THE MEAT RETAILING SYSTEM IN NAIROBI

By

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This thesis is my original work and has not been presented for a degree in any other University.

Signed ..Berhe..............

BERHE TEWOLDEBERHAN

This thesis has been submitted for examination with our approval as University Supervisors.

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ABSTRACT

The consumption of beef in Nairobi or Kenya as a whole is higher relative to other types of meat; hence the author confines his study to the beef sector with particular emphasis on the retail trade. In general the Price Control System in the beef industry forms a springboard for other problems. The resultant low profit margins have caused the butchers to give preferences to selling of low grade carcass.

Initially 52 butchers (about 11% of the total number in Nairobi) were interviewed. However, the data of only 80% of the butchers interviewed was used for analysis. In the categorization of the butchers 14 were found to be high class and 28 low class. The distinction of the two classes of butchers was mainly on their selling practices. The high class butchers sold their beef in special cuts such as fillet steak, rump steak, while the low class sold their carcass in either meat on bone or off bone only. Distinct characteristics of the two classes of butchers with respect to grade purchase, source of meat and composition of product handling in the retail shops were also observed.

Five hypotheses were put forward to answer some crucial elementary observations. Some of the hypotheses tested revealed positive results. In the testing of the hypotheses it was disclosed that the number of butchers did not decrease because of the unprofitability of beef retail business. It was rather found

that new entrants whose major sale was beef came into the picture.

In view of the findings various conclusions were made. It was inferred that, despite the butchers claim, the business of beef retailing is still profitable. Secondly, there is a general lack of incentives to sell higher grade carcass in the retail market.

Recommendations geared to improving the retail trade of beef were forwarded. Above all it was felt that, establishment of butchers training centre, availability of credit facilities, a thorough study of the cost structure for beef retailing, the decontrolling of some of the carcass grades or all grades were of utmost urgency in rectifying the beef retail trade in Nairobi. Moreover, the need to relate the retail prices to that of the wholesale and farm level prices is of great significance in the adjustment of the pricing policy for beef.

LIST OF ABBREVIATIONS

1.	K.M.C.	-	Kenya Meat Commission
2.	non-KMC	-	Private Wholesalers
3.	F/Q	-	Fore-Quarter
4.	H/Q	-	Hind-Quarter
5.	S/Cus	-	Sales per Customer
6.	S/Emp.	-	Sales per Employee
7.	K.shs.	-	Kenya Shillings
8.	Sq.m.	-	Square Meter
9.	Cus/D	-	Customers per Day
10.	F.A.Q.	-	Fair Average Quality

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CHAPTER 1

INTRODUCTION

1-1 General Description Of Meat Retailing System In Nairobi And The Problems Involved

The scenario of the meat retailing system in Nairobi can be described in line with the different participants in the market. The various participants in the retail trade of meat are:

1. the butchers on the retail side,
2. Kenya Meat Commission (KMC) and private wholesalers (non-KMC) on the wholesale side,
3. the consumers,
4. and the government body which considers the interests of retailers, wholesalers and the different income groups of consumers when determining maximum prices of beef and offals.

Meat retailing is performed by high and low class butchers. The distinction between the two is on the basis of the form of the beef handled. High class butchers sell special cuts, such as rump steak, fillet steak and sirloin, while low class butchers sell only meat off or on the bone.

The prices for beef including offals is fixed by the government both at wholesale and retail levels. Table 1 shows the maximum retail prices set by the price controller for the year 1975. There are now only two categories of beef for which the price controller sets the maximum retail price.

TABLE I: MAXIMUM RETAIL PRICES FOR BEEF AND SPECIAL BEEF CUTS, NAIROBI, 1975

	Commodity	Max. Price Per Kg. (in Kshs.)
1. Beef	Beef with bone	7.40
	Beef without bone	8.60
2. Beef (Special Cuts)	Fillet	13.00
	Sirloin on bone	11.40
	Sirloin	13.00
	Rump Steak	10.40
	Silverside	8.30
	Topside	9.30
	T. Bone Steak	11.40
	Stewing Steak	8.00
	Brisket	7.80
	Boneless Shin	5.40
	Ox-Tail	5.10
	Ox-Liver	6.20
	Ox-Heart	5.30
	Ox-Tounge	7.20
	Minced Steak	8.30
	Tripes	4.50

Source: Kenya Subsidiary Legislation, January 23, 1975 pp. 155 and 160.

The first category of the price fixing is for the special cuts. The second category is only for meat on and off bone. Even though the wholesale price of beef carcase is differentiated by grade, the retail price does not specify from which carcass grade the two categories are obtained. That means fillet steaks from different carcass grades fetch the same retail price. Similarly, the meat on or off bone have the same retail price regardless of the carcass grade.

X There have been indications of dissatisfaction by butchers with the price control system. The general contention of the butchers is that retailing beef continues to be unprofitable. The official maximum wholesale price charged by the principal wholesaler, KMC, for all grades of beef increased by an average of 58% since 1971, whereas the retail price increased only by 5% on special cuts and by 15% on boned meat(11). The dissatisfaction with the increase in wholesale price was manifested in January, 1975, when butchers boycotted meat selling even though all forms of strike were illegal at that time. It is therefore, imperative to study the retail market of beef in line with effect of the price control system on the gross margin. In addition to that the fixing of the wholesale price as related to the retail price would be of paramount importance in studying the beef retail trade.

The two classes of butchers differ in their selling practices or handling of the beef. The effect of the price control system and the changes in wholesale price on the gross margin is therefore expected to be different. The high class butchers mainly serve high income consumers, including expatriates who demand relatively high quality beef of specific cuts. Hence, as indicated by the butchers, there could still be high potential demand for quality beef even if the retail price is raised above the legal maximum.

One of the objectives of the price control system is to protect consumers from paying very high price. By keeping the price of beef low, it would be possible, particularly, for the low income consumers, to buy beef. However, the welfare of the society in general could be reduced in the sense that the retail market is not conducive to provision of high quality beef. As will be discussed in the gross margin section, butchers have an advantage of selling the lower carcass grade.

Kenya Meat Commission (KMC) is a parastatal body which has public and commercial functions. It performs the public function by playing a role in the implementation of the government's policy on purchase and processing of livestock for meat in Kenya. The producer's price at which KMC buys livestock and the wholesale price it charges to the butchers are controlled by the government. In other words the commission tries to stabilize the price in the country by adopting the price fixed by the control office in the Ministry of Finance and Planning. The second function is to make profit like other private firms. Kenya Meat Commission, like the other beef wholesalers, has a market share in the local trade of

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beef. That means a fraction of the beef supply for the retail market in Nairobi comes from KMC. The Nairobi retail market handled an average of 50 tons of beef per day for the year 1975, out of which about 12 tons were supplied by KMC(8). When expressed in percentage the commission supplied only 27.5% to the Nairobi retail market of beef. The study by T.J. Aldingon and F.A. Wilson in 1968, showed that 60-70% of beef supply for Nairobi used to come from KMC(2,pp. 101).

The percentage figures could imply that the supply from the KMC to the local retail market has decreased over the years. Some of the explanations for the reduction in the percentage beef supply by the commission are the increased number of private wholesalers and partly becaues of KMC's tendency to export more.

Kenya Meat Commission has legal monopoly over the export trade of meat in the country. As a parastatal body it serves the government in line with foreign exchange requirement. The profit motive of the institution could also be satisfied by exporting to places whose price for beef is decontrolled. Depending on the demand the beef is exported to a market where it can fetch higher price. A fruitful discussion was held with sales manager of KMC in line with export. He stated that the procurement cost for beef being low, higher profit could be obtained from the export market than the local.

Kenya exported 36.5% of its meat output over the years 1964-74, and the annual growth in export forecast by FAO is 7.6%(5,pp. 154). These percentage figures could imply that KMC, being the sole exporter, has to dispose larger portion of its output for export in order to meet the required quantity.

1-2 The Importance of Systematic Study on "Meat Retailing System in Nairobi" and Definition of Meat in the Study

It is necessary to carry out a systematic study of the beef retail market in order to come up with evidence of the problems that exist and possible solutions for them. The government fixes the retail price to benefit the low income consumers. On the other hand, the butchers, particularly, the high class butchers, complain that beef trading is unprofitable under the price control system. Therefore, proper investigation is indispensable in order to establish whether the meat retail market is operating efficiently, or whether the complaints of the meat retailers are true.

The definition of meat in this context refers only to beef meat. The study could have been more complete if it had included all types of meat that are served in the market. However, because of very limited time and funds it was planned to cover only beef. Nevertheless, this project is invaluable, because of the high consumption of beef in Nairobi and in Kenya as a whole.

1-3 The Principal Topics Discussed in the Thesis and the Hypotheses

Major topics discussed in this project are the retail market structure, the gross margin from wholesale to retail level and the pricing policy of beef. The objectives of the study were:

1. to determine the gross margin between the wholesale and retail market for each class of butchers and for each quarter of the carcass grades.
2. to analyse the retail market with respect to volume of sales, classes of butchers, competition, size of shops and sales of beef in relation to other products.
3. to determine how the government's pricing policy affects the different classes of butchers or retailers.
4. to see whether the price control system for beef is satisfactory or not and to investigate the possibility of improving the retail market for beef.

The following hypotheses were tested in the study:

1. The gross margin of each carcass grade is different, and butchers purchase the carcass grade with higher gross margin.
2. High class butchers sell their carcass quarter in special cuts because the return is higher than when sold in only two forms: meat on and off bone.
3. Price Control Order has the effect of reducing the number of butchers, because of the unprofitability of the business of beef retailing. Consequently the welfare of the consumers is reduced in terms of travelling a longer distance to get the commodity (beef).
4. The high class butchers tend to buy from KMC (where the required grade can be obtained) unless there is a

shortage of supply at KMC depot, whereas, the low class butchers purchase mostly from private wholesalers.

5. Keeping beef meat in the shop increases the sales of other types of meat. That means if butchers believe that beef is not profitable they keep beef in their shop in order to attract customers who at the same time would buy other types of meat.

1-4 Literature Review

Previous investigations were done on the beef retail market in Nairobi by the Institute for Development Studies, University of Nairobi. T.J. Aldington and Frank A. Wilson made some effort to investigate the market structure, and the gross spread analysis of Nairobi beef retailing system. The sample of butchers considered for their analysis were those who purchase from KMC. Moreover, their criteria of classifying the butchers into different categories was based on the beef grade they purchased from KMC. In this study a different criteria was used to classify the butcher. The sample considered by T.J. Aldington and Frank A. Wilson was reasonable, bearing in mind that at that period 60-70%(2, pp.10)of the beef supply to Nairobi retail market was from KMC. F.G. Hay studied the beef retail trade in Nairobi with respect to market structure and gross margins of the high class butchers in 1972. He concluded that the Price Control Order of 1971 reduced the gross margin on hind-quarter by between 19% and 99% and on the forequarter by between 3% and 27% depending on the carcass grades(6, paras. 1.12-1.22). He also inferred that the increase in wholesale price of July, 1971 reduced the gross margin by 15% to 53% on hindquarter and by 20% to 159% on fore-quarter.

Inspite of the previous efforts made to investigate beef retail trade in Nairobi, a more contemporary study of the same topic would also be of paramount importance. Due to several changes that have taken place between then and now, and due to some deficiencies of the previous studies, it is of substantial importance to carry a study on similar topic. The study by T.J. Aldington and Frank A. Wilson was exclusively for those who purchase from KMC. Some of the sources from private wholesalers (non-KMC) were not included in the analysis This study includes both KMC and private wholesale sources.

The figure of gross margin and the market structure of the beef retail trade is expected to have changed through time. The share of KMC on the beef retail trade is smaller than before. This indicates that private wholesalers now play a major role in the beef retail trade. Hence this study shows an up-to-date and comprehensive gross margin figure, and also describes the retail market structure which is expected to be different from what it previously used to be.

Moreover, the study by T.J. Aldington and Frank A. Wilson was very simplified especially on the calculation of the gross margin. The loss in weight of the beef carcass due to shrinkage and waste was not considered. That means they assumed that a given carcass weighs the same at wholesale and retail levels. This study has not established a standarized percentage of loss in weight between the market channels. However, every butcher interviewed was asked the weight of the particular carcass at purchasing time, the actual yield obtained for sale from that carcass grade, and the retail price for each item of the yields. This gives better approximation of the true retail sales figure, excluding some parts of the carcass which did not contribute to the retail sales of the carcass grade.

In this study the classification of the butchers was based on their selling practices rather than on their purchase of beef grades. The high class butchers generally serve those customers who demand specific prime cuts, while the low class butchers serve those customers who do not have any choice for prime or special cuts except meat with bone or meat without bone. The special cuts sold by high class butchers is shown in Table 1. Under the price control system the high class butchers tend to buy the lower carcass grade. This happens because the customers are not normally able to identify the fillet steak obtained from Choice or a lower grade like Standard unless it is extremely low, for instance the Commercial carcass grade.

The low class butchers buy both the high and the low carcass grade, the different grades are mixed and sold in meat off bone, and meat on bone. There is, therefore, an over-lapping in the purchasing pattern of carcass grades between the two classes of butchers. Hence, the distinct difference between the high class and low class butchers is only the selling practice. The high class butchers sell in special cuts such as fillet steak, rump steak, sirloin and the low class butchers sell in only two forms, meat on bone and meat off bone.

This study is more or less similar in approach to that of F.G. Hay except that it comprises both classes of butchers, whereas F.G. Hay's study dealt only with high class butchers.

1-5 Methodology

The Nairobi beef retail trade survey was designed to cover butchers who purchase from KMC and private wholesalers (non-KMC). As stated earlier, the sales manager of KMC estimated that 75% of the total beef supply to Nairobi comes from private sources and only 25% from KMC(13). Therefore, the supply that comes to Nairobi retail market from private wholesalers (non-KMC) has signficantly increased since 1968. But because of the unavailability of recorded data from the non-KMC wholesalers, it was decided that primary data from the butchers be used for analysis during this study. There is a total number of 458 butchers in Nairobi(11). Assuming 700,000 inhabitants in Nairobi an average figure of 1,500 customers are served by each butcher(10, pp. 6). In the designing of the sample, Nairobi town was classified into thirteen locations as follows:

1. Nairobi City Centre
2. Municipal Market
3. River Road, Race Course and Kariokor
4. Eastlands
5. Shauri Moya/Pumwani
6. Eastleigh/Pangani
7. Kibera/Woodley and Dagoretti Corner
8. Residential Suburb Shopping Centre
9. High Ridge

10. Railway/Industrial Area

11. Kariobangi

12. Nairobi South "C"

13. Kangemi/Kabete

During the pretesting of the questionnaires it was observed that the response of butchers within a class was more or less uniform, although it was different between the high and low classes. Hence, a random sample of four butchers from each location were interviewed, making the maximum sample size to be fifty two. However, some butchers were not co-operative enough to answer all questions. The actual number of butchers included for analysis was fourty two. After the data collection the butchers were grouped into their respective categories in accordance with the criteria used in this study, that is, selling practices of beef. This meant that those butchers who sold in special cuts were considered as high class, and those who sold in meat off and on bone only as low class. The period of data collection was from December 1, 1975 to January 8, 1976. The information collected for this study basically refers to the retail market situation since January 23, 1975, when wholesale prices at KMC were increased. The analysis of the gross marketing margin was done in two ways. First, the gross margin per quarter of each carcass grade in the high and low class butchers was worked out. Secondly, the gross margin for each retailing firm was calculated on the basis of their total purchase and total sales. The gross margin figure was defined as the difference between the retail sales and cost of purchasing the carcass, expressed as the percentage of the retail sales.

1-6 Limitation of the Study

The first off-hand limitation of the study was that it refers only to beef retail trade. The research would have been more complete if it had included all other types of meat too. But because of the limited time and research funds it was decided to concentrate on beef only. Comparison of the gross marketing margin for the different meat types could have given a clearer picture of the meat retail trade in general. The second limitation was the error that can be attributed to the biases of the butchers in estimating their sales data. At times, they deliberately underestimated the sales figure in order to be consistent with their idea that beef trade is unprofitable. The butchers biases could have been minimized if recorded data would have been available.

Moreover, the study has not succeeded in revealing the cost structure of retail trade in beef. This would require a longer time period in order to get close co-operation and reliable figures from the butchers. During the data collection a question on cost of retailing was included in the questionnaire. However, it was felt that the figures given were too distorted and biased. Within that period of data collection it was impossible to obtain accurate figures on cost. At least a long observation period of not less then 12 months on typified butcheries would be necessary to study more thoroughly the cost structure of beef marketing.

CHAPTER 2

THE BEEF RETAIL MARKET STRUCTURE IN NAIROBI

Structure of market refers to the organizational characteristics of an industry or an industry segment. The organizational characteristics of an industry describes such factors like the number, size and size distribution, type and type distribution and geographical location of firms. The types refer to:

1. the variations in the degree of specialization with respect to product mix, supply pattern or class of customers,
2. the degree of integration and
3. extent of product differentiation (16, pp. 621-623).

In the structural analysis the conduct of the market is described by the degree of competition that exists among the firms. Competition refers to the strategy used by the marketing firms to adjust in the business. Some of the marketing strategy exercised by the firms are such practices like determining prices or output, advertising and promotion, method of co-ordinating procurement and sales and so on.

Other factors that affect the structure of markets are:

1. Economies of scale.
2. Condition for new entry.
3. Natural advantages.
4. Public laws, regulations or services.

In this study the structural analysis is basically concerned with the classification of butchers, the volume of sales, the sources of beef supply and the purchasing pattern of the beef retailers.

2-1 Structure of the Beef Retail Trade with Respect to Classification

There are basically two classes of butchers in the Nairobi beef retail trade; the high class and the low class. In determining the classification of the butchers the criteria like selling practices, purchasing pattern with regard to quality, location of shop and type of customers served play an important role. But in order to understand the better criterion used for classifying the butchers of Nairobi it would be better to look into their behaviour.

2-1-1 The High Class Butchers

The high class butchers serve mainly the high income customers who demand specific prime cuts of the carcass. The customers in the high income category, particularly Europeans and other foreigners have the habit of eating the different parts of the carcass cooked in different styles. This forces the high class butchers to sell their product in spacial cuts (in accordance with the need of the customers) and also to purchase relatively higher carcass grade. However, although the high class butchers sell all their products in special cuts they do not necessarily purchase high grade carcass only. As shown in the gross margin section, the price structure of beef is such that lower grade carcass has higher gross margin than the high grade carcass. The wholesale price for the high grade carcass is higher than that of the low carcass grade. But the retail price for a cut is the same regardless of the carcass grade from which it is obtained. A fillet steak whether obtained from Choice or Standard grade has the same retail price. This is, therefore, conducive for the high class butchers to at least include the low grade carcass in their total purchase of beef. Even though the price structure favours the purchase of lower grade carcass; the high class butchers do also have to cater for their customers who are more quality conscious. The usual purchasing practice by the high class butchers is buying all carcass grades ranging from Choice to Standard in different proportions, with higher proportion from the high grade carcass. All the grades are then sold in special cuts.

2-1-2 The Low Class Butchers

The low class butchers serve mainly the customers who demand only meat (beef). Their choice ranges from meat on bone to meat without bone and with certain degree of fat content. The retail price for meat on bone is the same regardless of the grade from which it is cut. The same case applies to the retail price of meat off bone. But of course the retail price for meat off bone is higher. This again encourages the low class butchers to buy more of the lower grade carcass. Their usual purchasing practice is, therefore, to buy all grades of beef, with higher proportion of the lower carcass grade and sell it in meat off bone and meat on bone. The different grades are mixed before they are sold.

Using the criterion of selling practice out of the total sample size of 42, fourteen (14) were grouped as high class and the remaining twenty eight (28) as low class butchers. This is shown in Table 2 for the high class and Table 3 for the low class.

Table 2 shows that six butchers or 42.85% of the high class butchers own more than one shop. This figure connotes that horizontal integration is a significant management policy in the high class beef retail trade of Nairobi. The same table also shows that the average number of employees in the high class retailing shop is six (6). The average area of shop is $95m^2$.

Table 3 of the low class butchers shows that nine (9) or 31% of the low class sample own more than one shop. The low class butchers also practice horizontal integration policy. In fact it may be correct to say that generally horizontal integration is practised in the beef retail trade of Nairobi. The average number of employees per shop and the average size of shop in the low class butchers are 3 and $32.5m^2$ respectively.

The number of employees per shop in the high class butchers is about twice that of the low class. The average area of the shop in the high class butchers also is more than trice that of the low class. This is because all the high class butchers handle a considerable proportion of other meat (other types of meat including processed foods for dogs) in addition to beef. The average proportion of sales of beef and other types of meat is about the same in the high class butchers.

TABLE 2: SIZE OF THE FIRMS WITH RESPECT TO NUMBER OF SHO

BALANCES, VISITORS, AREA OF SHOP AND THE YEAR OF ENTR

(HIGH CLASS BUTCHERS, NAIROBI, 1975

Butcher Number	Number of Shops	Number of Employees	Year of Entry	Number of Wei- ing Balances
1	1	6	1963	2
2	2	12	1972	6
3	1	14	1965	6
4	1	6	1975	3
5	1	2	1968	4
6	4	5	1973	4
7	1	6	1957	5
8	3	6	1958	3
9	4	3	1970	2
10	4	3	1975	4
11	1	8	1975	4
12	1	7	1973	3
13	5	5	1959	1
14	1	6	1952	2
Average		6		

Source: Data from Survey, 1975.

TABLE 3: SIZE OF THE FIRMS WITH RESPECT OF NUMBER OF SHOPS, EMPLOYEES, WEIGHING BALANCES, VISITORS, AREA OF SHOP AND THE YEAR OF ENTRY INTO THE BUSINESS (LOW CLASS BUTCHERS, NAIROBI, 1975)

Butcher Number	Number of Shops	Number of Employees	Year of Entry	Number of Weighing Balances	Area of Shop (Sq.M.)	Customers Per Day
15	3	3	1973	2	30.00	25
16b	1	5	1956	1	19.51	400
17	2	3	1961	1	27.87	202
18b	1	7	1973	1	55.74	910
19b	1	4	1963	1	26.01	200
20	1	8	1974	3	43.11	352
21	1	2	1975(1%)	2	60.00	63
22b	1	5	1973	1	44.59	250
23	6	1	1970	2	18.48	500
24b	2	3	1965	1	33.44	200
25	1	5	1971	1	27.87	200
26	1	2	1975(0%)	1	2.23	153
27b	1	5	1970	1	37.16	200
28	1	2	1975(3%)	1	46.45	200
29	1	1	1970	1	8.92	28
30	1	3	1969	2	40.00	420
a31b	1	5	1975(0%)	3	55.74	64

Contd.

Table 3 Contd.

Butcher Number	Number of Shops	Number of Employees	Year of Entry	Number of weigh ing balances
32	1	2	1975(10)	2
33	4	1	1972	2
34	8	3	1969	2
35b	1	2	1975(21%)	1
36	4	2	1972	4
37b	4	1	1973	4
38	1	3	1975(0%)	1
39b	1	5	-	2
40	1	1	1974	1
41	1	1	1945	1
42	1	2	1974	1
a43	2	3	1964	2
Average:		3		2

Source: Data from survey, 1975.

a= Butchers who slaughte

b= Butchers selling roas

%= Percentage of other m

Because the high class butchers are serving the high income consumers, they are required to give more service. This explains why the high class butchers need more employees per shop to handle the different products.

The average number of customers visiting the shop per day is smaller (202) in the high class than in the low class butcheries (219). However, as it is illustrated in the next chapter the greater number of customers does not necessarily mean the sales volume of beef is higher. Rather it mainly depends on the quantity purchased per consumer. One of the reasons why the average number of visitors is greater in the low class butcheries, is because of the kind of special service given which is not practised by the high class butchers. Many of the low class butchers allow meat roasting in their shop. That means the customers buy meat and are permitted to roast it there for immediate consumption.

In Table 3 it is shown that about 42.86% of the low class butchers allow roasting meat.[1] This may explain why there are more visitors per day buying from low class butcheries. But the quantity of beef purchased by a low income visitor may be much less than that bought by a high income consumer visiting a high class butchery.

The most interesting point to note in Table 2 and Table 3 is the number of butchers who entered the business of beef

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[1] Consumers buy the meat from the butchery and they have the option of taking it to their home or roast it there for immediate consumption.

retailing in 1975. It is significant to note that when the butchers in Nairobi complained of the unprofitability of beef trading new butchers were entering the business! The new entrants started the beef retail trade after the wholesale price for beef increased. About 21% of the high class butchers entered the beef retail business in 1975. In addition to that it is important to observe that about 50% of the total sales made by the new entrants was beef. The same year (1975) about 24% of the low class butchers entered the beef retailing trade in Nairobi, with a higher proportion of their total sales being beef.

When the butchers were also asked whether some shops have closed in their surrounding, the high class butchers responded that there were no closure of shops except an increase in their proportion of other meat sales like fish and pork. In the low class sector in spite of the general belief on the unprofitability of beef retailing, new butchers entered the business in 1975 with a very high proportion of their sales being beef. None of the low class butchers interviewed spoke of any shop closing because of the increase in whole-sale prices of beef. This, therefore, shows that the contention of some butchers that beef retailing is unprofitable is unlikely to be correct. Given that the old butchers are existing and there are also new entrants whose major sale is beef, how could they run the business without profit? It might be suspected that, the loss incurred by the butchers, especially the high class, is compensated for by the profits from other types of meat. However, this may not be correct because first,of all the beef sale in the high class sector of the beef retail trade is about the same in proportion to that of other types of meats. Secondly, the total sales of meat in the low class butcheries is primarily beef. Therefore, the beef retailing is not likely to be unprofitable because of the following reasons:

1. beef retail enterprises have existed for many years in the business,
2. new entrants were observed in 1975 into the business of beef retail trade in Nairobi, and
3. higher proportion of the total sales in both classes of butchers is of beef.

The most likely thing that may have happened is that the gross margin or the profit per unit of carcass has decreased. That is the constant increase in wholesale price and the Price Control Order might have affected the profit or the gross margin. The observation of the researcher, particularly, from what some of the high class butchers imply in their answer is that, a demand for beef exists even if the retail price is raised. In some instances the researcher had a suspicion that the high class butchers charge a higher price for some cuts than the controlled one. But it was not possible to get a record on the prices they actually charge except the controlled list of retail prices. Some high class butchers indicated that there exists a potential demand even if the retail prices are raised. Therefore, the conclusion one arrives at is that when butchers complain about the meat trade being unprofitable, what they really want to say is that they would like to be allowed to make higher profit from their sales than they are doing now. The control price along with the increased wholesale price have reduced the profit per unit of carcass. That means the beef retail trade, specially, as viewed by the high class butchers, has a good potentiality for making a higher profit if the market is left free.

Similarly, in the low class butchers the effect of the price control order and the increase in wholesale price is felt in terms of profit reduction. However, unlike the high class butchers, the low class butchers favoured the price control order. Accepting in principle, that price control is necessary, they only complained that the retail prices were not geared to the wholesale price and demanded that the retail price should be raised. Their justification for favouring the price control is because it avoids price competition. In talking to the butchers, the writer was made to understand that the low class butchers favoured the Price Control Order because it enabled them to have a simplified accounting system. That means they can easily determine net profit when there is one fixed price, than when it is more than one and variable. Therefore, it appears that the low class butchers have a poor accounting system and that they need to improve on it.

2-2 The Source of Meat (Beef) Supply at Retail Market in Nairobi

Beef supply to the Nairobi retail market is broadly from two sources:

1. Kenya Meat Commission (KMC) wholesale depot
2. Non-KMC (Private Wholesalers)
   i. Abattoirs licensed by KMC to sell a specified number of beef carcasses per unit of time. For example Dagoretti Slaughter House, Langata Ongata Rongai Slaughter House, Waithaka Slaughter House.
   ii. Licensed abattoirs around Nairobi.
   iii. Fringe Slaughter houses on the district boundaries- example Kiambu.
   iv. Beef brought in from outside in carcass form, exampl cattles slaughtered at Machakos or Nanyuki.
   v. Cattle bought from outside and slaughtered in the butcher's shops.

The total beef supply to the retail market of Nairobi was 60%-70% in 1968 (KMC estimate) (2, pp. 101). However, nowaday the percentage supplied by a KMC is much less than before. A larger proportion rather comes from the private wholesalers. The Kenya Meat Commission supplies only 25% of the total beef in the retail market of Nairobi (13). That means the remaining 75% comes from non-KMC private wholesalers including some of the illegal sources, which are difficult to quantify. The reason for the low supply of beef by the Commission to the local retail market of Nairobi is that it concentrates more on export. Seventy percent of KMC's total beef production is exported in either fresh meat or canned form (8).

The concentration on export by KMC is of course in line with Kenya Government's need for foreign exchange and for more profit by the Commission itself. The export price being dependent on consumers demand higher price and more profit is expected than that of the local retail market. From KMC's point of view the procurement cost, particularly for the high grade carcasses is low. The export price is, therefore, more profitable for the quality carcass than the local price. The Commission being a sole exporter has to sell a lower proportion of its output to the local market.

During the interview it was found that the high class butchers purchased more beef from KMC than the low class. Because of KMC's preference for export, the high class butchers very often face shortages of the carcasses they require from KMC. One of the complaints of the high class butchers is the scarcity of the required carcass grade at KMC.

The high class butchers purchase different carcass grades for retail selling. Furthermore, compared with the low class butchers, their proportional purchase of the high grade carcass is higher. The reason may be because their customers are more quality conscious. This forces the high class butchers to buy at least a portion of their total carcass purchase from KMC since it has a more proper grading system. Nearly 100% of the high class butcher replied that they purchase partly or wholly from KMC. But they also indicated that they face shortages of the quantity and the quality of carcass they require. This may, in fact be an indication that the butchers are facing shortages of beef at KMC because it is concentrating on export.

During the interview as shown in Appendix 6, different wholesale prices for 1975 were recorded from the butchers whose sources were private wholesalers. This is unlike the KMC's wholesale price for 1975 shown in Table 21, which is fixed for each carcass grade. The wholesale price variation at non-KMC level (private wholesalers) can partly connote that the retail market of beef in Nairobi is dependent on sources other than KMC. It is, therefore, not surprising to observe wholesale price variation in the private wholesale sector because such wholesalers are strictly commercial. It can also be said that the monopoly status of KMC has been reduced with regard to controlling the beef supply and regulating the wholesale price in the Nairobi retail market. In the next section it will be shown that one of the factors that contributed to the variation in gross margin among the butchers is the slight variation in wholesale price.

The policy of the Government is to keep the price of beef low with particular benefit to the low income consumers. This is because the retail price is the same in all butcheries although there is wholesale price variation. However, this will not benefit the retailers unless KMC can exert a greater influence on the supply of beef to minimize the price variation. KMC as a parastatal institution, and having a legal monopoly on supply and price for the major towns, should also have the ability to reduce the wholesale price variation. One way of doing it is, by KMC being a major supplier for the beef retail trade in Nairobi. If KMC concentrates more on export the following may be expected to occur:

1. the quality of beef supplied to Nairobi retail market may be affected and
2. because of the smaller fraction of beef supply injected by KMC it might be conducive for the private wholesalers to vary their wholesale price.

- To loose its grip on the domestic mkt & in case of a fall in intern. mkt, it would collapse financially and finally face closure. (1987!)

This would mean that, although the retail price is the same for all butchers, the gross margin for each butcher may vary depending on the source. The government's policy is to increase the welfare of the low income consumers in particular. However, if the retail market of beef is not conducive to supplying quality beef, the general welfare of the public may be affected.

Table 4 shows the different sources of meat indicated by the butchers interviewed. Column (1) and column (2) are for the high class butchers. The columns from 3 to 6 are for the low class butchers. The figures in each column are the butchers identified by the number in the Table.

From the same table we can see that about 57.14% of the high class butchers replied that their source is from non-KMC while 42.86% of the high class butchers interviewed said that their source is KMC. Of the low class butchers, 82% of the interviewed showed that their source is non-KMC. Only 18% of the low class butchers said that their source is KMC. This table coincides with the estimation of the KMC sales department. On average, about 69.55% of the total sampled butchers replied that their source is non-KMC. The non-KMC source figure (%) could in fact be higher than indicated because as observed

TABLE 4: THE SOURCE OF BEEF SUPPLY INDICATED BY BUTCHER NUMBER FOR THE HIGH CLASS AND LOW CLASS BUTCHERS NAIROBI, 1975

High Class Butchers		Low Class Butchers			
Non-KMC Source Butcher No.	KMC Source Butcher No.	Non-KMC Source Butcher No.	KMC Source Butcher No.	Non-KMC Source Butcher No.	KMC Source Butcher No.
1	-	15	-	29	-
2	-	16 c	-	-	30
-	3	17	-	d31c	-
-	4	18 c	-	32c	-
5	-	19 c	-	33	-
6	-	-	20	34	-
7	-	21	-	35c	-
-	8	-	22c	36	-
-	9	23	-	37c	-
10	-	24c	-	38c	-
11	-	25	-	39c	-
12	-	26	-	-	40
-	13	27c	-	-	41
-	14	28	-	42	-
Total 8 Butchers	6 Butchers		Total	23 Butchers	5 Butchers
% 57.14	42.86		%	82	18

Source: Data from Survey, 1975.

d = Slaughters at their place.
c = Low class butchers selling roast meat.

during the interview some butchers tend to say that their source is from KMC in order to give the impression that their meat is of good quality.

2-3 Volume of Beef Sales per Unit of Time for Each Class of Butchers and the Relative Volume of Beef Sales to Other Meat Sales

The volume of beef sales and other types of meat varies seasonally. During the interview, the butchers were asked about their average sales per day, week, or month. Based on the average sales given by the butchers, it was possible to determine the volume of beef sales and other types of meat.

Table 5 shows the amount of beef and other types of meat, sold by high class butchers, both in absolute quantities and in percentage of total sales per month. Table 5 shows that the average percentage sales of other meats is relatively high for the high class butchers. Average beef sales were 59.28%, while that of other meat was 40.72%. These figures are an indication that in the high class butcheries the sales of other meat, in addition to beef are important. In fact in a few cases (2 of the high class butchers interviewed) the proportion of other meat sales to beef is higher. In the column of the absolute sales in K.shs. per month, the highest figure from the sample of the high class butchers is seen in the column labelled "other meat sales", which also coincides with the highest figure in beef sales. Given a greater number of observations it might be possible to see the sales of beef and other types of

TABLE 5: VOLUME OF MEAT SALES FOR EACH OF HIGH CLASS BUTCHERS

NAIROBI, 1975

	(KShs.) Sales In Absolute Value		Sales In Percentage (%)	
Butcher	Beef Sales / Month	Sales Of Other Products/Month	Of Beef Sales	Of Other Sales
1	211,140	23,225,40	90	10
2	200,000	150,877.18	57	43
3	101,444	82,999.63	55	45
4	-	-	-	-
5	-	-	-	-
6	320,000	480,000.00	40	60
7	-	-	-	-
8	36,511	10,599.96	77.5	22.5
9	-	-	-	-
10	50,400	50,400.00	50	50
11	-	-	-	-
12	48,855	27,480.00	64	36
13	28,734	19,156.00	60	40
14	260,800	391,200.00	40	60
Total	1,257,884.00	1,235,939.10		
Average	139,764.88	137,326.56	59.28	40.72

Source: Data from survey, 1975.

meat follow the same trend.

The significant proportion of other meat sales in high class butchers can be explained in that the consumption of pork, fish and so on is likely to be higher in the high income sector than in the low income groups. Therefore, it appears that the high class butchers may benefit by increasing the proportion of other meat sales, if beef is less profitable. The high class butchers have indicated during the interview that sales of other meat is more profitable than beef, but the demand for beef is higher. Their response to the question of "whether some butchers have closed their shops", is that, instead of closing, butchers prefer to increase their sales of other meat types.

Table 6 presents the sales of beef and other meat types both in absolute (K.shs.) and percentages sold by the low class butchers. The sample of the low class butchers clearly shows that beef sales greatly exceed other meat sales in absolute (K.shs.) and in relative terms. The average percentage of beef sales per low class butcher is about 95%, while that of other meats is only about 5%. This may be a clear indication that low income consumers in Nairobi have a higher demand for beef than other types of meat. The higher price of other meat types may partly account for the high beef demand in Nairobi. The price of mutton/goat is K.Sh9/- per Kg . While that of beef on bone is K.Sh7/40 and boneless beef K.Sh8/60 per Kg. (9, pp. 155, 160). Therefore, the beef demand could be expected to be higher due to the lower price per unit.

TABLE 6: VOLUME OF BEEF AND OTHER MEAT SALES PER MONTH IN EACH SHOP OF THE LOW CLASS BUTCHERS NAIROBI, 1975

Sales Of Beef And Other meats/Month In KGs			% Sales Of Beef And Other Meats	
Butcher	Beef Sales	Sales Of Other Meat	Of Beef Sales	Other Sales
15	58,084.50	4,440	92.90	7.10
16	46,914.00	11,400	80.45	19.55
17	24,000.00	3,870	86.11	13.89
18	50,544.00	1,975	96.24	3.76
19	39,960.00	-	100.00	-
20	87,070.00	12,150	87.75	12.25
21	66,650.00	384	99.43	0.57
22	81,300.00	-	100.00	-
23	79,980.00	-	100.00	-
24	70,200.00	-	100.00	-
25	44,400.00	5,600	88.80	11.20
26	27,072.00	-	-	-
27	16,722.00	-	100.00	-
28	33,300.00	900	97.37	2.63
29	22,200.00	-	100.00	-
30	54,252.00	4,500	92.34	7.66
31	51,276.00	-	100.00	-
32	20,521.00	2,240	90.16	9.84
33	59,984.00	-	100.00	-
34	51,984.00	9,000	85.24	14.76

Table 6: Contd.

Sales of Beef and Other Meats/Month in K.shs.			% Sales
Butcher	Beef Sales	Sales of Other Meat	of Bee
35	23,160.00	6,310.00	78
36	33,300.00	-	100
37	39,960.00	-	100
38	17,760.00	-	100
39	54,204.00	1,840.00	96
40	15,540.00	-	100
41	65,835.00	6,000.00	91
42	37,140.00	-	100
Total	1,272,848.00	70,609.00	
Average	45,458.88	2,521.75	95

Source: Data from Survey, 1975.

The consumers preference for various meat types would have been more clear if consumers had been included in the survey. However, when the KMC officials were consulted they gave the impression that there is a higher demand for beef not only in Nairobi, but in all parts of Kenya. An estimated 75% of meat consumption in Nairobi (and in all other parts of Kenya) is beef(13). This figure was supported by the sales of beef and other meat types calculated for the sample. The average beef sales of the high class and the low class butchers was calculated to be about 78%. Therefore, the average beef sales of both classes of butchers interviewed, agreed with the estimation of the KMC Sales Manager.

In Tables 5 and 6, the average volume of beef sales for the high class butchers is more than three times that of the low class butchers. This suggests that the high class butchers aim at high volume of beef sales to make higher profit.

2-4 The Proportion of Purchase with Respect to Carcass Grade and Carcass Quarter in Each Class of Butchers

Expectedly, the high class butchers buy a higher quality beef than the low class. The high class butchers are not only expected to differ with regard to the purchase of various carcass grades, but also with the different quarters of the carcass. They would buy a quarter that consists most of the special cuts sold at retail level.

In the previous section of the buying and selling habits of butchers, it was explained that, under the Price Control Order, there is a general tendency of butchers to purchase lower grade carcasses. The reason is that the special cuts from each carcass grade are not differentiated in retail prices, although the carcass grades have different wholesale prices. In the price control order there is no restriction of what carcass grade butchers should purchase. From KMC any of the following carcass grades are supplied to the retail market: Prime; Choice; Fair Average quality (F.A.Q.); Standard and Commercial. From the private wholesalers, any carcass that is approved by the veterinary people as fit for consumption, is allowed to be sold at the retail market. The general situation of the retail market, therefore, reveals that it might be favourable for all butchers to purchase the lower carcass grade for retail selling. In spite of the retail market favouring the sale of lower carcass grades, a difference in carcass grade purchases was observed between the classes.

Analyzing the purchasing pattern of the butchers is an appropriate measure to investigate their difference in grade purchase. Table 7 shows the different carcass grades and quarters bought by the high class butchers. The same table also shows that the butchers generally purchase three carcass grades: Choice, Fair Average Quality (FAQ) and Standard in descending order. The best quality carcass, Prime Grade and the lowest quality called Commercial, are not included in the purchasing pattern of of the butchers. The average percentage purchase of the high class butchers sample, was Choice Grade (44%), followed by FAQ

TABLE 7: PURCHASE PROPORTION OF BEEF CARCASS AND QUARTER IN THE HIGH CLASS BUTCHERS NAIROBI, 1975

Butcher	Grade Purchase (%)			Quarter Purchase (%)	
	Choice	F.A.Q.	Standard	Hind-Quarter (H/Q)	Fore-Quarter (F/Q)
1	50	50	-	53	47
2	50	50	-	100	-
3	50	50	-	63	37
4	17	48	35	50	50
5	50	50	-	100	-
6	53	47	-	100	-
7	50	50	-	53	47
8	33.3	33.3	33.3	50	50
9	33.3	33.3	33.3	100	-
10	100	-	-	54	46
11	-	-	100	79	21
12	33.3	33.3	33.3	100	-
13	50	50	-	100	-
14	50.5	49.5	-	100	-
Average	44.31	38.89	16.79	78.71	21.29

Source: Data from Survey, 1975.

(39%) and Standard (17%). The proportional purchase of Choice and FAQ grade was approximately the same. The Standard Grade was about half of the Choice and FAQ carcass grades.

The second point to notice in Table 7 is that the high class butchers purchased more H/Q than F/Q. On the average about 79% of the carcasses bought were H/Q and only about 21% F/Q. The reason for buying greater proportion of H/Q is that they yield more of the special cuts sold at retail level.

The low class butchers also bought carcass grades ranging from Choice to Standard. The three grades were purchased in different proportions. Table 8 shows that the sample butchers purchase, on the average, consisted of 49% Standard Grade, 41% FAQ and about 6% Choice. Secondly, a greater proportion of F/Q (53%) was purchased by the sample of the low class butchers compared to H/Q (47%). The low class butchers, as mentioned before, sell in meat off bone and meat on bone. The F/Q of any carcass grade as shown in Table 21 and Appendix 5, is cheaper than H/Q. Therefore, it may be advantageous for the low class butchers to buy more F/Q and sell it as meat on the bone and boneless meat.

Comparing the two classes of butchers in Table 7 and Table 8, a difference in the purchase of carcass grade is clearly observed. A larger proportion of Choice Grade is bought by the high class butchers, but it has the lowest proportion purchase by the low class butchers. Standard Grade is bought in larger quantity by the low class butchers. The high class butchers

TABLE 8: THE PROPORTION OF CARCASS GRADE AND QUARTER PURCHASE IN THE LOW CLASS BUTCHERS NAIROBI, 1975

	Grade Purchase (%)			Quarter Purchase (%)	
Butcher	Choice	F.A.Q.	Standard	Hind-Quarter (H/Q)	Fore-Quarter (F/Q)
15	31	34.00	35.00	65	35
16	-	100.00	-	52	48
17	-	-	-	50	50
18	-	55.56	44.44	52	48
19	-	-	100.00	52	48
20	All Grades Mixed And Sold As One			-	100
21	50	50.00	-	52	48
22	-	-	100.00	52	48
23	-	-	100.00	52	48
24	-	-	100.00	52	48
25	-	-	100.00	52	48
26	-	-	100.00	50	50
27	-	-	100.00	25	75
28	-	100.00	-	52	48
29	-	100.00	-	52	48
30	-	72,00	28,00	38	62
31	-	100.00	-	61	39
32	-	100.00	-	56	44
33	-	63.00	37.00	58	42

Contd.

TABLE 8: Contd.

	Grade Purchase (%)			Quarter Purchase (%)	
Butcher	Choice	F.A.Q.	Standard	Hind-Quarter	Fore-Quarter
34	-	50.00	50.00	57	43
35	-	-	100.00	35	65
36	-	50.00	50.00	53	47
37	-	100.00	-	56	44
38	-	-	100.00	100	-
39	-	50.00	50.00	50	50
40	-	50.00	50.00	-	100
41	33.30	33.30	33.30	44	56
42	54.00	-	46.00	56	44
Average	6.23	41.03	49.03	47.21	52.79

Source: Data from Survey, 1975.

purchase less Standard Grade in contrast to the low class. From the Tables 7 and 8 we observed that both classes purchase all carcass grades, but in different proportions. that is, the high class butchers buy the higher grade beef in larger proportion and the low class butchers buy the lower carcass grade in larger proportion. The difference in the purchase of the carcass grades imply that consumers differ in their quality consciousness.

CHAPTER 3

MONTHLY BEEF AND OTHER MEAT SALES PER EMPLOYEE, PER CUSTOMER AND THE RELATIONSHIP OF BEEF WITH OTHER MEAT SALES

The intention of this Chapter is to observe if either of the two classes of butchers benefit from economies of scale. But before going into the detail of the Chapter it might be necessary to define economics of scale.

Economies of scale in this text refers to the reduction in the average cost of operation by the marketing industries with increasing scale of operation using new technology or other factors. For example, a lorry which can carry large quantities of goods for a longer distance more cheaply, with greater speed and less damage has better economies of scale than transport by animals. Economies of scale in the meat retail trade could be relevant particularly with respect to transport costs. The high class butchers buy in larger quantities and transport them by private or hired vehicles weekly. The low class butchers buy in small quantities and transport them by private or hired vehicles daily. The low class butchers buy in small quantities where they have to pay daily transport costs which are higher per unit of weight.[2]

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[2] The high class butchers buy in a larger quantity at a time, because relatively they have better storage facilities than the low class butchers.

If we assume that the high class butchers benefit more from the economies of scale we also have to consider the diseconomies of scale that exist. Some of the diseconomies of scale are; higher salaries, rent, depreciation, maintenance cost and risks associated with handling large quantities of products.

The study would have given a clear picture of who benefits from economies of scale had the cost structure been included in the analysis. However, given total sales of beef and other meat, the advantages realized from economies of scale could be reflected in the sales per customer and per employee.

3-1 Monthly Beef and other Meat Sales Per Employee and Per Customer

Table 9 shows the monthly sales of beef and other meat per employee and per customer for each butcher in the high class sector. It is very interesting to note that the average sales of other meat per employee and per customer is greater than that of beef in the high class butchers. This figure could at least imply that the sales of other meat per unit cost of salary are greater than that of beef. That means that the total cost of salaries for a given period is fixed. Since the average sales of other meat per employee are greater than those of beef, the sales of other meat per unit cost of salary are, therefore, greater. However, this figure can be misleading because we are assuming that other things remain the same. The second point to note in Table 9 is that the sales per customer of butchers numbers 6 and 14 are high. The figures connote that there are some customers who spend

TABLE 9: MONTHLY SALES OF BEEF AND OTHER MEAT PER EMPLOYEE AND PER CUSTOMER HIGH CLASS BUTCHERS NAIROBI, DECEMBER, 1975

(K.shs.)

Butcher Number	Total Sales of Beef	Total Sales of Other Meats	No.Of Employ -ees	Sales of Beef Per Employee	Sales of other Meats Per Employee	No.Of Custom -ers	Sales of Beef Per Custom -er	Sales of Other Meats Per Custom -er
1	211,140	23,225.40	6	35,190.00	3,870.90	170	1,242.00	136.60
2	200,000	150,877.18	12	16,666.70	12,573.10	300	666.70	502.90
3	101,444	82,999.63	14	7,246.00	5,928.55	500	202.90	166.00
4	-	-	6	-	-	170	-	-
5	-	-	2	-	-	162	-	-
6	320,000	280,000.00	5	64,000.00	96,000.00	100	3,200.00	4,800.00e
7	-	-	6	-	-	300	-	-
8	36,511	10,599.96	6	6,085.20	1,766.70	100	365.10	106.00
9	-	-	3	-	-	400	-	-
10	50,400	50,400.00	3	16,800.00	16,800.00	120	420.00	420.00
11	-	-	8	-	-	200	-	-
12	48,855	27,430.94	7	6,979.30	3,925.85	112	436.20	245.40
13	28,734	19,156.00	5	5,746.80	3,831.20	50	574.70	383.10
14	260,800	391,200.00	6	43,466.70	65,200.00	150	1,738.70	2,608.00e
Average				22,464.50	23,321.80		982.90	985

Source: Data from Survey, 1975.

e= The butchers selling to restaurants.

Kenya shillings 4,800 on other meats and 3,200 on beef per month. Butchers number 6 and number 14 stated that they also sell to restaurants. This has, therefore, exaggerated the sales per customer. It can also be attributed to the error in the estimation of the customers visiting the shop per given time.

Table 10, derived from Table 9 shows the total sales of beef and other meats per employee and per customer. As expected, the total sales per customer for butchers number 6 and number 14 are high because they sell to restaurants.

Table 11 indicates the monthly sales of beef and other meat per employee and per customer for the low class butchers. The table clearly showsthat the sales of beef, both per customer and per employee are higher then those of other meats. The implication here is that other meat sales in the low class butchers are not considerable. It was shown in the previous section that the proportion of other meat sales is very low (about 5%).

Table 12 is derived from Table 11. It shows the total sales of beef and other meat both per customer and per employee.

Comparing the high class and the low class butchers, the average total sales (beef and other meat), both per customer and per employee are greater in the high class butcheries. The average total sales per employee are about twice that of the low class butchers. That means, the high class butchers tend to aim at high volume of sales for more profit. Secondly, the average total sales of beef and other meat per customer

TABLE 10: PRODUCTIVITY IN SELLING ALL MEATS IN NAIROBI, 1975

HIGH CLASS BUTCHERS

TOTAL SALES

	Per Employee			Per Customer		
	(K.shs.)					
Butcher Number	Beef Sales	Other Meat Sales	Total Sales	Beef Sales	Other Meat Sales	Total Sales
1	35,190.00	3,870.90	39,060.90	1,242.00	136.60	1,378.60
2	16,666.70	12,573.10	29,239.80	666.70	502.90	1,169.60
3	7,246.00	5,928.60	13,174.60	202.90	166.00	368.90
4	-	-	-	-	-	-
5	-	-	-	-	-	-
6	64,000.00	96,000,00	160,000.00	3,200.00	4,800.00a	8,000.00
7	-	-	-	-	-	-
8	6,085.20	1.766.70	7,851.90	365.10	106.00	471.10
9	-	-	-	-	-	-
10	16,800.00	16,800.00	33,600.00	420.00	420.00	840.00
11	-	-	-	-	-	-

Contd:

TABLE 10 Contd.

	Per Employee			Per Customer		
			(K.shs.)			
Butcher Number	Beef Sales	Other Meat Sales	Total Sales	Beef Sales	Other Meat Sales	Total Sales
12	6,979.30	3,925.90	10,905.20	436.20	245.40	681.60
13	5,746.80	3,831.20	9,578.20	574.70	383.10	957.80
14	43,466.70	65,200.00	108,666.70	1,738.70	2,608.00	4,346.70[a]

Source: Derived from Table 9.

a= Sell to restaurants.

TABLE 11: MONTHLY SALES OF BEEF AND OTHER MEAT PER EMPLOYEE AND PER CUSTOMER

LOW CLASS BUTCHERS

NAIROBI, DECEMBER, 1975

Butcher	Monthly Total/s of Beef (K.shs.)	Monthly Total/s of Other Meats	No. of Employ-ees	Beef Sales Per Employ-ee (K.shs.)	Other Meat Sales Per Employ-ee	No. Cust./D	S/Cust Of Beef (K.shs.)	S/Cust of Other Meats
15	58,084.50	4,440.	3	19,361.50	1,480.00	25	2,323.40	177.60
16	46,914.00	11,400	5	9,382.80	2,280.00	400	117.30	28.50
17	24,000.00	3,870	3	8,000.00	1,290.00	202	119.80	19.20
18	50,544.00	1,975	7	7,220.60	282.10	910	55.50	2.20
19	39,960.00	-	4	9,990.00	-	200	199.80	-
20	87,070.00	12,150	8	10,883.75	1,518.75	352	247.00	34.50
21	66,650.00	38,000	2	33,325.00	192.00	63	1,057.90	6.10
22	81,300.00	-	5	16,260.00	-	250	325.20	-
23	79,980.00	-	1	79,980.00	-	500	160.00	-
24	70,200.00	-	3	23,400.00	-	200	351.00	-
25	44,400.00	5,600	5	8,880.00	1,120.00	200	222.00	28.00
26	27,072.00	-	2	13,536.00	-	153	176.90	-
27	16,722.00	-	5	3,344.40	-	200	83.60	-
28	33,300.00	900	2	16,650.00	450.00	200	166.50	4.50
29	22,200.00	-	1	22,200.00	-	28	792.90	-
30	54,252.00	4,500	3	18,084.00	1,500.00	420	129.20	10.70

Contd.

TABLE 11 Contd.

Butcher	Monthly Total/s of Beef	Monthly Total/s of Other Meats	No. of Employ -ees	Beef Sales Per Employ -ee	Other Meat Sales Per Employ -ee	No. Cust./D	S/Cust Of Beef	S/Cust Of other Meats
	(K.shs.)			(K.shs.)			(K.shs.)	
31	51,276.00	-	5	10,255.20	-	64	801.20	-
32	20,251.00	2,240	2	10,260.50	1,120.00	50	410.40	44.80
33	59,520.00	-	1	59,520.00	-	430	144.10	-
34	51,984.00	9,000	3	17,328.00	3,000.00	359	144.80	25.10
35	23,160.00	6,310	2	11,580.00	3,155.00	50	463.20	126.20
36	33,300.00	-	2	16,650.00	-	50	666.00	-
37	39,960.00	-	1	39,960.00	-	50	799.20	-
38	17,760.00	-	3	59,200.00	-	80	222.00	-
39	54,204.00	1,840	5	10,840.80	368.00	50	1,0[illegible]4.10	36.80
40	15,540.00	-	1	15,540.00	-	100	155.40	-
41	65,835.00	6,000	2	32,917.50	3,000.00	275	239.40	21.80
42	37,140.00	-	2	18,570.00	-	360	103.20	-
Average				19,637.10	741.30		420.00	20.20

Source: Data from Survey, 1975.

TABLE 12: PRODUCTIVITY IN SELLING ALL MEATS IN NAIROBI, 1975

LOW CLASS BUTCHERS

TOTAL SALES IN (K.shs.)

	Sales Per Employee	(K.shs.)		Sales Per Customer		
Butchers Number	Beef Sales	Other Meat Sales	Total Sales	Beef Sales	Other Meet Sales	Total Sales
15	19,361.50	1,480.00	20,841.50	2,323.40	177.60	2,501.00
16	9,382.80	2,280.00	11,662.80	117.30	28.50	145.80
17	8,000.00	1,290.00	9,290.00	119.80	19.20	139.00
18	7,220.60	282.10	7,502.70	55.50	2.20	57.70
19	9,990.00	-	9,990.00	199.80	-	199.80
20	10,883.80	1,518.80	12,402.60	247.40	34.50	281.90
21	33,325.00	192.00	33,517.00	1,057.90	6.10	1,064.00
22	16,260.00	-	16,260.00	325.20	-	325.20
23	79,980.00	-	79,980.00	160.00	-	160.00
24	23,400.00	-	23,400.00	351.00	-	351.00
25	8,880.00	1,120.00	10,000.00	222.00	28.00	250.00
26	13,536.00	-	13,536.00	1,769.00	-	176.90
27	3,344.40	-	3,344.40	83.60	-	83.60
28	16,650.00	450.00	17,100.00	166.50	4.50	171.00
29	22,200.00	-	22,200.00	792.90	-	792.90
30	18,084.00	1,500.00	19,584.00	129.20	10.70	139.90

Contd.

TABLE 12 Contd.

Butchers Number	Beef Sales	Other Meat Sales	Total Sales	Beef Sales	Other Meat Sales	Total Sales
	Sales Per Employee		(K.shs.)	Sales Per Customer		
31	10,255.20	-	10,255.20	801.20	-	801.20
32	10,260.50	1,120.00	11,380.50	410.40	44.80	455.20
33	59,520.00	-	59,520.00	144.10	-	144.10
34	17,328.00	3,000.00	20,328.00	144.80	25.10	169.90
35	11,580.00	3,155.00	14,735.00	463.20	126.20	589.40
36	16,650.00	-	16,650.00	666.00	-	666.00
37	39,960.00	-	39,960.00	799.20	-	222.00
38	5,920.00	-	5,920.00	222.00	-	222.00
39	10,840.80	368.00	11.208.80	1,084.10	36.80	1.120.90
40	15,540.00	-	15,540.00	155.40	-	155,40
41	32,917.50	3,000.00	35,917.50	239.30	21.80	261.10
42	18,570.00	-	18,570.00	103.20	-	103.20
Average	19,637.10	741.30	20,378.40	420.00	20.20	440.20

Source: Derived from Table 11.

is about five times that of the low class butchers. This situation can be expected because the consumers served by the high class butchers are at a relatively higher income level. Hence, the frequency of meat consumption by the high income group is greater than the low income beef consumers. It was found in the study that, on average, about 202 customers visited each high class butchery daily. For the low class butchers, an average of 219 customers visited each shop per day. It is very clear in this study that the greater number of visitors in the low class butcheries has less effect on volume of sales than the freqency and quantity purchased per person by the relatively high income consumers.

As shown in Table 10 and Table 12, total average sales (beef and other meat) per employee for the high class butchers are about 2.25 times that of the low class. Assuming salary cost is the same for both classes, high class butchers have a better adventage from economies of scale. However, this cannot be the case because it is likely that the high class butchers need a relatively greater number as well as more skilled employees. That means, the salary cost could be higher than that of the low class butchers. Table 2 and Table 3 show that the average number of employees per shop is 6 for the high class butchers and 3 for the low class butchers. The average total sales per customer is about five times that of the low class butchers. This may indicate that the cost of service per person is lower in the high class than in the low class sector. However, it would be more appropriate to consider the diseconomies of scale, but which were not covered in this study. Considering the cost of depreciation, fixed cost and so on, we might understand better who benefits from the economies of scale.

3-2 Relationship of Beef and Other Meat Sales

The primary objective of this section was to investigate the effect of beef sales on other meat sales. The butchers claim that selling beef is not profitable. However, a considerable proportion of their meat sales consists of beef. One of the questions raised was: If beef is not profitable could keeping beef in the shop as a "loss leader" increase the sales of other meats? That would mean when consumers visit a shop to buy a certain amount of beef they would at the same time buy other meats too. In a similar fashion the effect of other meat sales on beef was also investigated. In short this section was intended to check if there is any sales promotion effect of beef on other meat sales.

The price of other meats like chicken, pork, and fish are not controlled by the government. Particularly, for the high class butchers major sale of other meats consist of chicken, pork, and fish. Therefore, it was thought that an economic model could be used to explain the relationship between beef and other meat sales.[3]

The sales data in K.shs. for beef and other meats were obtained from the butchers during the interview. Using the sales data

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[3] The economic model used in the regression analyses was a linear function of the form: $Y=a+bX$.

of the butchers a computer was used for the regression analysis. The economic model used for the regression analysis was:

1. $Y_h = F(X_h)$

where Y_h = Sales of other meats by the high class butchers.

X_h = Sales of beef by the high class butchers.

2. $Z_h = F(V_h)$

where Z_h = Beef sales by the high class butchers.

V_h = Other meat sales by the high class butchers.

3. $Y_l = F(X_l)$

where Y_l = Other meat sales by the low class butchers.

X_l = Beef sales by the low class butchers.

4. $K_l = F(Q_l)$

where K_l = Beef sales by the low class butchers.

Q_l = Other meat sales by the low class butchers.

The computer result of the regression analysis is summarized in Table 13. The following four functions were developed from computer result:

1. $Y_h = -52,572 + 1.36K_h$

Elasticity = 1.38[4]

[4] See footnote 4 on page 57.

TABLE 13: REGRESSION OF BEEF SALES ON OTHER MEAT SALES AND OTHER MEAT SALES ON BEEF SALES, NAIROBI, 1975

Classes of Butchers	Dependent Variable (Sales In K.shs.)	Degrees of Freedom	Constant	Independent Variable (Sales In K.shs.)	Regression Coefficient	Common Coefficient
1. High Class						
a.	Other Meat Sales (Y_h)	7	-52,572 S.E.=55,746 t =0.940	Beef Sales (X_h)	1.36 S.E.=0.320 t=4.240***	R^2=0.719 D.W.=0.670 t=2.998 C.I.=0.99
b.	Beef Sales (Z_h)	7	67,018 S.E.=26,905 t =2.490**	Other Meat Sales (V_h)	0.530 S.E.=0.124 t =4.240***	R^2=0.719 D.W.=0.480 t=2.998 C.I.=0.99

Contd.

TABLE 13 Contd.

Classes of Butchers	Dependent Variable (Sales In K.shs.)	Degrees of Freedom	Constant	Independent Variable (Sales In K.shs.)	Regression Coefficient	Common Coefficient
2. Low Class						
a.	Other Meat Sales (Y_1)	14	1719 S.E=2773 t=0.62	Beef Sales (X_1)	0.07 S.E.=0.05 t=1.28	R^2=0.119 D.W.=2.67 t=2.624 C.I.=0.99
B.	Beef Sales (K_1)	14	39,785 S.E.=2773 t=4.69	Other Meat Sales (Q_1)	1.76 S.E.=1.4 t=1.28	R^2=0.119 D.W.=1.61 t=2.624 C.I.=0.99

Note: *** and** mean the t-value is significant at the 1% and 5% levels respectively.

Source: Data from Survey, 1975.

2. $Z_h = 67,018 + 0.53Y_h$

   Elasticity = 0.52[4]

3. $Y_l = 1719 + 0.07X_l$

   Elasticity = 1.26[4]

4. $K_l = 39.785 + 1.76Q_l$

   Elasticity = 0.10[4]

Equations 1 and 2 describe the relationship of beef sales to other meat sales in Ksh. and vice versa for the high class butchers. The regression coefficients of both functions show that the sales of the two items are positively related. Expression 1 states that, an increase of Ksh. 1.00 in beef sales will also increase other meat sales by Ksh. 1.36. Equation 2 indicates that, an increase in other meat sales by Ksh 1.00 will increase beef sales by Ksh. 0.52. In this case expression 1 is more logical to test that beef acts as a loss leader. The relationship of other meat sales to beef sales was explained better by the calculated elasticity. A 1% increase in beef sales, increased other meat sales by 1.38%. The calculated figure for regression coefficient and elasticity in the high class butcheries, therefore, implies that high income people consume variety of meats. Diversification in the consumption of the different meat types is more common than it is in the low income consumers. Hence, the larger

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4 The value of elasticity was calculated using the regression coefficients and the average sales, that is $\frac{dy}{dx} \cdot \frac{\bar{x}}{\bar{y}}$

the number of high income consumers for beef the larger the number of customers for other meats too.

Equation 3 and 4 describe the relationship of beef sales and other meat sales in K.shs. for the low class butchers. For the purpose of testing our hypothesis, function 3 is considered logical. The calculated elasticity for expression 3 states that a 1% increase in beef sales, increases other meat sales by 1.26%. The regression coefficient for the same function also illustrates that, an increase of K.sh .1/- in beef sales, will increase other meat sales by K.sh 0.07.

The regression coefficient in equation 3, therefore, implies that there is no diversification in meat consumption by the low income people. That means, other meat sales are less responsive to beef sales in the low class butcheries. Whatever other meats the low income consumers eat, is brought occasionally on arbitrary manner. The responsiveness of other meat sales to beef sales between the two classes of butchers is also easily realized by the range of average percentage sales of beef and other meat. In the high class butcheries the average percentage sales of beef is 59% and of other meats is 41%. In the low class butchers the average percentage sales of beef is 95% and of other meats is 5%.

Table 13 illustrates the distinct difference between the two classes of butchers in the relationship of beef and other meat sales. The difference is shown by the values of the regression coefficients and the R^2. However, there is a danger of considering the regression analysis as plausible for several reasons. First of all the number of observation is small.

Secondly, the butcher's bias in the estimation of the sales data has also contributed to the error in the analysis. Thirdly, there are many variables that should have been included in the regression analysis. Some of the variables that should have been considered are: the prices of other meats; the income of consumers and the total supply of beef and other meats in the retail market. In a market where the supply of the two items, other meats and beef is short, the sales of both items could increase (goes in the same direction) up to a certain level. This means that up to a certain point what ever quantity is supplied to the market will all be consumed.

CHAPTER 4

MARKETING MARGIN BETWEEN WHOLESALERS AND RETAILERS

The concept and proper definition of margin is of paramount importance to the understanding of the analytical framework. Consumers demand for food is an order for a complex bundle of goods and services. Hence, broadly, marketing margin is defined as the difference between the total sales and total outlay. It is also very important to mention here that the gross marketing margin calculated on the basis of the wholesale price and retail price for a unit of carcass or quarter can be misleading. The reason is that a unit of carcass weight at wholesale level weighs less when taken at the retail level, due to shrinkage, loss of blood and wastage in preparing the special cuts. Therefore, it is more correct to work the gross margin on the basis of equivalent weight. We have to find the equivalent weight at the retail level for a unit weight of carcass at the wholesale level.

In this study, although it was difficult to determine a standard percentage loss in weight for all units, it approaches the correct method. During the interview the butchers were asked the weight of the hind-quarter or fore-quarter they purchase at wholesale level, and the yield they obtain from each quarter. In this manner the butchers were able to tell the actual yield of the unit of carcass that can be sold (which excludes the waste and the approximate weight loss).

The marketing margin can be measured in absolute and relative terms. In this study, the gross marketing margin is measured in relative terms and it is calculated per product unit and retailing firm.

4-1 Gross Margin Per Quarter of Each Carcass Grade and in Each Class of Butchers

Butchers purchase the hind-quarter (H/Q) or the fore-quarter (F/Q) or both for retail selling. The H/Q and F/Q are different in wholesale price. Most of the special cuts sold by the high class butchers are obtained from the H/Q. It was also shown in the section on butchers purchasing pattern, that the high class sample butchers buy a larger proportion of H/Q while the low class buy more F/Q. It is, therefore, essential to calculate the gross margin of H/Q and F/Q separately

Table 14 and Table 15 show the gross margin per quarter of each carcass grade in the high and low class butchers respectively. Table 14 shows clearly that the lower the carcass grade the higher the gross margin for both the H/Q and the F/Q. Assuming there is demand for lower grade beef, this implies that the high class butchers would benefit more from the lower carcass grade. Some of the factors that attribute to the calculation in Table 14 are:

1. the difference in wholesale price for each quarter and
2. the similar retail price for the special cuts regardless of the carcass grade from which it is obtained.

A question which could be posed is "why do the high class

TABLE 14: GROSS MARGIN PER QUARTER OF EACH CARCASS GRADE (HIGH CLASS BUTCHERS) NAIROBI, 1975

Hind-quarter (%) (H/Q)			Fore-quarter (%) (F/Q)		
Choice	F.A.Q.	Standard	Choice	F.A.Q.	Standard
11.03	17.10	20.67	13.51	18.83	22.93

Source: Data from Survey, 1975.

TABLE 15: GROSS MARGIN PER QUARTER OF EACH CARCASS GRADE (LOW CLASS BUTCHERS) NAIROBI, 1975

Hind-quarter (%) (H/Q)			Fore-quarter (%) (F/Q)		
Choice	F.A.Q.	Standard	Choice	F.A.Q.	Standard
21.08	21.09	27.14	20.08	21.42	27.41

Source: Data from Survey, 1975.

butchers sell the high carcass grade only? Partly, the answer is that the consumers are quality conscious. This could be expected because high income consumers demand quality beef as opposed to those of the low income. The high class butchers indicated that, although the lower carcass grade is more profitable per unit (quarter), they are forced to sell the quality grade to satisfy their consumers. High class butchers, therefore, buy the higher grade carcass in a larger proportion and rather benefit from volume of sales. The average sales per month of the high class butchers are much higher than those of the low class. This could be an explanation for the benefit the butchers obtain from volume of sales.

A very obvious point in Table 14 is that the gross margin of F/Q is higher than for H/Q. However, the high class butchers purchase more H/Q because most of the special cuts for retail selling are obtained from this quarter.

Table 15 shows the gross margin per quarter for the low class butchers. For both H/Q and F/Q it indicates that the lower the carcass grade the higher the gross margin. The situation is relatively advantageous to the low class butchers. The reason is that the lower income consumers cannot afford to act as quality conscious buyers. This is elaborated in Table 7 and Table 8 which show the proportional purchase of beef. The low class butchers benefit in two aspects:

1. they buy a larger proportion of the lower carcass grade and

2. they buy a larger proportion of the F/Q.

It is, therefore, only on volume of sales that the high class butchers benefit.

4-2 Gross Margin Per Retailing Firm

In this section the gross margin for each butchery was calculated by estimating the monthly wholesale purchases and the monthly retail sales. Given the two figures the relative gross margin was calculated. This was based on the estimation of the butchers interviewed who gave their average purchase, and sales per unit of time.

Tables 16 and 17 show the gross margin on total sales of the low class and high class butchers respectively. In Table 16 we can see that there are variations in the gross margin among the different shops. This kind of variation can be expected, particularly of those whose source is from non-KMC wholesalers. This occurs because within a certain range there is a wholesale price variation in the non-KMC source. For some butchers, the gross margin was particularly high, and this may be due to some source (non-licensed) whose wholesale price is lower than KMC or the licensed private wholesalers. At times some butchers buy the animal and slaughter it in their house which may be cheaper per unit of weight.

Table 17 shows the gross margin per retailing firm of the high class butchers. We can see from the table that the variation in gross margin is much lower than that of the low class butchers.

TABLE 16: GROSS MARGIN ON TOTAL SALES OF EACH BUTCHER, IN THE LOW CLASS NAIROBI, 1975

Butcher	Gross Margin (%)	Butcher	Gross Margin (%)
15	22.83	29	20.27
16	27.10	30	19.46
17	25.00	31	41.49
18	19.87	32	20.18
19	16.22	33	25.66
20	15.52	34	22.35
21	25.73	35	31.45
22	21.22	36	22.30
23	25.17	37	32.43
24	23.08	38	18.92
25	20.27	39	21.29
26	22.21	40	20.27
27	17.52	41	9.41
28	20.27	42	30.23
Average			22.78

Source: Data from Survey, 1975.

TABLE 17: GROSS MARGIN PER RETAIL SHOP IN THE HIGH CLASS BUTCHERS NAIROBI, 1975

Butcher	Gross Margin (%)
1	17.28
2	16.27
3	17.07
4	17.35
5	16.27
6	16.27
7	17.28
8	17.35
9	16.27
10	17.27
11	16.27
12	16.27
13	16.27
14	16.27
Average	16.73

Source: Data from Survey. 1975.

In most cases, and even from the observation of the interviewer, the high class butchers tend to buy from KMC in spite of their complaints about the shortage of beef at KMC. Hence, the gross margin variation at the high class retail shop is likely to be less, because the wholesale price at KMC is more stable. Another point to note is that the average gross margin per shop at the low class butcheries is higher than that of the high class butcheries. This is likely to be due to the gross margin we observed per unit of the carcass.

4-3 Comparison of the Gross Margin with Figures Studied in Previous Years for the High Class Butchers

Comparison of gross margin with previous studies helps in understanding the trend of marketing margin. The study of F.G. Hay shows that the average gross margin per retailing shop in Nairobi was 24.6% before the price control order in 1971 and 19.9% after the introduction of the price control order (6, pp. 9). The average gross margin obtained in this study for high class butchers was 16.7%. The average figure of the gross margin, therefore, suggests that, since 1971, gross margins have decreased.

4-4 Comparison of Gross Sales Per Quarter of Each Carcass Grade in Each Class of Butchers

Tables 18 and 19 show the sales of the quarters for each

TABLE 18: SALES IN SPECIAL CUTS OF THE QUARTERS FOR EACH CARCASS GRADE, NAIROBI, 1975. (HIGH CLASS BUTCHERS)

Hind-quarter (H/Q) KShs			Hind-quarter (F/Q) KShs		
Choice	F.A.Q.	Standard	Choice	F.A.Q.	Standard
433.10	433.10	405.07	398.32	381.17	342.16

Source: Data from Survey, 1975.

TABLE 19: SALES IN TWO FORMS: MEAT ON BONE AND MEAT OFF BONE OF THE QUARTERS FOR EACH CARCASS GRADE, NAIROBI, 1975 (LOW CLASS BUTCHERS)

Hind-quarter (H/Q) KShs			Fore-quarter (F/Q) KShs		
Choice	F.A.Q.	Standard	Choice	F.A.Q.	Standard
442.25	438.06	384.99	405.43	390.42	350.40

Source: Data from Survey, 1975.

carcass grade, both for the high class and low class sectors of the beef retail trade. The idea behind these two tables was to determine if there is any benefit for the high class butchers to deal in special cuts. It has been explained that butchers are classified according to whether they sell in special cuts or in only two forms: meat on bone and boneless meat. Hence, this section is to elucidate the advantage of selling in special cuts, and in only two forms: meat on bone and boneless meat. The tables clearly show that the sales of the quarters in each carcass grade are higher for the low class butchers than for the high class butchers, except for Standard Grades. This point supports the suggestion that the high class butchers are forced to sell in special cuts, and better quality meat, basically due to the preferences of the high income consumers they serve. As already stated, all high class butchers do sell other type of meats, in almost the same proportion to beef. The market for some of the types of meat being free, profit reduced in beef may be compensated for by the sale of other meat types.

CHAPTER 5

PRICING POLICY AND COMPETITION IN BEEF RETAIL TRADE IN NAIROBI

The principal functions of prices in a free enterprise economy are to:

1. allocate resources used in production and marketing,
2. allocate goods and services among consumers,
3. balance the forces of demand and supply and
4. produce and allocate income payments among the various recipients (16, pp. 561-562).

Therefore, the efficiency of pricing policy is measured on the degree of achievement of the above principal functions.

There are several price imperfections that occur in the beef market which deserve to be looked at. It is, therefore, important for pricing policy to alleviate the price imperfections that exist. Some of the price imperfections are:

1. prices of beef at the farm, wholesale, and retail levels are not closely related, and
2. price differences among grades or qualities of meat do not usually reflect value difference.

The basic concept in pricing policy is the level of the marketing system at which price is determined. Is it at the farm level, wholesale level or retail level? The answer is that price is determined at all of these levels in the marketing system and not independently determined at any one of these levels. Price at the retail level is determined by a primary demand function and a derived supply function. The price at wholesale level is determined by derived supply and derived demand functions. Price at the farm level is determined by derived demand functions and primary supply functions. Hence, price setting at all levels in the system is highly inter-related

The general magnitude of gross margin earned in any private section of the economy is controlled by the degree of competition among the participants. There are four types of competition in a marketing system: Pure Monopoly, Monopolistic Competition, Oligopoly and Pure Competition. The characteristics of each type of competition are summarized in Table 20.

5-1 Pricing Policy of the Nairobi Beef Retail Trade

The prices of beef, mutton and goat meat are fixed by the government in the retail trade of Nairobi. Others like prices of pork, fish, chicken, are left free of government intervention Beef, and to a certain degree mutton and goat meat, are important types of meat which are commonly included in the diet of most consumers. The government, therefore, gives priority to the prices of these controlled items so as to ensure that the nutritional requirement of the general public is met. The price structure is such that the low income consumers can benefit from the retail trade. KMC, which is a parastatal body, was originally established to implement the government's policy on the beef retail trade. The government's policy was implemented by allocating a major share of the wholesale trade to KMC at government controlled prices.

TABLE 20: CHARACTERISTICS OF THE FOUR BASIC MARKET MODELS

	Market Model	Number of Firms	Types of Product	Control Over Price	Condition For Entry	Non-price Competition
1.	Pure Competition	Very large number	Standardized	None	Very easy	None
2.	Monopolistic competition	Many	Differentiated	Some, but with rather narrow limits	Relatively easy	Considerable emphasis on advertising, brand names, trade-marks, etc.
3.	Oligopoly	Few	Standardized or differen-tiated	Circumscribed by mutual interdepend-ence; consi-derable with collusion	Significant obstacles present	Typically a great deal particularly with product differenciat-ion.
4.	Pure Monopoly	One	Unique, no close substitute	Consider-able	Blocked	Mostly public relations advertising

Source: Samuelson, Paul A. Economics - An Introductory Analysis New York 1967. Chapter 25, Table 25-1 pp.470.

In order to assess the pricing policy of the government on beef, it is very useful to observe the relationship of prices at different market levels. Beef prices are fixed at the producer level, wholesale level and retail level. Both at the producer and wholesale levels the prices of beef are differentiated according to grades. At the wholesale level of KMC, five grades are identified; Prime, Choice, F.A.Q., Standard and Commercial in descending order. At wholesale level of KMC, the higher grade a carcass is, the higher the price it fetches. At the retail level, the price of beef is fixed in two groups. The first group sold mainly by the low class butchers, consists of only two forms: meat on the bone and boneless meat. A maximum price is set for the two forms of beef meat. The second group consists of a list of fixed prices for the different special cuts obtained from the carcass. The carcass is cut into different parts such as fillet steak, rump steak, sirloin in accordance with the customers' demand. The retail price is, therefore, fixed for each of these cuts. The important factor to note is that, while there is price differentiation depending upon the grade at the wholesale and producer level, it does not hold true at the retail level. This means that at the retail level, the prices are fixed for the two groups mentioned without any consideration to the grade from which the yield is obtained. Hence, although the pricing system is consistent at the producer and wholesale levels, it is inconsistent at the retail level. The retail price does not seem to reflect the existence of different carcass grades. It may be said that the price structure favours the purchase of lower carcass grade by butchers.

The second important point to note in the pricing policy is the constant increase in the wholesale price. The general understanding of the butchers is that, despite the fact that the wholesale and retail prices are not closely related, the constant increase in wholesale price has also affected the profitability of beef. This means that the pricing structure is inconsistent on two counts: first, the wholesale prices are not closely related to retail prices and second, wholesale prices have increased constantly thereby decreasing the gross margin between the wholesale and retail levels. Table 21 shows the wholesale price changes since 1973. It was calculated using the maximum wholesale prices at KMC. The table clearly shows that the wholesale price per Kg. increased by an average of about 57% for beef over the three years. Furthermore, the Kenya Gazette Supplement No. 12, April 7, 1975 shows that, since 1971, the retail price increased by an average of 5% on special cuts and by 15% on boned meat.

The butcher's problem, therefore, is seen from two angles as far as the pricing policy is concerned. The first is the Price Control Order which is not favoured, particularly, by the high class butchers. The second is the constant increase in wholesale price which is not geared to the retail price. The second problem was mentioned by most of the butchers interviewed. The reason for the inconsistency of wholesale and retail prices is that the retail prices do not reflect the existence of grade differences. The government's view on the pricing policy of beef appears to be a political concern.

TABLE 21: PERCENTAGE CHANGE IN WHOLESALE PRICE AT KMC NAIROBI, 1975

Carcass Grade	Wholesale Price 1 Kg. from July '73 to January 23, 1975		Wholesale Price 1 Kg. after January 23, 1975		% Change in Wholesale Price	
	H/Q	F/Q	H/Q	H/Q	H/Q	F/Q
	(K.shs./Kg.)		(K.shs./Kg.)			
Choice	5.90	4.30	7.40	6.60	25.42	53.49
F.A.Q.	5.25	4.15	6.70	6.10	27.62	46.99
Standard	3.65	3.35	6.20	5.80	69.86	73.13
Commercial	3.30	3.00	6.00	5.40	81.82	80.00

Source: Kenya Gazette Supplement No. 12, April 7, 1975.

Although the Price Control Order increases the welfare of the low income consumers, the whole issue could also be looked at from another angle. The general price structure of beef retail trade favours the selling of lower quality beef. This implies that the general welfare of consumers may have decreased because the market is not capable of providing higher quality beef carcasses. The fact that the price is not geared to other levels of the marketing system may have repercussions on the production of quality beef. This means that the tendency to sell quality beef carcasses at retail level and to produce quality beef at farm level may be reduced. Infact, the price structure looks very favourable for the development of black markets.

The high class butchers favour a free retail market for beef. During the interview, 86% of the high class sample butchers replied that the market should be left free. The justification for their stand was:

1. the price control system reduced the profitability of beef and,
2. the availability of quality meat in the beef retail market is reduced under the present Price Control Order.

5-2 Competition in the Beef Retail Trade in Nairobi

The total number of butchers in Nairobi beef retail trade is 458. This implies that there are a significant number of butchers participating in the retail market of beef. However, although the types of competition varies between the classes, in the overall marketing practice it can be said that non-price competition is more common than price competition. During the interview, few high class butchers indicated that they sell at a price less than the fixed retail price. It was also found that those who do sell at a price less than the fixed retail price owned more than one shop. This is in line with the objective of the high class butchers who aim at high volume of sales for more profit. About 36% of the high class butchers interviewed indicated that they sold at less than the fixed retail price. Only one butcher (about 4% of the low class butchers interviewed) replied that he sold less than the fixed retail price. The price competition could be expected to be minimal because the gross margin has decreased since 1971. From the butchers' point of view, the improvement suggestions for the beef pricing system ranged from increasing the beef retail price to discontinuing government control of the retail price.

Most of the non-price competition observed was basically on services. In the high class butchers, the facilities, neatness of the shop, availability of other types of meat or products were important tools used for attracting customers. A distinct difference in the standard of service was observed between the two classes of butchers. However, the low class butchers also engaged in certain competitive practices. One important factor which played a role in attracting customers in the low class beef retail trade was the service of allowing customers to roast meat in the butcheries. It was observed to be a common phenomenon among the low class butchers to allow their customers to buy meat and roast it there for immediate consumption. The butcher who had the highest number of visitors (910) per day was among those who permitted roasting meat at their shop. However, the highest number of visitors did not always coincide with the highest sales. The reason is that the quantity purchased per individual and per unit time is lower in the low class butchers group.

Entry to business may differ depending on which class the new entrant prefers to join. However, the interviews showed that, in spite of the complaints about the low margin, new entrants appeared in the beef retail business. When the wholesale price for beef increased in 1975 and the Price Control Order already in existence, 6 butchers from the low class and 3 butche from the high class joined the beef retail trade. That is, about 21% of each class interviewed entered the business. An equal proportion entered the beef retail trade in each class. However, in absolute figures, more low class butchers entered the business. Two conclusions can be drawn from the figures of new entrants. The first is that beef trading is not as unprofitable as the butchers claim. Secondly, the access for new entrants is relatively easy. Moreover, the entry at the low class butcheries is expected to be relatively easier because the investment required is less than in the high class sector. The type of competition that prevails in the Nairobi beef retail trade is summarized in Table 22. To a certain degree, market imperfections were observed in pricing. About 36% of the high class butchers interviewed sold their beef at

TABLE 22: SUMMARY OF THE TYPE OF COMPETITION IN THE NAIROBI BEEF RETAIL TRADE, NAIROBI, 1975

Class of Butchers	No. of Firms	Type of Product	Butchers Control over Price	Condition for Entry	Non-Price Competition
I. High Class Butchers	Many	Beef and other type of meat in about the same proportion. Beef is sold in special cuts.	Government controlled. About 36% of sample sell at less than controlled price	Relatively easy. 21% of the interviewed butchers entered in 1975	Mainly service-selling of other products in addition to beef - neatness of shop
II. Low Class Butchers	Many	Beef only. Beef is sold in two forms: meat off bone and meat on bone	Government controlled 4% of the sample sell less than the fixed price	Relatively easy. 21% of the interviewed butchers entered in 1975	Mainly attract customers by selling roasted meat in their butcheries

Source: Data from Survey, 1975.

a less price than the fixed price. Only one or 4% of the low class butchers interviewed sold at prices less than the fixed price. It was also found that those who sold their beef meat at less than the fixed prices were those who owned more than one shop. Therefore, there was a relationship between horizontal integration and price competition. However, from Table 22 it may be concluded that the type of competition in the Nairobi beef retail trade tends to be monopolistic.

CHAPTER 6

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

6-1 Summary

In the structural analysis undertaken in this study it was found that the most convenient and consistent method of classifying the butchers was on their selling practices. Two types of selling practices were identified in the study. The first was selling in special cuts such as fillet steak, rump steak, sirloin and the second type was selling in two forms; meat on bone and meat off bone. Based on the method of selling practice it was found that basically there are two classes of butchers in Nairobi; namely, the high class and the low class butchers. The result of the finding for the two classes of butchers is summarized in Table 23, which also illustrates distinct differences between them.

The market integration that exists in the beef retail trade in Nairobi is mainly horizontal. About 43% of the sample butchers interviewed in the high class sector indicated that they own more than one shop. Similarly, about 31% of the low class butchers interviewed replied that they own more than one butchery. The percentage figure of owning more than one shop is an illustration of the existence of horizontal integration in the beef retail market. A relationship was observed between the horizontal integration practice and price competition. Some butchers indicated that they sold their beef at lower

TABLE 23: SUMMARY OF THE FINDINGS FOR THE LOW CLASS AND HIGH CLASS BUTCHERS, NAIROBI, 1975

High Class Butchers	Low Class Butchers
1. Source of Beef in Percentage	1. Source of Beef in Percentage
a. KMC - 43% b. Non-KMC - 57%	a. KMC - 18% b. Non-KMC - 82%
2. Purchasing Practice in Percentage	2. Purchasing Practice in Percentage
a. Carcass Grade (i) Choice - 44% (ii) F.A.Q. - 39% (iii) Standard - 17%	a. Carcass Grade (i) Choice - 6% (ii) F.A.Q. - 41% (iii) Standard - 49%
b. Quarters (i) Hind-quarter - 79% (ii) Fore-quarter - 21%	b. Quarters (i) H/Q - 47% (ii) F/Q - 53%
3. Selling Practice	3. Selling Practice
a. In Special Cuts Such as Fillet Steak, Rump Steak	a. In only two forms: meat off and on bones
4. Percentage Sales	4. Percentage Sales
a. Beef - 59% b. Other meats - 41%	a. Beef - 95% b. Other meats - 5%
5. Average Sales Per Customer (in K.shs.)	5. Average Sales Per Customer (in K.shs.)
a. Beef - 983/- b. Other meats - 1041/-	a. Beef - 420/- b. Other meats - 20/-
6. Average Sales Per Employee (in K.shs.)	6. Average Sales Per Employee (in K.shs.)
a. Beef - 22,465/- b. Other Meats - 23,322/-	a. Beef - 19,637/- b. Other meats - 741/-
7. Average Gross Margin Per Shop	7. Average Gross Margin Per Shop
a. 17%	a. 23%

Source: Data from Survey, 1975.

than the fixed price to attract customers and benefit from high volume of sales. Those butchers who sold their beef at lower price than the controlled price were those who own more than one shop.

The analysis of the gross margin of beef retail trade showed that the margin is higher in the low class butcheries than in the high class. The gross margin between wholesale and retail levels was calculated both per unit of carcass and per retailing shop. As far as the gross margin per unit of carcass and per retailing shop was concerned the low class butchers seemed to benefit more. In addition, the comparison made between selling a unit of carcass in special cuts or in meat off and meat on bone showed that sales of the latter were greater. However, when the average sales per month of the two classes were compared, those of the high class butchers were found to be much higher. That means, the high class butchers maximize their profits from greater volume sales of beef. The second advantage the high class butchers have is from the sale of other meat types. The proportion of other meat types to that of beef is about the same. Therefore, the loss in gross margin or profit from beef might be compensated for by the profit from the sales of other meat. The main reason why the high class butchers sell their beef in special cuts is because they benefit from high volume of sales.

In the study it was also found that there is a general tendency of purchasing the lower grade carcass. Because of the higher gross margin it was found that it is advantageous for the butchers to buy the lower grade carcass than the higher grade carcass. But butchers, particularly the high class, could not completely behave in accordance with the benefit obtained from a unit of carcass grade. They are also forced to look into the tastes and preferences of their customers. Because of the consideration of customer's preferences a difference in the purchasing pattern was observed between the high class and the low class butchers. The high class butchers buy all carcass grades, but the higher grade is bought in slightly higher proportion. The low class butchers also purchase all grades of carcass but less proportion from the high grade.

Generally, the type of competition in the retail market of beef is more on other factors like services and facilities than on prices. Price competition is minimized because of the Price Control Order. The distinct factors of competition in the high class butchers are neatness, facilities like refrigerators, good display and availability of other products. The high income consumers buy other products like fish, pork, mutton, chicken and food for their pets in addition to beef. Therefore, butchers who provide all these items are likely to attract more customers. In the low class butchers one of the main factors that enhance competition is the service of allowing meat roasting in their shop. The study indicated that those butchers which offered meat roasting facilities attracted more number of customers or visitors per day. However, the number of visitors per day did not correlate with the volume of sales. The reason is that the customers who buy beef for roasting, purchase small quantities for example 1/4 Kg. since this is what they can consume at a time. The second explanation is the error by the butchers in the estimation of both sales value and the number of visitors per unit of time.

The ease of entry in the beef retail trade might differ depending on class of entry. The investment required in the two classes of butcheries is different, hence, it could be a factor of consideration. In the study we found that 21% of the butchers interviewed in both classes entered the business of beef retailing in 1975. This was the period when butchers complained of the unprofitable beef business. The percentage of butchers that entered during that period, however, implied that beef retailing was still profitable and that the entry to the business was relatively easy.

The study also explained that KMC's local market share of beef has declined, although, in the past it used to have a larger share. About 57% of the high class butchers and 82% of the low class butchers interviewed indicated that their source of beef was of non-KMC orgin (private wholesalers). The rest of the butchers in both classes purchased their beef from KMC.

From the percentage of sources, we can conclude that on the average a large proportion of beef supply to the retail market of Nairobi is from non-KMC sources. The beef in the retail market is less homogeneous because standard grading is done only at KMC.

Considering the competitive methods used in the beef retail market, it can be concluded that there is market imperfection. Although the number of butchers are many, and the entry to the business looks relatively easy, we can broadly conclude that the type of competition in the beef retail trade in Nairobi is rather monopolistic.

The pricing policy for beef is conducive to selling of lower grade carcass. The price of beef is controlled by the government at all levels, that is, producer, wholesale and retail levels. The producer price and wholesale price are consistent because they vary according to the grade of the animal. However, at the retail level the prices fixed by the government do not reflect the carcass quality differences. The retail prices are fixed for each special cuts obtained from the carcass without any reference to the carcass grade. That means fillet steak obtained from Choice grade or Standard carcass grade fetches the same retail price. Similarly, retail price is also fixed for the meat on bone and the off bone. Again, there is no price differential between meat on bone and meat off bone from different grades. The conclusion on the pricing policy is that there is no close relationship between the prices at the retail level and at wholesale and producer levels. One of the market imperfection, therefore, arises from the pricing policy.

6-2 Hypotheses Tested

Hypothesis 1: That the gross margin of each carcass grade is different and butchers purchase the carcass grade with higher gross margin. The gross margin for each carcass grade was found different. The gross margin per quarter for the high and low classes of butchers is summarized in Tables 14 and 15, and show that the lower the carcass grade the higher the gross margin. This implies that it is profitable for the butchers to purchase the lower grade carcass. However, butchers consider the tastes and preferences of the customers too. The actual purchasing behaviour of the high class butchers was a preference for the higher grade carcasses. Similarly, the low class butchers bought all types of carcass grades, but with a larger proportion from the lower grade. This means that the purchasing practice of all butchers does not only depend on the gross margin. The proportional purchase of carcass grades for the high and low class butchers is summarized in Tables7 and 8. The tables illustrate that Hypothesis 1 is partly acceptable. But relatively Hypothesis 1 is more acceptable in the low class butcheries than in the high class.

Hypothesis 2: that the high class butchers sell in special cuts, because the return is higher than selling the carcass in meat off and on bone. The gross returns of the hind-quarter and fore-quarter of each carcass grade were compared. This is summarized in Tables18 and 19. The gross return of all quarters for each carcass grade was found higher when sold in meat on and off bone, except for the hind-quarter of the standard grade, where the gross return was higher when it was sold in special cuts. In addition to the gross return per quarter, the gross margin found in this study was higher for the low class butcheries. The high class butchers, therefore, sell their beef in special cuts in order to satisfy their customers. The benefit for the high class butcheries is obtained form high volume sales than per unit of carcass (quarter). This was illustrated by the monthly average sales of beef where it was found to be much higher for the high class butchers.

Hypothesis 3: That the Price Control Order reduced the number of butchers in the beef retailing business causing the customers to travel longer distances to get beef. The implementation of the Price Control Order did not reduce the number of butchers in the retail market of beef. On the contrary 21% of each class of butchers entered the business in 1975 despite the existence of the Price Control Order. The likely explanation, particularly for the high class butchers, might be an increase in their sales of other meats. Some of the high class butchers interviewed responded that they increased their sales in other meats. They did not notice closure of any butchery in their surrounding.

Hypothesis 4: That the high class butchers prefer to buy from KMC, because they are able to get the required carcass grade. The other sources do not have standard carcass grading system. During the interview 100% of the high class butchers indicated that they bought their beef partly or wholly from KMC. The source of beef for the butchers is summarized in Table 4. The high class butchers were forced to buy from other sources because of the shortage of beef at

KMC. 35% of the low class butchers replied they would prefer to purchase partly or wholly from KMC.

<u>Hypothesis 5:</u> That keeping beef in the shop increases the sales of other meats. That means beef acts as a loss leader. The result of the regression analysis is summarized in Table 13. The analysis revealed that there is positive relationship between beef sales and other meat sales. The calculated value of elasticity also showed that in the high class butcheries an increase of beef sales by 1% increased other meat sales by 1.38%. Similarly in the low class butcheries an increase of 1% in beef sales raised other meat sales by 1.25%. This implies that beef sales acts as a loss leader. However, beef acts as a loss leader more in the high class butcheries. It should also be mentioned here that the regression analysis done cannot be taken as reliable because not all variables were included.

<u>Hypothesis 6:</u> That the number of butchers in the low class butcheries is greater than the high class. Although it was difficult to get the exact distribution figure, from the observation of the writer the number of butchers was found greater in the low class. Nearly all high class butchers were visited during the interview, whereas the low class butchers were not. From the total butchers interviewed about 67% and 33% represented the low class and the high class butchers respectively.

6-3 Conclusions and Recommendations

As mentioned in the beginning the cost structure of the beef retail market was not included in the study. The inclusion of the cost study could have helped to determine the exact profit derived from beef retailing. However, from the calculated gross margin and the number of butchers who entered the business of beef retailing in 1975 we can conclude that beef selling is profitable as opposed to the butchers claim. Possibly, the profit obtained by the butchers might have decreased due to the Price Control Order and the increase in wholesale prices. Alternatively, the gain made by the butchers from beef retailing might be below what they expected (particularly the high class). But given that the butchers were in the beef retailing business for certain years, and that some entered the business at the time when butchers claimed it to be unprofitable; it evidently leads us to strongly suspect that beef retailing has been a profitable business.

Over time the gross margin of beef retailing has decreased. The comparison between the gross margin studied by F.G. Hay in 1971, for high class butchers and that arrived at in this piece of work for the said butchers, reveals that gross margin has reduced since then. The reduction of the gross margin from beef retailing has, therefore, affected the market situation in many ways. Generally, the quality of beef sold in the retail market is lower. This means that butchers would prefer to sell the lower grade carcass because of its higher gross margin.

Some of the butchers, particularly, the high class responded during the interview that the price structure did not permit them to sell quality beef. They said that they could aim at selling high grade beef if the market was left free. The pricing system is such that it does not differentiate the quality of the special cuts and those two forms of beef' meat off and on bone. This issue has, therefore, to be looked at seriously if the market is required to provide quality beef. If the Price Control Order and the increase in whole-sale price continue to operate simulataneously, the welfare of the consumers may be adversely affected. The whole situation of the beef retail market could be improved if it is left free partially or wholly. That is leaving the market free for some or all of the grade carcases.

The writer suggests that the following improvements be done in order to alleviate the general problem of beef retail market in Nairobi:

1. Establishment of training institution for the butchers. Most of the butchers replied in the interview that they had no formal training in meat cutting and handling, except local experience. Distinct differences between the high class and low class butchers were observed in hygienic standards, meat cutting and methods of display. It is, therefore, possible to improve this situation by introducing specific professional training programmes. This should include cost accounting, and management of buying and selling.

2. The facilities in the shops of the low class butchers

are low in standard compared to those of the high class. As it was a general case it can be concluded that the low class butchers experienced capital constraint problems. Credit fascilities for the beef retail trade should be made available to alleviate the level of standards of the facilities.

3. The supply problem of beef at KMC should be improved. Most butchers interviewed have complained of the unavailability of the required beef grades at the Commission. The beef shortage at the local market should, therefore, be solved by KMC increasing its quantity supplied to the retail market or allowing the local slaughter houses to expand their capacities. Secondly, the standard grading system of carcasses should be introduced to the private wholesalers (non-KMC).

4. Kenya Meat Commission should have its own retail shop with proper recording system. It will help for studies, such as this one, to provide better sources of information.

5. Yield data should be available at KMC for the retailers. Yield estimate is available for export at KMC. It is, therefore, very important for KMC to make available the yield estimate of a unit of carcass (quarter) at the retail level. The yield estimate per unit of carcass should be done both in special cuts, and meat off and on bone.

6. The cost structure of beef retail in Nairobi requires a longer period for a thorough study. In order to investigate properly the cost of beef retailing in both classes of butchers it is necessary to make studies on this. As was observed in

the study, the Price Control Order was implemented without basic conclusive research. Hence, it is useful to study the cost structure of selling meat at wholesale and retail levels for a longer period in order to establish a formula for price setting and to help policy makers and administrators in making better decisions.

APPENDICES

The yield data that is used in this study was obtained as result of looking at the following sources:

1. KMC yield estimates
2. Butchers of Nairobi

Basically the yield estimate of the butchers was used, because that of KMC was either for export, or different from the yield obtained at the retail level. During the interview the butchers were asked the yield they obtained from the carcass purchased. The yield per unit of carcass (quarter) given in either meat off and on bone or in special cuts. This means,the butchers were asked how many Kgs. of meat off and on bone or special cut is obtained from a hind-quarter or fore-quarter.

APPENDIX I: YIELD ESTIMATE PER (HIGH CLASS BUTCHERS) NAIROBI, 1975

Cut		Yield In %	Grades		
			Choice Kgs.	F.A.Q. Kgs.	Standard Kgs.
			Yield In Kgs.	Yields In Kgs.	Yield In Kgs.
1.	Sirloin On Bone	15.5	8.70	8.50	8.06
2.	Rolled-Sirloin	12.5	7.00	6.90	6.50
3.	Topside	10.1	5.65	5.56	5.52
4.	Silver Side	11.1	6.20	6.10	5.77
5.	Top Rump	6.7	3.75	3.69	3.48
6.	Rump Steak	8.2	4.60	4.51	4.26
7.	Shin On Bone	4.8	2.70	2.64	2.50
8.	Boneless Shin	2.3	1.30	1.27	1.20
9.	Flank	5.3	3.00	2.92	2.76
10.	Fat	3.9	2.20	2.15	2.03
11.	Bones	10.4	5.80	5.72	5.41
12.	Waste	5.8	3.25	3.19	3.02
13.	Kidney	0.5	0.25	-	-
14.	Mince	2.0	1.10	2.10	1.40
	Total		56.00	55.00	52.00

Source: Data from Survey, 1975.

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APPENDIX II: YIELD ESTIMATE PER F/Q (HIGH CLASS BUTCHER)
NAIROBI, 1975

Cut	Yield In %	Grades		
		Choice Kgs.	F.A.Q. Kgs.	Standard Kgs.
Rolled Ribs	14.81	8	7.70	6.91
Brisket	14.81	8	7.70	6.91
Shin Bones	12.96	7	6.74	6.05
Chuck Steak or Mince	9.26	5	4.82	4.32
Shin on Bone	12.96	7	6.74	6.05
Middle Ribs	7.41	4	3.85	3.46
Flat Ribs	7.41	4	3.85	3.46
Neck	7.41	4	3.85	3.46
Flank	7.41	4	3.85	3.46
Waste & Dehydration	5.56	3	2.89	2.59
Total	100	54	52	46.67

Source: Data from Survey, 1975.

APPENDIX III: AVERAGE YIELD OF H/Q (LOW CLASS BUTCHERS) NIROBI, 1975

Choice (58.17 Kgs.)		F.A.Q. (57.61 Kgs.)		Standard (56.63 Kgs.)	
On Bone	Off Bone	On Bone	Off Bone	On Bone	Off Bone
48.27	9.89	47.82	9.79	42.02	8.61

Source: Data from Survey, 1975.

APPENDIX IV: AVERAGE YIELD OF F/Q (LOW CLASS BUTCHERS) NAIROBI, 1975

Choice (54 Kgs.)		F.A.Q. (52 Kgs.)		Standard (46.67 Kgs.)	
On Bone	Off Bone	On Bone	Off Bone	On Bone	Off Bone
49.14	4.86	47.32	4.68	42.47	4.20

Source: Data from Survey, 1975.

APPENDIX V: AVERAGE WHOLESALE OF THE PRIVATE WHOLESALERS NAIROBI, 1975

H/Q (KGs)			F/Q (KGs)		
Choice	F.A.Q.	Standard	Choice	F.A.Q.	Standard
6.00	6.00	5.54	6.00	5.90	5.45

Source: Data from Survey, 1975.

APPENDIX VI: WHOLESALE PRICE VARIATION THE PRIVATE WHOLESALERS NAIROBI, 1975

H/Q (KGs)			F/Q (KGs)		
Choice	F.A.Q.	Standard	Choice	F.A.Q.	Standard
7.40- 6.00	6.70- 5.80	6.30- 5.50	6.60- 6.00	6.10- 5.40	5.70- 4.70

Source: Data from Survey, 1975.

APPENDIX VII: YIELD ESTIMATE
(ATHI RIVER)

H/Q		F/Q	
Cut	% Yield	Cut	% Yield
Top Side	11.00	Chuck & Rib Meat	51.80
Silver Side	11.70	Boneless Shin	3.30
Thick Flank	8.20	Eye of Rib	2.90
Sirloin	6.90	Red Meat	6.70
Striploin	7.00	Waste	6.30
Fillet	2.20	Fat	5.80
Boneless Shin	5.00	Bones	23.20
Bone	14.80		
Fat	66.00		
Triming (waste)	11.00		
Kidneys	0.70		
Red Triming to Canning	15.70		

Source: KMC Yield estimate at Athi River, 1975.
(Production Section).

Average wgt./Carcass	Choice	F.A.Q.	Standard
Cold dressed wgt. (C.D.W.)	203 Kgs.	199 Kgs.	122 Kgs.
Average/side weight	101 Kgs.	99 Kgs.	61 Kgs.
H/Q = 52% of side			

APPENDIX VIII: RETAIL PRICE FIXED BY THE GOVERNMENT

Cuts (Beef)	Price/Kg . In KShs.
Fillet	13.00
Sirloin	13.00
Sirloin on Bone	11.40
Rump Steak	10.40
Silverside	8.30
Topside	9.30
T. Bone Steak	11.40
Stewing Steak	8.00
Brisket	7.80
Boneless Shin	5.40
Ox-Tail	5.10
Ox-Liver	6.20
Ox-Heart	5.30
Ox-Tounge	7.20
Minced Steak	8.30
Tripes	4.50
Beef on Bone	7.40
Beef off Bone	8.60

Source: Kenya Subsidiary Legislation, Jan, 1975, pp. 155 & 160.

APPENDIX IX: QUESTIONNAIRE FOR BUTCHERS, NAIROBI, 1975.

1. Description

   a. Name of Butcher ____________________ Age ________

   b. Name of the shop ____________________________

   c. Location of the shop __________________________

   d. Single Multiple (If multiple how many) ________

   e. Number of employees __________________________

   f. Year entered into the business ______________

   g. Number of weighing equipment _________________

   h. Size of the shop (estimate the area) ________

   i. Regular customers per week   Asians ____________

      Africans ____________

      Europeans ____________

2. General

	Do you also sell	Profitability of Products in Descending Order	Value of
i. Fish			
ii. Bacon			
iii. Pork Pie			
iv. Tinned & Bottled Products			
v. Poultry			
vi. Sausage			
vii. Vegetables			
viii. Others			

3. Every how many meters do you find butchers in this area?
(i.) Less than 50 (ii) 100 (iii) 500 (iv) Over 500

4. i. Do you think the number of butchers has increased or decreased in your area, since the recent (January, 1975) increase in wholesale price of beef? If the number is reduced do you have more customers coming than before?

ii. Since the increase in wholesale price (Jan 1975) has your quantity of beef purchase from KMC and non-KMC changed?

i. Increased____________
ii. Decreased____________
iii. Remained the same________
iv. By what % ____________

5. Do you purchase the following separately or with Carcass source (KMC or non-KMC)
i. Offals
ii. Specific prime cuts

6. i. Do you give credit to customers? If yes, state to what type of customers credit is given.

ii. Do you get discount from wholesalers?

(a) KMC
(b) Non-KMC

7. List the facilities you have in your shop.

	Value in KSh	Estimated life
a. Storage facilities		
b. Transport vehicle		
c. Others		

8. Is it better to leave the beef market free, or under the present price control order? Why?

9. i. Where do you purchase your beef?

   (a) KMC
   (b) Non-KMC

   (Name the non-KMC source)

   ii. Are your non-KMC sources only licensed ones? If so, why don't you buy from the non-licensed sources?

10. Which carcass grade do you usually purchase?

If your source is non-KMC, give its equivalent to that of KMC grading system.

	Choice	F.A.Q.	Standard	Commercial
a.	KMC			
b.	Non-KMC List the names of sources			

11. Which carcass grade is sold in meat with the bone and off bone?

	Hind-quarter		Fore-quarter	
Carcass grade	Kgs of Meat with bones	Kgs of boneless	Kgs of meat with bones	Kgs of bonelss meat

12. Which grades do you sell in special cuts?

	Yield In Kgs of The Grades								Price/Kgs in spcial cuts?							
Special Cuts	Choice		F.A.Q.		Standard		Commercial		Choice		F.A.Q.		Standard		Commercial	
	H/Q	F/Q	H/Q	F/Q	H/Q	F/Q	H/Q	F/Q	H/Q	F/Q	H/Q	F/Q	H/Q	F/Q	H/Q	F/Q
i. Fillet Steak																
ii. Rump "																
iii. Stewing "																
iv. Silver Side																
v. Top																
vi. Sirloin																
vii. Rolled ribs																
viii. Slim leaf																
ix. Brisket																
x. Mince (top quality)																
xi. Liver																
xii. Heart																
xiii. Tounge																
xiv. Kidney																
xv. Head meat																
xvi. Dripping																

13. If your source of meat is from non KMC wholesale, how much do you pay for the particular carcass grade?

Name of the non-KMC Source	Carcass Grade	Price/Kg.	
		Hind-quarter	Fore-quarter

14. Estimate the cost of the following

Fixed		Non Fixed	
Item	Where in KShs. per unit of time	Item	Value in KShs per unit of time.
1. Rent			
2. Wage			
3. Others			
4.			
5.			
6.			

15. When there is shortage of beef in the city do you buy from

i. KMC only
ii. KMC and non-KMC
iii. Non-KMC only

Why?

16. Is there a time when you sell your meat less than the controlled price?
Give reasons:-

17. Have you had any training in meat cutting, quality determination etc.?
If not how did you learn it?

18. How would you like the meat retail or trade be improved?

19. If your sources of meat is from non-KMC
   a. Do you buy the animal, and slaughter it at the local slaughter houses paying the charge ?
   b. Do the local slaughter houses sell it to you the carcass ?
   c. Do you get it from the owner of the animal who slaughter it at the local slaughter house at charge ?

20. i. Do you sell the following ?

	meat in Kgs.	Value of monthly sales
a. Mutton		
b, Lamb		
c. Chicken		
d. Goat		
e, Veal		

ii. How do you consdier the consumption of the above (20i) type of meat in relation to beef in Nairobi? Do you think your sales on the above types of meat considerably increase when there is shortage of beef?

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