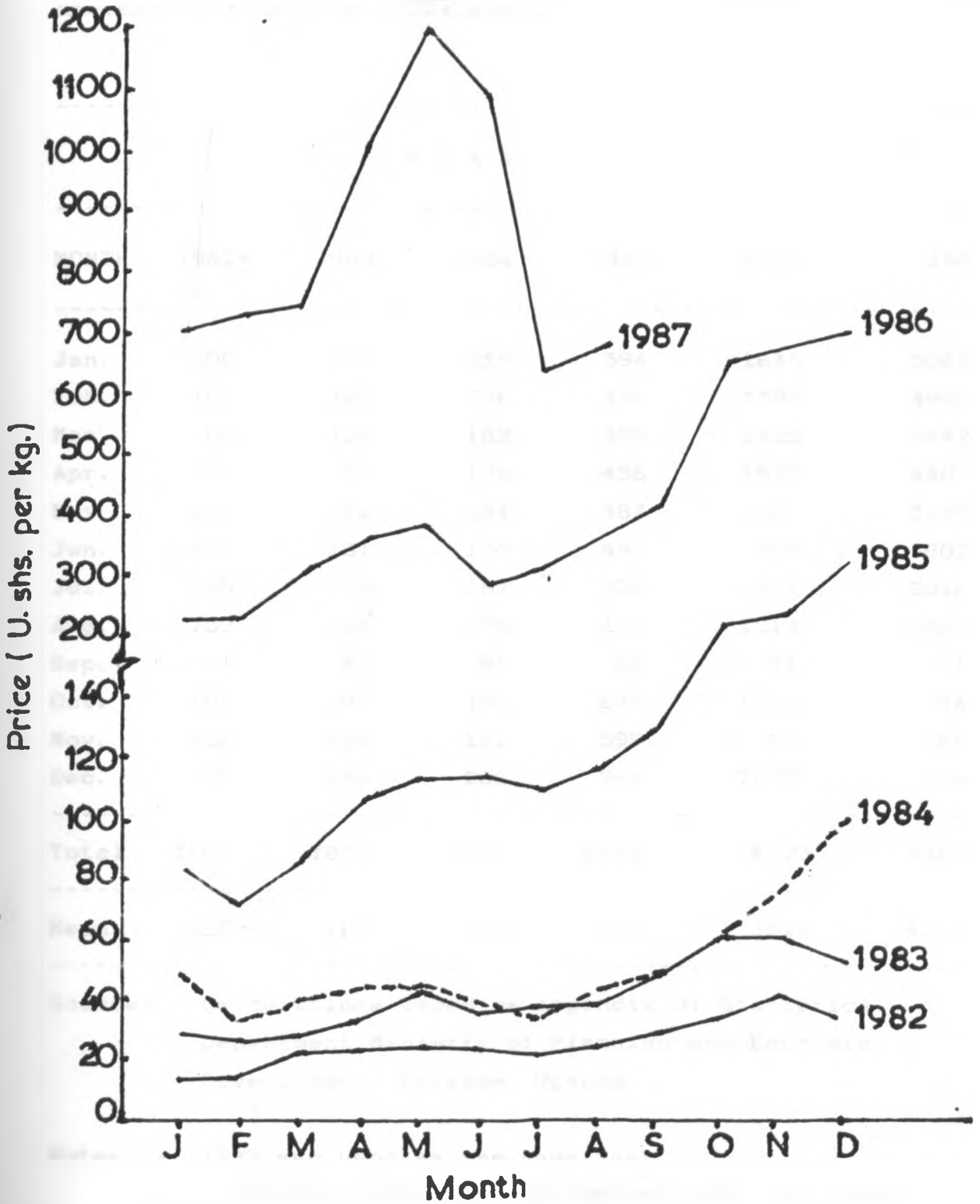
Oloya et al (1972, p. 28) contended that the purpose of any marketing system should be to provide efficient marketing services at minimum costs so that the farmers can make profit and reward the resources used in production. Nyiti (1976, p. 12) noted that small scale farmers responded favourably to product prices in deciding what to produce.

In a competitive market, the farmers get fair prices because the competing marketing agents bid the prices up to a level where the margin between the agents' purchase price (which is the producer price) and the

agents' sales price just covers their costs and leaves a "normal" profit. Figure 3, which is based on Appendix 3, shows that the prices of cooking bananas in Uganda have increased tremendously between 1982 and 1987. This can also be noted from Table 3. Oloya et al (1972, p.46) noted that there was little exchange of information between the markets in Kampala City as regards prices of cooking bananas and that the farmers were at a bargaining disadvantage with regard to the sale of their produce. This was caused by both costly transport and ignorance of market conditions which could lead to collusion by the wholesalers and retailers. Hence market information was inadequate, suggesting that the structure of the market for cooking bananas in Kampala City at that time was not as competitive as would be desirable.

Helmberger, Campbell and Dobson (1981, p. 504) and Hays (1975, p. 58) have reviewed the marketing margins for various farm products. The farmer's share of the retail price has been found to vary across products and over time but on average it has been found to oscillate around 40 percent. The findings of Mukwaya (1962, p.664) revealed that the farmer's share of the retail price of cooking bananas in Uganda was about 44 percent. However, the study by Hays (1975) gave a larger farmers' share of the retail price of about 68 percent for the millet and sorghum producers in Northern Nigeria. According to this study, the transporters' margins

FIGURE 3. AVERAGE MONTHLY RETAIL PRICES OF COOKING BANANAS IN KAMPALA MARKETS, 1982-1987



Source : Statistics Department, Ministry of Planning and Economic Development, Entebbe, Uganda.

Table 3. Aggregate Price Indices of cooking bananas in Kampala City Markets, 1982-1987.

Y E A R						

MONTH	1982*	1983	1984	1985	1986	1987

Jan.	100	210	355	594	1645	5067
Feb.	100	187	236	496	1598	4988
Mar.	100	129	183	395	1425	3442
Apr.	100	151	199	456	1577	4405
May	100	181	184	487	1697	5190
Jun.	100	161	170	499	1256	4802
Jul.	100	180	167	526	1471	3048
Aug.	100	166	179	495	1514	2865
Sep.	NA	NA	NA	NA	NA	NA
Oct.	100	187	186	677	1982	NA
Nov.	100	146	191	599	NA	NA
Dec.	100	156	286	948	2058	NA

Total	1100	1854	2336	6172	16223	33807

Mean	100	167	212	561	1622	4226

Source: Calculations based on Appendix 3; Statistics Department Ministry of Planning and Economic Development, Entebbe, Uganda.

Notes: * -1982 was used as the base year.

NA -Indicates that the figures were not available.

The prices of cooking bananas doubled between 1982 and 1984, but by 1986, they had increased sixteen fold and by 1987, they had shot up 42 times.

remained fairly constant at 2-4 percent of the retail prices. The present study attempts to find out the proportions of the retail price of cooking bananas that are received by the grower, transporter, wholesaler and retailer. This helps in identifying who gets the largest share of the price paid by consumers. Farmers who grow cooking bananas in Uganda could be expected get the largest share of the retail price, given that there is no processing and storage involved in the marketing of the bananas as compared with the cereals in case of the Nigerian farmers.

According to the previous studies, no grading is involved in the marketing of cooking bananas in Uganda. The most common form of transport in this trade has been noted to be the lorry. However, Mukwaya (1962, p. 652) indicated that bicycles were being used to deliver a considerable quantity of cooking bananas to the Kampala markets from the nearby villages.

Cooking bananas are both bulky and perishable. Mukwaya (1962) elaborated that if handled properly in a cool atmosphere, bananas can last for about one week (from the time of harvest) before they begin to ripen. These conditions affect the prices at which the cooking bananas can be sold. Hence increased retail prices of cooking bananas may not necessarily benefit the growers, but they may benefit the traders involved.

CHAPTER THREE

METHODOLOGY.

3.1. Area of study and location in the Country.

The area selected for the study is Kampala City which constitutes the Kampala District. The area is located within the Lake Victoria crescent zone and can be identified on Map 1.

3.2 Population of the area.

The population of Kampala City in 1969 was 331,890, and was estimated to be growing at an annual rate of 10.4 per cent. This figure had increased to 544,400 persons by 1984 (Uganda, June, 1984). This rapid urban population growth may be expected to generate a good market for foodstuffs especially the cooking bananas, which are the predominant staple food in the area.

3.3 Types of data, their sources and the analytical approach.

Two types of data are utilized. The secondary data obtained from any relevant available publications, especially those of the Ministries of Agriculture and Forestry, and of Planning and Economic Development, are on production and retail prices of cooking bananas. Primary data obtained through the use of questionnaires and through interviews of traders at different market places in Kampala include the source of cooking bananas, forms of transport used, costs involved, the prices at

different stages of the distribution channel and the number of wholesalers and retailers involved in the banana trade.

The main analytical methods used in this thesis are descriptive analysis and cross-tabulations. A Lorenz curve is used to illustrate the concentration of the business. Simple regression analyses were done to establish the influence of one variable on another using the Student's t-Statistic.

3.4 Sample Selection and Field data collection.

A list of markets was obtained from the City Treasurer's Department, Kampala City Council and used as the basis for sampling in this study. These markets were divided into five groups according to their location in the city. From each group a stratum of the first four markets which earned the highest revenue for the City Council in the month of November 1986 were selected. The markets selected were as in Appendix 9.

From each of the five strata, one market was randomly picked for the study by using a table of random numbers.

The following markets were selected from each stratum:-

Nakasero Group :	Nakasero
Katwe Group :	Kibuye I
Namirembe Group:	Bakuli
Mulago Group :	Kamwokya I
Nakava Group :	Nakava

The names and location of these markets can be identified on Appendix 10.

After these markets were selected, field data collection was done by ten enumerators (two for each market). The

author discussed thoroughly the questionnaires with the enumerators. The questionnaires were pretested on 28th and 29th January, 1987 in the selected markets. Points which were not clear to the enumerators were explained and some questions were added while others were redrafted to ensure clarity. The formal interviews were undertaken between 2nd February and 31st March 1987. The enumerators had no communication problem with the traders because they could speak both English and Luganda. Luganda is the local language spoken widely in Kampala City.

The data were collected from Monday to Friday of every week during the study period. The enumerators had to arrive at the markets very early, usually by 7.00 a.m., so as to meet the wholesalers who would be offloading the bananas. At each market, all the wholesalers had to be interviewed because it had been observed during the pretesting of the questionnaires that, on average, about two vehicles were delivering bananas daily.

As regards the retailers, it was observed that Nakasero Market had 6, Kibuye I had 13, Bakuli had 10, Kamwokya I had 16 and Nakawa had 14. All these retailers were interviewed. The retailers were selling complete bunches of bananas only. None of these retailers were subdividing the bunches of cooking bananas to sell them in terms of clusters or heaps of fingers of bananas.

Every week, the author reviewed the data collected by enumerators at a meeting they would have to attend. The enumerators would also present the problems they would have met. Throughout the period of data collection, the author visited every enumerator at least three times a week to ensure that the work was being done as expected. Since the study carried out by Oloya et al (1972) had noted that there are seasonal variations in the supply of cooking bananas, with peak supply months being between March and June and a marked drop in quantity of bananas between December and January, the author assumed that cooking bananas supplies would be fairly steady during the months of February and March, and that is why data were collected during the February/March period.

3.5. Problems experienced during the data collection period.

During the month of March, there was a temporary fuel shortage in Uganda and this affected the prices of cooking bananas. During that month, the banana supply was reduced. Therefore only the data collected during the month of February are utilized for analysis in this study.

CHAPTER FOUR

PRESENTATION AND INTERPRETATION OF THE RESEARCH FINDINGS

The research findings are presented and interpreted in sections 4.1 and 4.2 below. Section 4.3 deals with the hypotheses testing. The modes of transport involved in the marketing of cooking bananas in Kampala City are considered in section 4.4. Lastly, section 4.5 examines the proportions of the retail price per bunch of cooking bananas that are received by the grower, transporter, wholesaler and retailer.

4.1. THE STRUCTURE OF THE MARKET FOR COOKING BANANAS IN KAMPALA CITY.

Market structure refers to those characteristics of the market organization which influence the nature of competition and pricing within the market. The elements of market structure examined in this study were the degree of market concentration, market transparency or information and barriers to market entry.

4.1.1 Market Concentration

Sales of cooking bananas can take place at farmers' holdings, rural collection centres, roadsides or in the established market places. The degree of the market

concentration may be expected to vary at each of these sales points. Due to lack of sufficient data on actual sales that take place at farm holdings, rural collection centres and roadsides, the degree of market concentration at these sales points was not considered. This study only considered the degree of market concentration in Kampala City markets.

4.1.1.1. The number of wholesalers and retailers involved in the marketing of cooking bananas in Kampala City

Both lorries and pickups were being used for delivering cooking bananas to the Kampala City markets. Lorries had capacities of 5-10 tonnes while the pickups' capacities ranged from 0.5 to 2.0 tonnes.

The wholesaler had to travel to the countryside himself or send a representative to start buying and gathering bunches of cooking bananas before a vehicle would be sent there. This task needed 1-5 days and on average took 2.5 days as reported by the wholesalers. Then when the wholesaler would have gathered enough bunches of cooking bananas for a trip to Kampala City (depending upon the capacity of the vehicle), the journey would take an average of 1.5 days, with a range of 1-3 days.

During the month of February, a total of 111 trips were recorded. The results of the study carried out in the markets of Nakasero, Kibuye I, Bakuli, Kamwokya I and Nakawa indicated that the number of wholesalers who were engaged in the marketing of cooking bananas in Kampala City in the same period were 267. This number of wholesalers may seem to be high, but this was due to the nature of the business. Only 40 wholesalers operated individually, while the other 227 wholesalers had partnerships ranging from two to seven. This was because the wholesalers in most cases had to get together and contribute funds for operating the business. For computational purposes, only the number of trips will be taken into consideration. Further, it is to be assumed that for every trip recorded, there was one wholesaler. In any case, only one wholesaler was interviewed for every trip recorded.

The number of retailers who were selling bunches of cooking bananas in the area of study are indicated in Table 4.

Table 4. Number of Retailers involved in banana marketing in five selected markets in Kampala, February 1987.

Market	Number of Retailers
Nakasero	6
Kibuye I	13
Bakuli	10
Kamwokya	16
Nakava	14
Total	59

Source: Authors investigations.

All the retailers had stalls in the markets and usually operated daily. This number of retailers may look relatively low as compared to the number of wholesalers but as indicated earlier, the study considered only the retailers who were selling complete bunches of bananas.

4.1.1.2. The volume of the trade

The volume of the trade was evaluated in terms of the number of bunches of cooking bananas delivered at the markets by the wholesalers. The total volume of the trade which was 38,628 bunches delivered in 111 trips was equivalent to 579,420 kg of cooking bananas. This figure was arrived at by using an average value of 15 kg per bunch. This conversion value was obtained from the statistics section of the Uganda's Ministry of Agriculture and Forestry at the time of the study. The average number of bunches per trip was found to be 348 bunches.

4.1.1.3 The Concentration of the trade

In order to find out the concentration of business, a Lorenz curve was utilized. It uses cumulative percentages for both the number of wholesalers and the volume of the trade. Appendix 8 shows the concentration of the business, while Figure 4 shows the Lorenz concentration curve .

It can be noted from Figure 4 that 20 percent of the wholesalers in the five markets surveyed controlled about 40 percent of the business, while 60 percent of the same wholesalers were controlling 80 percent of the business. This implies that the marketing of cooking bananas in Kampala City is not dominated by a few wholesalers but is relatively equitably shared.

4.1.2 Market transparency (Information)

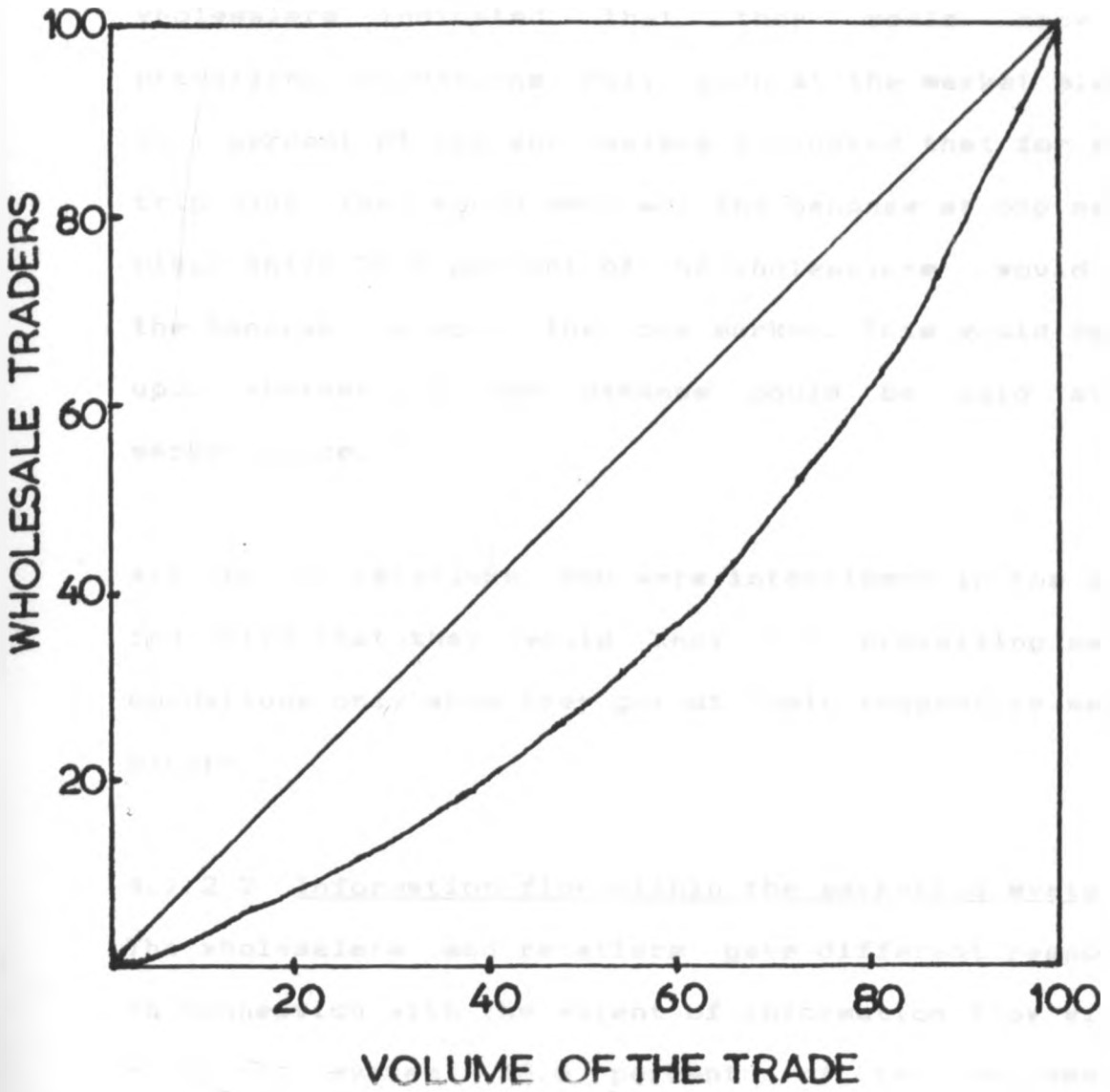
Market transparency is the information flow within the marketing system and it serves as an aid in decision making at all levels in the marketing process.

4.1.2.1 Knowledge about the Market Conditions

If wholesalers or traders do not have adequate knowledge about the market conditions, then the intensity of their competition would be greatly reduced.

The results obtained from the study indicated that 16.2 percent of the wholesalers interviewed knew the market

FIGURE 4. LORENZ CONCENTRATION CURVE



Source : Author's Investigations.

conditions in advance, while 83.3 percent of the wholesalers indicated that they would know the prevailing conditions only when at the market places. 72.1 percent of the wholesalers indicated that for every trip made, they would sell all the bananas at one market place while 27.9 percent of the wholesalers would sell the bananas in more than one market. This would depend upon whether all the bananas could be sold at one market place.

All the 59 retailers who were interviewed in the study indicated that they would know the prevailing market conditions only when they got at their respective market places.

4.1.2.2 Information flow within the marketing system.

The wholesalers and retailers gave different responses in connection with the extent of information flow within marketing system. 58.6 percent of the wholesalers indicated that they knew the prices of cooking bananas in markets other than the ones in which they would be operating, while 41.4 percent of them indicated that they did not. But only 18.6 percent of the retailers knew the prices in other markets, while 81.4 percent of them were ignorant of the prices in other markets. Therefore, intermarket flow of information was not satisfactory.

The extent of information flow within the marketing system was more pronounced for the wholesalers. This was caused by the nature of their transaction. They would aim at purchasing the cooking bananas from places where prices were relatively low and sell them wherever they could get the highest prices. Wholesalers often disagreed with the retailers on the price levels and they would have to move from market to market with vehicles loaded with the cooking bananas, until an agreeable price was reached. Of course the wholesalers could not move from market to market indefinitely as this could influence their transport costs and as well lead to spoilage of the cooking bananas.

4.1.2.3. Methods used for obtaining price information.

Table 5 illustrates the methods used by the wholesalers to obtain price information for cooking bananas.

Table 5. Methods used by wholesalers to obtain price information

Method	Number of Respondents	Percentage
Direct Observation	65	58.6
Personal Communication	5	4.5
Both	41	36.9
Total	111	100.0

Source: Author's Investigations.

Table 6 illustrates the methods used by retailers to obtain price information for cooking bananas.

Table 6. Methods used by retailers to obtain price information

Method	Number of Respondents	Percentage
Direct Observation	46	78.0
Personal Communication	7	11.9
Both	6	10.1
Total	59	100.0

Source: Author's Investigations.

Both the wholesalers and retailers were relying upon the method of direct observation to obtain their price information. During the period of the study, it was noted that there was no use of mass media, such as the radio or newspapers, to publish price information for cooking bananas, yet this could have been of great help for all the wholesalers, retailers and farmers.

4.1.2.4 Use of Weights and Measures in the marketing of cooking bananas

During the study, it was observed that weights and measures were not being used in the marketing of cooking bananas in Kampala City. Hence direct comparison of bunches of cooking bananas was difficult. Comparisons were based on the lifting of individual bunches of bananas to ascertain which one would be heavier or by

mere observation. This implies that the pre-conditions for a high degree of market transparency were apparently poor. In addition, and quite often, the bunches of cooking bananas would be bruised while loading in the buying centres and while offloading in the markets in Kampala City, but that would not affect the sales.

4.1.3 Market entry.

Decisions to enter a trade are usually made on the basis of the prospective traders' perception of the profits being earned by those already in the business. Barriers to market entry reduce the threat of potential competition and therefore influence marketing efficiency. Barriers to market entry could result from lack of managerial ability, lack of capital, legal barriers as well as aggressive reactions by those already in business to the new-comers.

4.1.3.1 Lack of managerial ability.

It was noted that no special training was required for the banana wholesalers. The business was learnt by doing. Indicators of managerial ability are formal education, vocational training and business experience. Completion of the first seven years of formal education is assumed to be adequate for the wholesalers to possess some knowhow for a business like marketing of cooking bananas. All the wholesalers indicated that they had had at least primary education while 47.8 percent had obtained secondary education.

Business experience can also enhance the necessary skill for the wholesalers engaged in the marketing of cooking bananas. The number of years a wholesaler has been in business may therefore determine the extent to which he has acquired the required skills for the trade. Of course there may be some old traders who are poor managers, but age has been assumed to be and is usually regarded as a reasonable proxy for managerial ability. Since 76.6 percent of the wholesalers responded that they had been in business for more than one year, it can be argued that most of them had acquired enough skills. Table 7 illustrates the various ages of the wholesalers involved in the marketing of cooking bananas.

Table 7. Ages of Wholesalers involved in Marketing of Cooking Bananas

Age (Years)	Number of Respondents	Percentage
Less than 30	8	7.2
30 - 39	50	45.1
40 - 49	39	35.1
50 - 59	14	12.6
Total	111	100.0

Source: Author's Investigations.

The youngest wholesaler involved in the marketing of cooking bananas was 24 years old, while the oldest was 54 years old . 80.2 percent of the wholesalers were between 30 and 49 years of age, implying that they were mature enough. According to these results, managerial ability was not a barrier in this case to market entry.

4.1.3.2 Capital Requirements

One of the major barriers to market entry for both the wholesalers and retailers is capital needed to operate their businesses. 25.2 percent of the wholesalers indicated that they had to ask for credit in order to start the business. 74.8 percent of the wholesalers depended on personal savings to start the business. In terms of actual level of capital requirements for starting the business of banana marketing, Table 8 illustrates the wholesalers' response.

Table 8. Level of Capital requirement by the wholesalers for starting the business of banana marketing

Level of Capital Needed (U.Shs. in Millions)	Number of Respondents	Percentage Response
0.0 - 0.9	15	13.5
1.0 - 1.9	3	2.7
2.0 - 2.9	22	19.8
3.0 - 3.9	47	42.4
4.0 - 4.9	5	4.5
5.0 and above	19	17.1
Total	111	100.0

Source: Author's Investigations.

Table 8 indicates that 16.2 percent of the wholesalers needed less than U.Shs. 2 million to start the business, while 62.2 percent of the wholesalers needed U.Shs.2-3.9 million for the same purpose. But 21.6 percent of the

wholesalers needed at least U.Shs. 4 million for starting the business. Starting capital is crucial in business transactions and wholesalers need cash with which to acquire the working stock and pay for transportation of cooking bananas as well as in establishing the business.

Most of the wholesalers indicated that they had acquired the starting capital through their own efforts or personal savings. This could explain why most of them had to form partnerships to raise the starting capital. Since the wholesalers could form partnerships and raise the needed starting capital, it appears that capital was not a barrier to market entry for the wholesale business.

Since the initial capital requirements by retailers are lower than those of the wholesalers, most of them depended on personal or family savings for starting their businesses. Only 13.6 percent of the retailers indicated that they had asked for credit to start their business, while 86.4 percent of the retailers did not need credit. Table 9 shows the level of capital requirements by the retailers to start the business.

Table 9. Level of Capital requirements by different retailers for starting their businesses

Level of Capital Needed U. Shs. '000	Number of Respondents	Percentage Response
0 - 99	19	32.2
100 - 199	13	22.0
200 - 299	16	27.1
300 - 399	2	3.4
400 - 499	9	15.3
Total	59	100.0

Source: Author's Investigations

Table 9 indicates that 81.3 percent of the retailers needed less than U. Shs. 300,000 to start their businesses while only 18.7 percent of the retailers needed more than that amount for the same purpose. This amount of capital for the retailers did not seem to be a bottleneck, since all the market stalls were found to be occupied and there was still need for other additional stalls.

4.1.3.3 Legal Barriers or Institutional Framework

The institutional set-up may affect wholesalers and retailers engaged in the marketing of cooking bananas. Licensing was a pre-requisite for all the wholesalers in addition to the payment of market fees, which were being charged by the Kampala City Council authorities.

The banana wholesalers were required to pay U. Shs. 2,500 for a travelling wholesale licence per year. They also had to pay U. Shs. 500,000 as income tax per year in order to get an income tax clearance certificate needed for their businesses. And whenever the wholesalers would be offloading their bunches of bananas at a market, they would pay U. Shs. 200 for every bunch of banana sold as market fee. The retailers were operating their business in market stalls for which they had to pay a monthly rent of U. Shs. 13,000 for each stall.

None of the wholesalers engaged in the marketing of cooking bananas in Kampala City were operating as appointed agents because the trade was not controlled by the government. They only needed to acquire trading licences and have an income tax clearance certificate to start their operations. The amount of money needed for these legislations was not a serious barrier for the traders interested in this business as revealed by the author's investigations. As long as the wholesalers had these pre-requisites, they would operate smoothly.

4.1.3.4 Aggressive reactions by the Wholesalers already in business to new comers

It has already been noted that 76.6 percent of the

wholesalers had been in business for more than one year. Only 23.4 percent of the wholesalers had been in business for a period less than one year.

From the author's investigations there was no case reported involving aggressive reactions by the established wholesalers towards the new comers into the business of marketing cooking bananas.

All the above interplaying factors tended to influence the nature of competition in the market for cooking bananas. A further understanding of the functioning of the market for cooking bananas was obtained by looking at the conduct of both the wholesalers and the retailers.

4.2. THE CONDUCT OF THE MARKET FOR COOKING BANANAS IN KAMPALA

The term conduct refers to the patterns of behaviour that market participants follow in adjusting to the buying or selling conditions in the market place (Maritim 1982). It refers to the nature of pricing policies adopted by the market participants and how the prices are determined. Forms of competition, terms of payment, and actions to avoid competition are also considered.

Market conduct of the retailers and wholesalers involved in the marketing of cooking bananas in Kampala City was analysed separately for each group of traders. The conduct of market retailers is considered under sub-section 4.2.1, while that of market wholesalers is considered under sub-section 4.2.2.

4.2.1 The conduct of Market Retailers

Market retailers were interviewed about their opinion on what they thought attracted buyers. The retailers pricing actions were investigated and it was of interest to find out whether there was any collusive behaviour in the business.

4.2.1.1 Retailers' Opinion on what attracts buyers

The retailers opinion was sought on what attracted buyers or customers and Table 10 presents the findings.

Table 10. Retailers' opinion on what attracts buyers

<u>Basic for Attraction</u>	<u>Number of Respondents</u>	<u>Percentage Response</u>
Quality of Produce	32	54.2
Lower prices	16	27.1
Long Business Relations	8	13.6
Credit	1	1.7
Other (e.g. market situation)	2	3.4
Total	59	100.0

Source: Author's Investigations.

The retailers opinion was that the quality of the cooking bananas attracted buyers most and selling at lower prices ranked second. Although there were no set standards as regards the quality of cooking bananas, regular customers could easily identify good quality bananas for purchase. Good quality bananas would be expected to be mature, easy to peel and of a good size or over 15 kg in weight per bunch.

4.2.1.2 The Retailers' pricing actions

The retailers were found to be determining the prices of cooking bananas at the market places. In most cases, the retailers aimed at a target margin of about U.Shs. 2,000 to 4,000, which they were adding to the purchase prices in order to arrive at the retail prices. The average retail price of cooking bananas in the markets at the time of the study was U.Shs. 17,780. This method of pricing is described as the cost-plus pricing method. This method of pricing would help the retailers to realize a certain target income. About 79.7 percent of the retailers indicated that they would not sell their bananas without cash payment since they were also not getting credit terms from the wholesalers. The 20.3 percent of the retailers who indicated that they could offer credit terms would be having personal relations with the customers.

4.2.1.3 Behaviour of the Market Retailers

Noting that most of the retailers were found to be determining the prices of cooking bananas at the market places, collusive behaviour could be suspected. In addition, 81.4 percent of the retailers indicated that they did not know prices in other markets in Kampala City, other than the ones in which they would be operating. This could add to the suspicion of collusive behaviour in their transactions, but this may as well be a problem associated with lack of adequate market information.

Most of the retailers' purchases were done early in the mornings when there would usually be very few customers. And it would involve some bargaining with the wholesalers. The retailers would thus probably agree between themselves at a range of prices to charge the customers and this could influence the market prices and similarly the market competition.

4.2.2 The Conduct of Market Wholesalers or Lorry Traders

The market wholesalers were interviewed about their market opinion on what they thought attracted buyers, who in this case were the retailers. The wholesalers pricing actions were investigated as well as their behaviour in the market places.

4.2.2.1 Wholesalers' Opinion on What attracted buyers.

The wholesalers' opinion on what attracted buyers is summarised in Table 11.

Table 11. Wholesalers' Opinion on what attracts buyers.

Basis for Attraction	Number of Respondents	Percentage Response
Price	58	52.3
Quality of Produce	29	26.1
Personal Relations	15	13.5
Credit	6	5.4
Others(e.g. Prior arrangements)	3	2.7
Total	111	100.0

Source: Author's Investigations.

The wholesalers' opinion was that prices attracted the retailers most and quality of cooking bananas came second. For instance, cooking bananas from Masaka District were regarded as having a better quality than the others, and at times customers would be willing to pay higher prices for them. However, if the wholesaler asked for a very high price for the cooking bananas, the

retailers would reject the offer and wait for another wholesaler, with whom an agreeable price would be sought.

4.2.2.2 The Wholesalers' pricing actions.

Most of the wholesalers also indicated that they were determining prices of cooking bananas at the market-places. This usually involved some bargaining with the retailers. However 58.6 per cent of the wholesalers said that they knew banana prices in other markets, other than the ones in which they would sell the bananas.

Like the retailers, the wholesalers aimed at a target margin in their pricing actions, which employed the cost-plus pricing method. The wholesalers would take into consideration the transport charges and the purchase price, while aiming at a target margin. 93.7 per cent of the wholesalers indicated that they did not offer the retailers credit terms, since they were using cash for their operations. The wholesalers purchase price was on average U.Shs. 6,180; the transporters' charge was on average U.Shs. 3,400 for a bunch of cooking bananas delivered in Kampala City such that the wholesale price would be about U.Shs. 13,470 per bunch of cooking bananas, after making provision for a wholesalers' margin of U.Shs. 3,860.

4.2.2.3 Behaviour of the Market Wholesalers.

Since the majority of the wholesalers were determining the prices of cooking bananas at the market-places, their behaviour could easily be influenced by collusive tendencies. In addition their pricing methods which aimed at specific target margins also point to some collusive behaviour. This type of behaviour by the wholesalers was more prevalent in March 1987, when there was a fuel shortage and the banana supply was reduced. In response the prices shot up from an average of U.Shs 17,780 to over U.Shs 30,000 per bunch of cooking bananas. However, this situation was considered abnormal and is not given much treatment in this thesis.

4.3 HYPOTHESES TESTING

Four hypotheses were tested with regard to the objectives of the study.

1. To test the hypothesis which states that "There is no single wholesaler that is controlling the market", a Lorenz concentration curve was estimated and is given on page 35. From this figure, 10 percent of the wholesalers were found to be controlling 24 percent of the business, while 20 percent of them controlled 40 percent of the business. Similarly, 50 percent of the wholesalers controlled 72 percent and 80 percent of them controlled 92 percent of the business.

This information suggests that the business of cooking bananas in Kampala City is not being controlled by a few wholesalers. Alternatively it suggests that there is competition in the business. Therefore, the hypothesis is not rejected.

2. To test the hypothesis which states that "The retail price of cooking bananas is influenced by the level of producer prices", a simple regression analysis was carried out. The results of the estimate of the regression equation were:

$$X_2 = - 4.49 + 0.599 X_1 \text{ (see Appendix 4)}$$

where,

X_2 = consumer or retail price

X_1 = producer price

From Appendix 4, the regression showed a probability of 0.000 and a Student's t-value of 7.689. These results suggest that the influence of producer prices on the level of retail prices was highly significant. This indicates that the wholesalers are likely to be influencing the retail prices in the market. Hence the hypothesis can not be rejected.

3. To test the hypothesis which states that "The areas around Kampala are no longer the main source of cooking bananas for the city markets", the information already documented plus the results of this study were used. According to studies conducted by Mukwaya (1962) and Oloya et al (1972), Mukono District was the main source of cooking bananas for the Kampala City markets: it used to supply about 80 percent, while Masaka

District came second with about 10 percent of the quantities supplied. The other 10 percent of the supply came from various sources, such as Mbale and Mbarara Districts. Table 12 illustrates the supply sources as established by this study.

Table 12. Quantities of cooking bananas supplied to the Five selected Kampala Markets by Sources.

District	Number of Trips	Number of Bunches Supplied	Percentage
Masaka	64	24,560	63.6
Mbale	9	3,635	9.4
Mbarara	8	3,437	8.9
Bushenyi	6	2,398	6.2
Mukono	17	2,300	6.0
Mubende	5	1,488	3.8
Rakai	2	810	2.1
Total	111	38,628	100.0

Source : Authors' Investigations.

Table 12 illustrates that Masaka District was the main supplier of cooking bananas to the Kampala markets. Mukono District turned out to be supplying only a mere 6 percent. The main source of bananas for Kampala City markets is far from the city. Hence the hypothesis No.3 can not be rejected because the areas around Kampala are no longer the main sources of cooking bananas for the city markets. See Appendix 5 for the

4. To test the hypothesis which states that "Price markups for the cooking banana wholesalers are influenced by the transport costs, " a simple regression analysis was carried out. The results of the estimate of the regression equation were:

$$X_2 = 0.06 + 0.810 X_1 \text{ (see Appendix 11)}$$

where,

X_2 = price markup

X_1 = transport cost

From Appendix 11, the regression showed a probability of 0.000 and a Student's t-value of 12.761. These results suggest that the influence of transport costs on the level of price markups for the wholesale traders was highly significant. This suggests that the wholesalers may have been determining the price markups based on the transport costs. Also it was noted elsewhere in the study that they were aiming at a target margin in their pricing actions. These ideas would therefore suggest that the behaviour of the wholesalers was subject to collusive tendencies. As such, the hypothesis can not be rejected.

4.4 MODES OF TRANSPORT USED IN THE MARKETING OF COOKING BANANAS IN KAMPALA CITY

Table 13 shows the modes of transport used in the marketing of cooking bananas in the five selected markets in Kampala City by sources.

Table 13. Modes of Transport used in the Marketing of cooking Bananas in Five selected markets in Kampala City

Source of Bananas (District)	Type of Transport By number of trips		Total Number of Trips
	Lorry	Pick-up	
Masaka	63	1	64
Mukono	5	12	17
Mbale	9	-	9
Mbarara	8	-	8
Bushenyi	6	-	6
Mubende	3	2	5
Rakai	2	-	2
Total	96	15	111

Source: Author's Investigations.

Results from from Table 13 indicate that 86.5 percent of the transport used in marketing of cooking bananas involved lorries while 13.5 percent involved pick-ups. No deliveries by bicycles were recorded during the period of the study. Further, 96.4 percent of the transport used in the marketing of cooking bananas was hired (Table 14).

Table 14. Ownership of Transport involved in the Marketing of Cooking Bananas in Kampala City

Type of Transport And Ownership By Number of Trips			Total Number of Trips	Percentage Of Ownership Of Transport
Ownership	Lorry	Pickup		
Hired	95	12	107	96.4
Personal	1	3	4	3.6
Total	96	15	111	100.0

Source: Author's Investigations.

During the time of the previous studies, bicycles were used to collect bananas from villages near Kampala. These villages no longer produce significant quantities of cooking bananas due to infestation by nematodes and banana weevils (Personal Communication with field staff of the Department of Agriculture).

Most of the transport which was bringing cooking bananas from Masaka District involved lorries while that from Mukono District mainly involved pick-ups. Since pick-ups carry small loads of cooking bananas, Mukono District came as fifth with regard to actual quantities of bananas supplied to the Kampala City markets (Table 12).

Again pick-ups would be mostly involved in shorter journeys like from Mukono area, particularly because the roads to Masaka and Mbarara Districts were reported by wholesalers to be in poor shape.

4.5 Proportions of the retail price per bunch of Cooking bananas that are received by the grower, transporter, wholesaler and retailer:-

Noting from the results of the study that the retail prices of cooking bananas were quite high for the urban consumers, it was of interest to find out the proportions of the retail price that were received by grower, transporter, wholesaler and retailer. From the author's investigations (see the computer printout in Appendix 4), the prices and costs per bunch of cooking bananas at different stages of the distribution channel were as follows:-

Purchase Price	U. Shs.	6,180.
Transport costs	U. Shs.	3,430
Wholesale Price	"	13,470
Retail Price	"	17,780

Hence the proportions of the retail price per bunch of cooking bananas that were received by the different marketing intermediaries were as below:-

The grower: $(6180 \div 17,780) \times 100 = 34.8$
percent.

The Transporter: $(3,430 - 17,780) \times 100 = 19.3$
percent.

The Wholesaler: $(3,860 - 17,780) \times 100 = 21.7$
percent.

The Retailer: $(4,310 - 17,780) \times 100 = 24.2$
percent.

The results of this analysis suggest that the grower received the highest proportion of the retail price for a bunch of cooking bananas. However, this proportion of 34.8 percent may not all have gone to the grower because, for the purpose of data analysis, the wholesalers' purchase price was assumed to be the farmgate price.

Based on Figure 2, one may expect some cooking bananas to be bought by traders from rural markets or assembly points and then be resold later in urban markets. This suggests that the recorded purchase price of U.Shs. 6,180 may not have been the farmgate price since there were reports of farmers selling bunches of cooking bananas for a price as low as U.Shs. 1,000 (Uganda, New Vision, Nov. 1986).

The proportion received by transporters was 19.3 percent, and this is far above that reported by Hays (1975) for the Nigerian farmers, which was between 2

and 4 percent of the retail prices. The transporters complained mainly of bad roads (both the trunk and feeder roads) as well as high costs of spare parts for their vehicles to justify their high transport charges. The results of the study suggest that the marketing intermediaries as a group i.e. the wholesalers, transporters and the retailers, received the largest share of at least 65.2 percent of the retail price of cooking bananas, when they are all considered together. Bananas are vulnerable to spoilage due to their perishability. Banana prices are influenced by this factor.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATIONS

The conclusion and recommendations of this study are presented in sections 5.1 and 5.2 respectively.

5.1 CONCLUSION

Many less Developed Countries (LDCs), are characterised by various marketing problems, such as lack of market information, transport, poor roads and shortage of suitable market outlets and there is need to improve the marketing systems in LDCs (Hays, 1975). This is true for Uganda. A good marketing system can, for instance, stimulate production and consumption, create employment and bring about higher incomes for farmers, and this eventually contributes to the overall development of the economy.

The marketing system for cooking bananas in Kampala City in particular and Uganda as a whole was found to be functioning entirely in the hands of the private sector. This entails mobilization of private capital and entrepreneurship.

The results of this study indicate that the marketing of cooking bananas in Kampala City is not dominated by a few wholesalers since 20 percent of them were controlling 40 percent of the business. Market

transparency was noted to be poor. Mass media were not being used to publish price information. Hence dissemination of price information between different markets was minimal.

Barriers to market entry reduce market competition. This can easily result in increased prices and the volume of the business may also be greatly affected. No serious barriers to market entry were noticed with regard to either lack of managerial ability, aggressive reactions by established traders to new-comers or the legal barriers. The majority of the wholesalers and retailers depended on personal or family savings to start their businesses. Those who would manage to get loans would acquire them through private sources.

Quality of the cooking bananas was regarded by the retailers as the most important factor in attracting buyers. Selling the cooking bananas at a lower price was the second attraction. The retailers were using cash for their day to day operations. Most of them indicated that they were determining the prices of cooking bananas at the market places. This factor could easily lead to collusion among themselves.

Prices and quality of the cooking bananas were regarded by the wholesalers as the most important factors for

attracting their customers, who are the retailers. The wholesalers were also using cash in all their transactions. Collusion among the wholesalers was also suspected since it was found out that they were determining the prices of cooking bananas at the market places. It was also noted that price markups for the wholesalers involved in this trade were being influenced by the transport costs.

These results lead us to conclude that the volume of trade in cooking bananas in Kampala City was not concentrated in the hands of a few traders while the conduct aspect was subject to collusive tendencies, which could have been the cause of the high prices which prevailed during the period of the study. This situation was, in addition, aggravated by the prevalence of a poor price information dissemination system.

Most of the transport involved in the marketing of cooking bananas was hired and mainly depended on lorries. Masaka District was found to be the main supplier of cooking bananas to the Kampala City markets, having 63.6 percent of the market share.

The marketing intermediaries, such as the wholesalers, transporters and retailers, were found to be receiving the largest share of the retail price of cooking

bananas, their combined share being about 65.2 percent. The marketing intermediaries appear to have been taking advantage of the existence of a poor price information dissemination system to charge high prices. Noting that cooking bananas were not graded or processed before being marketed, the share of the retail price received by growers could have been expected to be more than what the results show us. This would encourage the growers to produce more and to obtain extra funds for their activities and welfare. Hence there is need, from a policy point of view, to institute measures which would raise the farmers' share of the retail price.

5.2. RECOMMENDATIONS.

The following suggestions are aimed at improving the marketing system for cooking bananas in Kampala City.

1. Price information needs to be disseminated to all those concerned in the marketing system by all possible means. The radio, newspapers and circulars could be utilized for this purpose. This would help the farmers in their allocative decisions since market prices would be indicative of their expected gains.

2. There is a need to introduce some measures of standards for grading bananas as it was noted that there were no uniform weights and measures involved in the

marketing of cooking bananas. This would be a long-term plan since these measures would have to be introduced gradually in all the producing areas where the economy is still predominantly peasant in nature. Introduction of uniform weights and measures would help to even out price distortions which are largely caused by absence of this facility. If some appropriate packaging would be introduced along with measures of standards, then the quality of the cooking bananas put on the market would be enhanced, through reduced bruising that occurs during handling.

3. Mukono District, which was the main supplier of cooking bananas to the Kampala City markets in the 1960's and early 1970's has been overtaken by other districts, notably Masaka District. The production of cooking bananas in Mukono District and the other areas around Kampala has been reduced by infestations of banana weevils and nematodes. If any improvement in the production of cooking bananas in these areas is to be expected, then there is need for better husbandry practices and use of modern technology, such as the application of chemical fertilizers, insecticides and nematicides.

4. Transport used in the marketing of cooking bananas mainly involved lorries which were hired. The hire charges affect the prices at which the bananas are sold

to consumers. For instance it was noted that the average transport cost for every bunch of cooking bananas delivered in a Kampala City market was U.Shs. 3,430. The government or the Cooperative Unions should avail the wholesalers some lorries for hire at cheaper rates. Alternatively, the government or some private authority should carry out a feasibility study to find out the possibility of using rail transport in the marketing of cooking bananas. Bananas are bulky and rail transport would help to move huge loads at a time. But an efficient collection system in the rural areas and an efficient distribution system in Kampala City would have to be established.

5. Farmers producing cooking bananas should be encouraged to form co-operative societies, so that they can take advantages of size. They can ask for loans to purchase lorries for transporting their bananas through these societies. They would also market their bananas directly, in the final markets, such that the marketing intermediaries would be reduced or eliminated altogether. Then the farmers' share of the retail price of cooking bananas would be increased, for their own advantage.

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Appendix 1A

BANANA AREA ('OOOHA) AND PRODUCTION ('OOOTONNES) 1971/75

DISTRICT	HA71	TON71	HA72	TON72	HA73	TON73
MUKONO	184.7	1496.5	178.1	1275.5	189.0	1533.0
MPIGI	30.0	292.0	28.9	247.8	30.1	291.9
MUBENDE	47.4	418.0	40.1	312.0	60.0	527.9
MASAKA	111.3	1179.2	120.6	1110.8	128.1	1331.9
ANKOLE	163.4	1813.6	163.5	2488.8	168.0	1863.3
KIGEZI	16.3	84.7	18.5	85.5	18.6	96.7
TORO	26.3	188.4	30.4	208.7	30.9	240.9
BUNYORO	59.9	485.2	62.1	444.7	63.1	511.0
ACHOLI	5.9	12.9	5.2	10.1	5.6	12.3
LANGO	4.9	12.3	4.7	10.6	5.2	13.0
W. NILE	2.4	14.9	3.0	16.4	3.4	21.1
MADI	1.1	5.0	2.2	9.1	2.1	9.5
KARAMOJA						
TESO	4.1	9.8	4.0	8.7	4.8	11.5
BUGISU	46.5	237.0	50.5	228.0	50.4	257.4
BUKEDI	60.1	294.5	59.7	258.6	61.3	300.3
BUSOGA	140.7	1013.0	144.3	918.7	153.4	1104.3
UGANDA	905.0	7557.0	916.0	7634.0	974.0	8126.0

Appendix 1A Con'd.

DISTRICT	HA74	TON74	HA75	TON75
ADONI	200.0	1620.9	203.3	1643.7
AGSI	35.1	340.6	38.3	270.5
AGRENDE	87.9	774.5	89.9	788.9
AKAKA	135.9	1414.5	139.7	1448.8
AGALE	178.0	1968.2	181.7	2002.1
AGBEZI	20.7	107.6	22.3	115.6
AGBO	36.2	283.4	39.6	309.2
AGWORO	67.1	543.3	69.5	561.3
AGWOLI	6.1	12.4	6.1	11.8
AGAGO	5.2	13.0	5.8	12.6
AGWILE	4.0	24.8	5.9	34.4
AGC	3.2	14.4	3.3	14.8
AGWAMOJA				
AGBO	5.2	12.5	5.8	12.6
AGWISU	51.4	259.3	53.4	270.5
AGWEDI	64.0	314.6	64.7	303.7
AGWAGA	163.0	1175.0	167.7	1205.5
AGWANDA	1063.0	8879.0	1097.0	9106.0

Source: Ministry of Agriculture, Entebbe.

Appendix 1B

BANANA AREA ('OOOHA) AND PRODUCTION (TONNES) 1976/80

DISTRICT	HA76	TON76	HA77	TON77	HA78	TON78
MUKONO	210.5	1408.0	210.7	1421.9	224.3	1526.4
MPIGI	47.3	378.5	47.5	383.8	52.3	426.5
MUBENDE	92.8	674.4	92.9	681.1	96.8	715.3
MASAKA	145.7	1250.9	150.3	1303.1	157.4	1373.5
ANKOLE	192.6	1757.7	200.9	1849.5	178.0	1652.7
KIGEZI	26.8	112.5	28.8	124.8	26.9	116.4
TORO	49.2	317.2	56.6	369.2	62.4	411.0
BUNYORO	77.4	517.8	80.3	541.9	83.4	567.7
ACHOLI	6.3	7.5	6.5	7.7	6.6	7.9
LANGO	8.3	65.8	8.9	67.2	10.2	77.4
W. NILE	10.7	124.9	23.8	130.4	30.8	170.2
MADI	3.4	3.4	3.5	3.7	3.6	3.9
KARAMOJA						
TESO	6.7	22.4	7.0	23.4	7.5	15.1
BUGISU	58.3	244.4	62.0	262.9	66.7	284.6
BUKEDI	65.1	189.3	66.0	194.9	64.9	193.0
BUSOGA	178.9	1062.3	194.3	1165.5	215.2	1302.2
UGANDA	1180.0	8137.0	1240.0	8531.0	1287.0	8844.0

Appendix 1B Con'd.

DISTRICT	HA79	TON79	HA80	TON80
MUKONO	209.3	1343.9	207.7	1009.2
MPIGI	47.6	277.0	57.4	279.0
MUBENDE	92.3	401.8	56.5	274.4
MASAKA	148.3	1304.9	221.4	1075.9
ANKOLE	187.7	1025.4	177.4	861.6
KIGEZI	23.8	104.5	76.3	370.9
TORO	52.3	204.2	103.1	500.8
BUNYORO	75.7	305.6	103.8	504.4
ACHOLI	5.7	8.2	1.8	8.8
LANGO	6.2	15.0	8.5	41.4
W. NILE	14.8	50.1	13.5	65.3
MADI	3.4	6.3	0.1	0.8
KARAMOJA				
TESO	5.0	9.5	5.6	26.9
BUGISU	58.0	166.2	79.8	387.8
BUKEDI	57.0	140.4	12.0	63.2
BUSOGA	185.1	727.0	47.1	228.6
UGANDA	1173.0	6090.0	1173.0	5699.0

Source: Ministry of Agriculture, Entebbe.

APPENDIX 1C

BANANA AREA(HA) AND PRODUCTION (TONNES) BY DISTRICT 1981/85

DISTRICT	HA81	TON81	HA82	TON82	HA83	TON83
MUKONO	123702	618510	125405	689728	125601	690806
MUBENDE	56816	284080	57745	317598	57837	318104
LUWERO	85223	426115	86617	476394	86617	476394
TORORO	13077	65385	13291	73101	13662	75141
MBALE	76506	382530	77757	427664	78027	429149
KAPCHORWA	3757	18785	3818	20999	3926	21593
SOROTI	301	1505	306	1683	315	1733
KUMI	5260	26300	5346	29403	5513	30322
MASINDI	14129	70645	14360	78980	15074	82907
HOIMA	90334	451670	91812	504966	92099	506545
MOROTO						
KOTIDO						
ARUA	8116	40580	8249	45370	8874	48807
NEBBI	5411	27055	5500	30250	5620	30910
MOYO	150	750	152	836	152	836
LIRA	1052	5260	1069	5880	1446	7953
APACH	7515	37575	7638	42009	7837	43104
KITGUM	301	1505	306	1683	311	1711
GULU	1503	7515	1528	8404	1887	10379
JINJA	11724	58620	11916	65538	12182	67001
IGANGA	21644	108220	21998	120989	22280	122540
KAMULI	13978	69890	14207	78139	14679	80735
KABALE	19239	96195	19873	109302	20010	110055
RUKUNGIRI	57567	287835	58509	321800	58989	324440
MBARARA	63429	317145	64466	354563	65168	358424
BUSHENYI	114984	574920	116865	642758	117341	645376
MPIGI	57717	288585	58661	322636	58800	323400
MASAKA	108071	540355	109839	604115	110629	608460
RAKAI	114684	573420	116560	641080	117726	647493
KASESE	15331	76655	15582	85701	15625	85938
BUNDIBUGYO	23749	118745	24137	132754	24170	132935
KABAROLE	64631	323155	65688	361284	66224	364232
TOTALS						
HA81	1,179,901.00					
TON81		5,899,505.00				
HA82	1,199,200.00					
TON82		6,595,607.00				
HA83	1,208,621.00					
TON83		6,647,423.00				

APPENDIX 1C cont'd

DISTRICT	HA84	TON84	HA85	TON85
MUKONO	125608	696685	125621	708292
MPIGI	59126	300868	59132	290138
MUBENDE	57897	277732	57903	285388
LUWERO	86617	443202	86626	427396
MASAKA	110907	649997	110919	545879
RAKAI	117813	690738	117825	580897
JINJA	12184	58447	12185	77284
IGANGA	22285	107028	22287	141347
KAMULI	14683	75130	14685	93127
TORORO	13691	65676	13696	86673
MBALE	78083	391211	78095	495013
KAPCHORWA	3929	18847	3931	24908
SOROTI	315	1511	315	1999
KUMI	5513	26445	5514	34976
MOROTO	4	12	4	18
KOTIDO				
LIRA	1568	8490	1568	8154
APACH	7846	8327	7847	55085
KITGUM	211	787	211	1755
GULU	1591	5932	1592	10641
ARUA	8874	42569	8875	56297
NEBBI	5667	26978	5668	35655
MOYO	152	247	152	964
MASINDI	15174	72790	15176	85007
HOIMA	92109	540029	92119	519366
KASESE	15625	91610	15627	77100
BUNDIRUGYO	24176	134012	24181	153339
KABAROLE	66224	317677	66231	373453
KABALE	20010	117319	20012	126947
RUKUNGIRI	58994	345883	59000	374235
MBARARA	65212	382338	65219	321560
BUSHENYI	117341	562885	117353	661695

HA84	1,209,429.00
TON84	6,461,402.00
HA85	1,209,569.00
TON85	6,654,588.00

TOTALS

 Planning Unit, Ministry of Agriculture, Entebbe.

Appendix 2

Weights attached to various food items in Uganda
in terms of their contribution to the staple diet

<u>Food item</u>	<u>Weight</u>
Bananas	20
Meat	17
Maize Meal	14
Dry Fish	14
Sugar	8
Groundnuts	5
Milk	5
Bread	3
Sweet Potatoes	2
Dry beans	2
Cooking Oil	2
Rice	2
Dry Cassava	1
Green Vegetables	1
Tea	1
Salt	1
Tomatoes	1
Onions	1
-----	-----
-	100
-----	-----

Source: Statistics Dept. Ministry of Planning and
Economic Development, Entebbe, Uganda.

APPENDIX 3

Average Retail Prices of Cooking Bananas
in Kampala City Markets (U.Shs. per kg.)

YEAR	M	O	N	T	H	
	JAN.	FEB.	MAR.	APR.	MAY.	JUN. JUL.
1982	13.9	14.6	21.5	22.7	23.2	22.9 21.0
1983	29.2	27.3	27.8	34.2	41.9	36.9 37.9
1984	49.4	34.4	39.3	45.2	42.6	38.9 35.0
1985	82.6	72.5	84.9	103.5	113.0	114.2 110.5
1986	228.6	233.3	306.3	357.9	393.8	287.7 308.9
1987*	1704.3	728.2	740.0	1000.0	1204.2	1099.6 640.0

APPENDIX 3 Con'd.

YEAR	M	O	N	T	H
	AUG.	SEP.	OCT.	NOV.	DEC.
1982	23.7	-	32.8	41.0	34.2
1983	39.4	47.6	61.3	59.9	53.2
1984	42.4	47.9	61.2	78.3	97.7
1985	17.4	131.6	222.2	245.5	324.3
1986	358.8	416.7	650.0	-	704.3
1987*	679.0	NA	NA	NA	NA

Source: Statistics Department, Ministry of Planning and Economic Development, Entebbe, Uganda.

- Notes: 1. * NA : Not Available at the time of the study.
2. The Statistics Department was recording retail prices for Cooking bananas in Shs. per Kg. for ease of comparison.

Market Variables

<u>Case No.</u>	<u>Producer Price</u>	<u>Consumer Price</u>
1	8.0	17
2	6.5	18
3	7.0	17
4	7.0	20
5	9.0	22
6	5.0	19
7	5.5	18
8	5.4	17
9	6.0	20
10	6.0	19
11	7.5	20
12	4.0	16
13	4.0	17
14	3.5	16
15	8.0	20
16	6.0	18
17	5.0	18
18	6.5	20
19	8.5	19
20	6.5	18
21	7.0	19
22	5.0	17
23	6.0	18
24	6.0	18
25	6.0	18
26	6.0	20
27	5.0	17
28	7.5	19
29	6.5	20
30	4.0	18
31	9.0	21
32	6.5	18
33	4.0	15
34	4.0	16
35	9.5	16
36	9.0	17
37	6.0	15
38	10.0	19
39	10.0	20
40	10.0	21
41	8.5	18
42	6.0	16
43	10.0	17
44	4.0	16
45	9.0	18
46	5.0	16
47	9.0	20
48	6.5	18
49	6.0	19
50	8.0	19
51	4.2	16
52	4.0	16
53	3.4	15
54	3.5	16
55	5.0	17
56	6.1	18
57	3.0	16
58	3.8	17
59	5.0	17

Market Variables (Cont'd)

<u>Case No.</u>	<u>Producer Price</u>	<u>Consumer Price</u>
60	4.0	18
61	10.0	22
62	9.0	20
63	9.0	23
64	5.0	18
65	5.3	19
66	4.5	17
67	5.0	18
68	4.5	16
69	5.0	19
70	5.0	20
71	7.0	20
72	6.5	19
73	5.2	19
74	4.5	17
75	6.7	18
76	6.0	14
77	6.0	15
78	7.1	19
79	7.0	20
80	4.7	15
81	5.1	17
82	6.0	13
83	5.5	16
84	8.0	19
85	9.5	19
86	7.0	17
87	6.0	17
88	9.0	18
89	8.0	20
90	4.0	16
91	3.0	16
92	4.0	15
93	7.0	17
94	7.0	18
95	3.5	16
96	3.0	16
97	3.8	15
98	5.2	18
99	6.1	18
100	5.0	17
101	7.0	13
102	9.5	20
103	7.0	19
104	8.5	19
105	6.0	18
106	4.5	17
107	4.2	18
108	4.0	16
109	8.5	21
110	5.5	17
111	5.0	16

Statistical analysis of the market variables:-

Average(Producer Price)= 6.16

Variance(Producer Price)=3.53

Average(Consumer Price)= 17.78

Variance(Consumer Price)=3.46

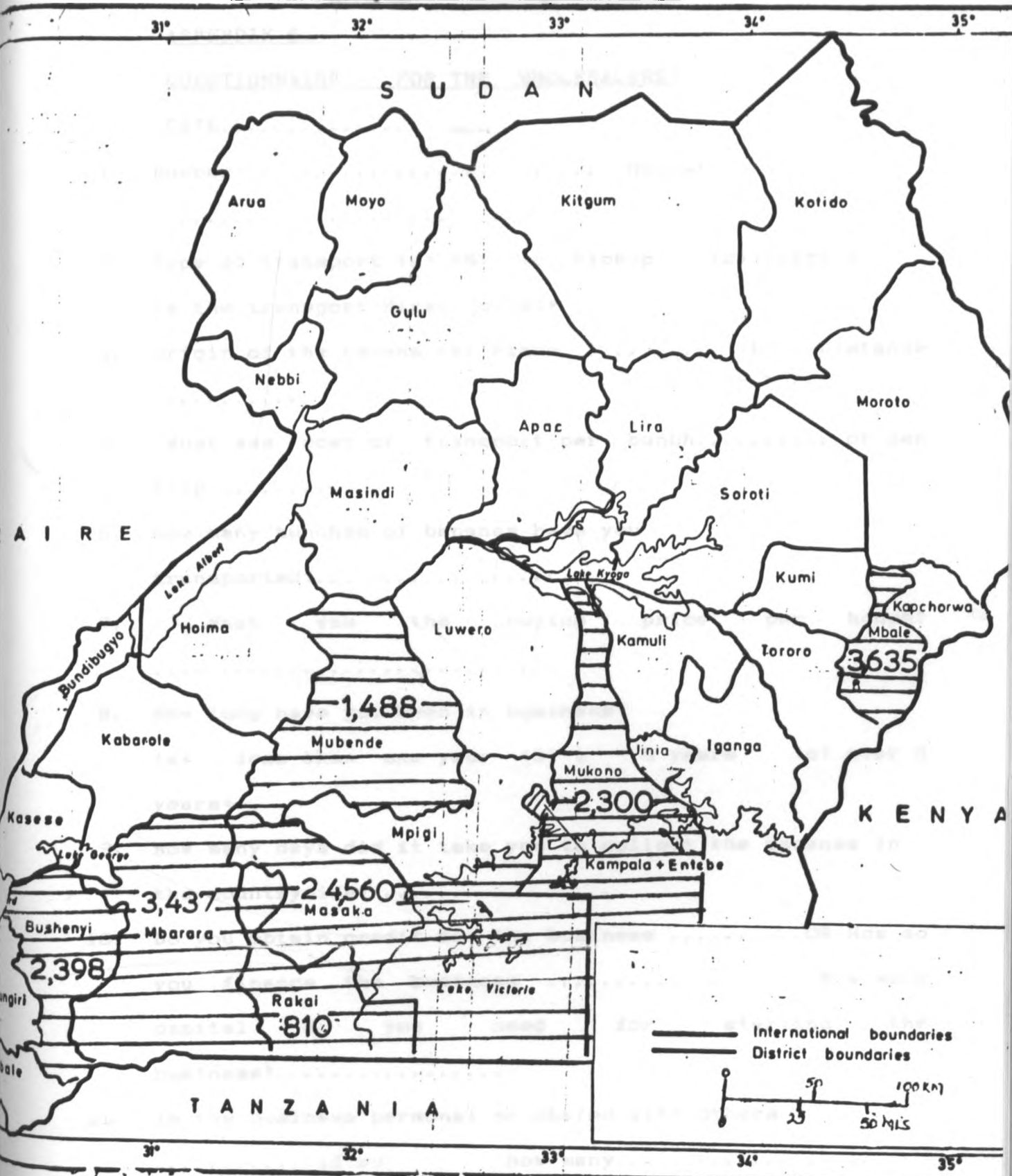
Covariance(Producer Price, Consumer Price)= 2.07

Correlation(Producer Price, Consumer Price)=0.593

Intercept=-4.49 ; Slope=0.599 ; Standard Error=0.078

Student's T Value=7.689 ; Probability=0.000

**APPENDIX 5
QUANTITIES OF COOKING BANANAS SUPPLIED TO KAMPALA
MARKETS, BY SOURCE AREAS**



Source : Author's Investigations

APPENDIX 6.

QUESTIONNAIRE (FOR THE WHOLESALERS)

DATE.....

1. Number, Market
2. Type of transport (a) PSV (b) Pickup (c) Lorry *
- 3 Is the transport Hired /owned*
4. Origin of the banana (a) Place (b) Distance
5. What was cost of transport per bunch..... or per trip
6. How many bunches of bananas have you transported?.....
7. What was the buying price per bunch?
8. How long have you been in business?
(a) less than one year (b) 1 - 5 years (c) over 5 years*
9. How many days did it take you to collect the bananas in the countryside?
10. Do you obtain credit for the businessOR How do you finance the business How much capital do you need for starting the business?.....
11. Is the business personal or shared with others ?
.....if so how many
12. Do you sell bananas to only one market ? If there are others, which ones ?

APPENDIX 6 (Cont'd)

13. How do you determine the prices ?

.....

(a) Direct observation (b) Personal communication

(c) Both (c) others(specify).....*

14. Do you determine the prices in advance or at the market place ?

15. Do you sell the bananas to the retailers on credit?

.....

16. In you opinion, which of the following attracts the retailers to whom you sell the bananas:- (a) Price

(b) Cash payment (c) Credit (d) Quality of produce (e) Personal relations (f) Prior

arrangements (g) Other (Rank them in order of importance)

17. What is your agelevel of education.....?

(a) Primary (b) Secondary (c) Post Secondary

18. What are the main problems you experience ?

List them in order of importance.....

.....

19. Are there any resistance you came across when trying to join the business ?

20. Do you buy bananas directly from farmers or from other traders ?

* Tick whichever is applicable

APPENDIX 7

QUESTIONNAIRE. (FOR RETAILERS) DATE

1. Number Market.....
2. How many bunches of bananas have you bought today
.....
3. Do you obtain any credit for the business
..... OR How do you finance the business
?.....
4. Is the business personal or shared with others ?
..... If so, how many ?.....
5. How do you determine the prices
(a) Direct observation (b) Personal communication
(c) both (d) others ,(specify) Tick whichever is
applicable.
6. Do you determine the prices in advance or at the market
place Do you know the prices in
other markets?.....
7. Do you sell the bananas to the buyers on credit?
.....
8. In your opinion, which attracts the buyers to whom you
sell the bananas:- (Rank them in order of importance).
(a) Market situation (b) Large purchases
(c) Long-standing business relations (d) Quality of
produce (bananas) (e) Credit (f) Lower selling
prices (g) Others

APPENDIX 7 (Cont'd)

9. What are the main problems you experience ?

List them in order of importance.....
.....
.....

10. Are there any restrictions you come across when trying to
join the business ?.....

.....

11. How many bunches of bananas do you sell in one day ?.....

12. What is your lowest price per bunch of banana ?
and the highest price

Appendix 8.

The Concentration of the Banana Trade in Five
Selected markets in Kampala City.

Number of Bunches per Wholesaler	Percentage of No. of Bunches per Wholesaler	Cummulative Percentage of No. of Bunches	Cummulative Percentage of the wholesalers
1540***	3.99	-	-
1320***	3.42	7.41	2.22
1050***	2.72	10.13	3.33
955**	2.47	12.60	4.44
920**	2.38	14.98	5.55
900**	2.33	17.31	6.66
865**	2.24	19.55	7.77
826**	2.14	21.69	8.88
823**	2.13	23.82	9.99
790**	2.04	25.86	11.10
785**	2.03	27.89	12.21
785**	2.03	29.92	13.32
749**	1.94	31.86	14.43
550**	1.42	33.28	15.54
500	1.29	34.57	16.65
500	1.29	35.86	17.76
500	1.29	37.15	18.87
470	1.21	38.36	19.98

Appendix B (cont'd)

462	1.20	39.56	21.09
456	1.18	40.74	22.20
450	1.16	41.90	23.31
450	1.16	43.06	24.42
450	1.16	44.22	25.53
450	1.16	45.38	26.64
450	1.16	46.54	27.75
440	1.14	47.68	28.86
435	1.13	48.81	29.97
434	1.12	49.93	31.08
430	1.11	51.04	32.19
425	1.10	52.14	33.30
420	1.09	53.23	34.41
418	1.08	54.31	35.52
412	1.07	55.38	36.63
410	1.06	56.44	37.74
410	1.06	57.50	38.85
410	1.06	58.56	39.96
410	1.06	59.62	41.07
408	1.06	60.68	42.18
408	1.06	61.74	43.29
405	1.05	62.79	44.40
405	1.05	63.84	45.51
400	1.04	64.88	46.62
400	1.04	65.92	47.73
400	1.04	66.96	48.84
400	1.04	68.00	49.95
400	1.04	69.04	51.06
396	1.03	70.07	52.17
395	1.02	71.09	53.28

Appendix B (cont'd)

395	1.02	72.11	54.39
395	1.02	73.13	55.50
390	1.01	74.14	56.61
390	1.01	75.15	57.72
390	1.01	76.16	58.83
388	1.00	77.16	59.94
380	0.98	78.14	61.05
375	0.97	79.11	62.16
375	0.97	80.08	63.27
372	0.96	81.04	64.38
370	0.96	82.00	65.49
370	0.96	82.96	66.60
366	0.95	83.91	67.71
364	0.94	84.85	68.82
360	0.93	85.78	69.93
360	0.93	86.71	71.04
350	0.91	87.62	72.15
350	0.91	88.53	73.26
303	0.78	89.31	74.37
300	0.78	90.09	75.48
300	0.78	90.87	76.59
300	0.78	91.65	77.70
300	0.78	92.43	78.81
290	0.75	93.18	79.92
280	0.73	93.91	81.03
280	0.73	94.64	82.14
220	0.57	95.21	83.25
205**	0.53	95.74	84.36
200	0.52	96.26	85.47
174**	0.45	96.71	86.58

Appendix 8 (cont'd)

155**	0.40	97.11	87.69
150	0.39	97.50	88.80
150	0.39	97.89	89.91
143**	0.37	98.26	91.02
125	0.32	98.58	92.13
105	0.27	98.85	93.24
100	0.26	99.11	94.35
98	0.25	99.36	95.46
68	0.18	99.54	96.57
65	0.17	99.71	97.68
60	0.16	99.87	98.79
50	0.13	100.00	99.90
<hr/>			
38,628	-	100.00	100.00
<hr style="border-top: 1px dashed black;"/>			

Source: Author's Investigations.

Notes: Wholesalers were considered by the total number of bunches of cooking bananas, which were delivered to Kampala City markets.

A percentage of 1.11 percent for each wholesaler was used to arrive at the cumulative percentages.

*** Wholesalers delivered loads of cooking bananas to Kampala City markets three times.

** Wholesalers delivered loads of cooking bananas to Kampala City markets twice.

The rest of the wholesalers delivered loads of cooking bananas to Kampala City markets only once.

Appendix 9.

The list of markets which were selected from different groups of markets in Kampala City for the study.

Nakasero Group

Nakasero

Nakivubo

Musupali

Wandegeya

Katwe Group

Katwe

Kibuye I

Kibuye II

Gaha

Namirembe Group

Nekulabye

Bakuli

Kasubi

Netete

Mulago Group

Mulago

Bwaise I

Bwaise II

Kamwokya

Nakawa Group

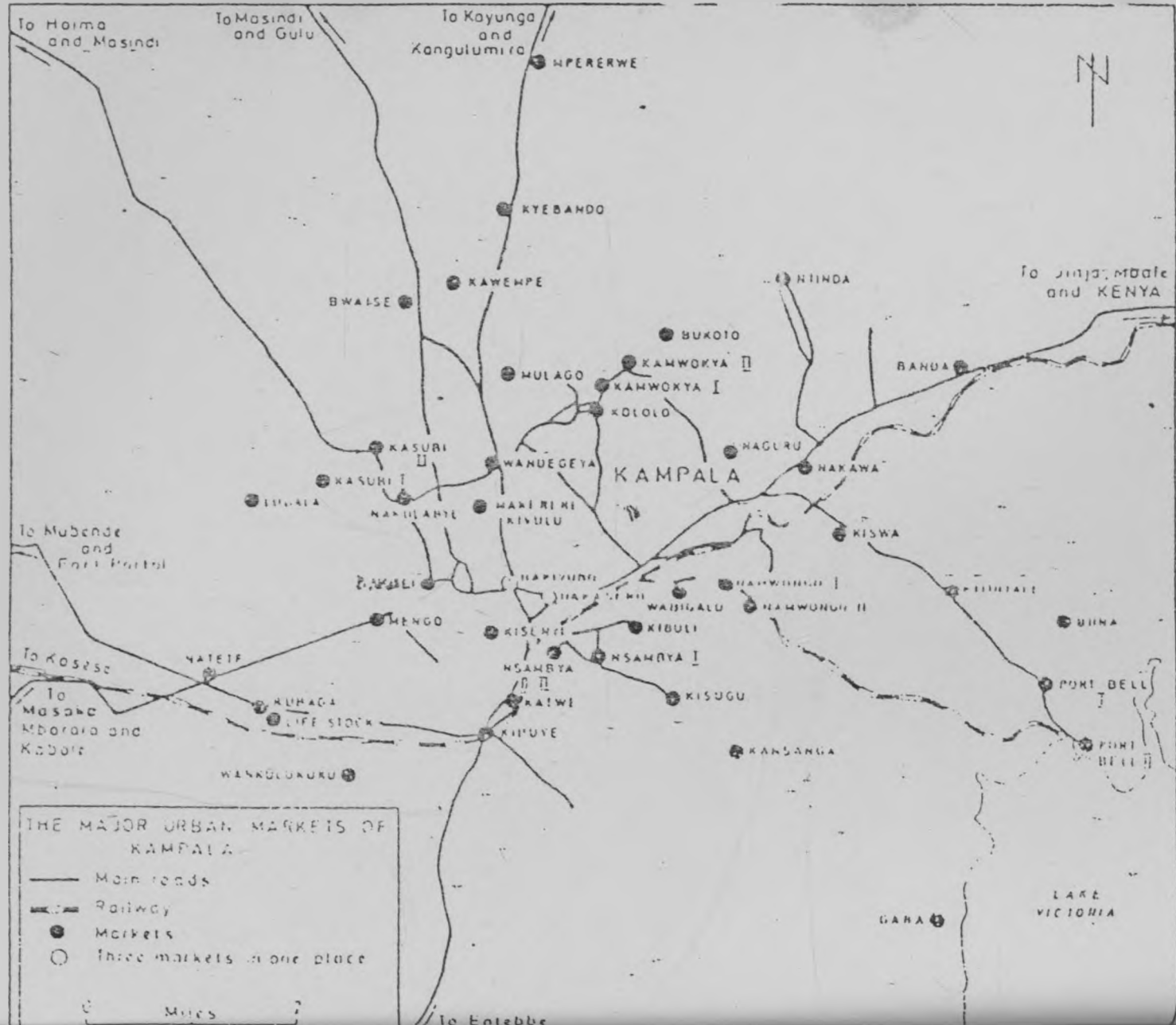
Nakawa

Ntinda

Bugolobi

Kitintale

APPENDIX 10. THE MAJOR URBAN MARKETS OF KAMPALA



Appendix 11.

TRANSPORT COSTS VS MARKUPS (SHS '000.) OF COOKING BANANA
 Function: PRLIST
 Data case no. 1 to 111
 Without selection

LIST OF VARIABLES

 VAR TYPE NAME/DESCRIPTION
 1 numeric TRANS COST
 2 numeric MARKUP

NO.	1	2	NO.	1	2	NO.	1	2
1	5.1	3.3	35	2.7	2.7	70	4.6	5.1
2	2.6	3.3	36	2.4	3.1	71	2.8	4.3
3	3.8	4.9	37	4.8	5.0	72	3.3	5.2
4	2.9	5.0	38	3.6	4.5	73	6.2	6.9
5	3.7	5.9	39	2.7	2.3	74	2.0	3.0
6	2.5	3.1	40	2.5	2.5	75	4.3	5.6
7	4.6	5.2	41	2.8	2.8	76	1.1	2.4
8	6.0	6.1	42	2.3	2.2	77	2.1	3.7
9	6.5	6.9	43	3.5	3.9	78	3.9	5.0
10	3.3	3.8	44	5.8	6.2	79	4.7	5.8
11	2.7	3.6	45	2.2	2.6	80	5.1	4.7
12	4.9	3.3	46	2.1	2.5	81	3.3	4.1
13	2.3	4.0	47	4.6	5.0	82	4.6	3.5
14	6.6	5.1	48	1.6	1.9	83	6.0	5.5
15	2.5	3.5	49	1.4	2.1	84	3.0	3.5
16	3.9	4.3	50	4.1	2.9	85	2.6	4.7
17	3.8	5.1	51	2.6	2.7	86	2.3	3.6
18	5.7	6.7	52	5.7	5.3	87	2.7	3.1
19	5.0	6.2	53	3.2	3.1	88	3.4	3.7
20	3.1	4.3	54	1.9	2.2	89	2.7	4.4
21	3.5	4.6	55	2.6	3.4	90	2.6	3.4
22	6.2	7.0	56	2.5	3.5	91	4.7	5.4
23	3.8	5.3	57	3.8	4.6	92	2.9	3.1
24	3.5	3.7	58	3.1	5.1	93	2.2	4.8
25	3.1	4.0	59	3.6	4.9	94	1.7	3.1
26	3.7	5.3	60	3.9	5.1	95	3.0	4.1
27	3.9	3.4	61	3.4	5.0	96	1.6	2.9
28	4.5	5.4	62	3.3	2.9	97	3.6	4.0
29	3.1	3.9	63	3.5	4.5	98	2.6	4.2
30	3.6	4.2	64	1.8	3.2	99	3.1	4.4
31	3.2	5.1	65	3.5	4.8	100	3.8	5.2
32	2.0	2.9	66	5.3	6.0	101	2.7	2.8
33	4.0	4.0	67	2.6	3.1	102	1.1	3.4
34	3.3	3.7	68	5.7	5.8	103	2.6	4.0
			69	2.4	4.0	104	2.5	2.5

Appendix 11. Con'd.

Case NO.	1	2
105	2.2	3.0
106	3.6	4.9
107	3.1	3.5
108	4.9	5.6
109	2.6	3.9
110	2.4	3.6
111	3.6	3.6

TRANSPORT COSTS VS MARKUPS (SHS '000.) OF COOKING BANANA

Function: DATA ANALYSIS
 Data case no. 1 to 111
 Without selection

TRANS COST

Variable 1 Average = 3.43 Variance = 1.50

MARKUP

Variable 2 Average = 4.16 Variance = 1.37

Number = 111
 Covariance = 1.11 Correlation = 0.774
 Intercept = 0.06 Slope = 0.810
 Standard Error = 0.063
 Student's T value 12.761 Probability = .000

Notes: Wholesale price less Transport cost and Buying price is equal to the markup.