

STUDY of The ~~System~~ ^{Market of} Liberalization Vegetables and Fruit and the Impact of Deregulation of Prices"

Antonio Francisco
Ana Raria Ribeiro
Kerina Ponces
Belmino Baptista

[Summary]

Maputo, 1987

INTRODUCTION

The market of vegetables and fruits has been dealt with special attention, not only because it contributes for the solution of serious food shortages, but also it is a field of the economy, where the supply and demand helps in the determination of prices transparency within a free and competitive market.

Thus, the objective of this research is to make an assessment of the experiences in the liberalization of prices in the market of vegetables and fruits, with special focuses on the identification of serious problems facing the market system and the means through which the system can become more competitive and therefore increase a reduction in the current prices.

Maputo City is the main consumption centre, whose area of influence comprises the three southern provinces of the country, the main suppliers of vegetables and fruit among other products.

Before independence the supply of vegetables to Maputo City was based upon the average and giant producers, who had their own means of transport to flow off their products, being the main agents of the wholesale trade of fruit and vegetable in the market.

The task of these agents used to be increased by the existing competition at that time, having these products reached the consumer at prices that depended on the law of supply and demand.

After independence most of the foreign producers fled the country leaving their properties in a state of abandon, thus creating disruptions in the wholesale distribution system. The abandoned properties were intervened by the State or turned into co-operatives in order to assure their continued functioning.

At the same time, the retail market was abandoned by its agents, most of whom were foreigners who dominated the public market in Maputo City.

The appearance of new sellers, together with the lack of experience in commercializing the production was the main reason for the confusion that arised between the prices practiced to the producer and to the consumer.

Until 1979 the producers had difficulties in flowing off their production; that is why the government interfered in the fixing of prices with the objective of assuring the practice of fair prices to the producer and protect the consumer.

Between 1982 and 1984, there was a sharp decline production, due mainly to the drought that affected southern Mozambique, being the market characterized by a higher demand than the supply.

During that period, the producers had the sale of their products assured, thus preventing the existence of difficulties in the flowing off process. However, the producers did not agree with the current prices, particularly during the off-season of vegetables. Consequently, the products are sold at prices higher than the fixed and this leads to the development of the black market.

In May 1985 the prices of vegetables, onions, sweet-potatoes, cassava and fruit were liberalized, in what constituted the first time where the government stopped to interfere in the fixing of prices for some products, with the objective of stimulating the productivity levels and improving the quality of those products.

As a result, there was an increase in the number of producers and the production of vegetables and fruit in 1986. This increase originated from the support given to the private sector in instruments for production through international organizations such as the USAID programme.

The non-existence of a continued research about the situation in the market before and after prices liberalization led to the arousal of different reasons to justify the current problem, particularly in the following points:

- a) High prices are caused by excessive opportunities of commercialization practiced by the retailers, who have a high monopoly power at the moment.
- b) Despite the high prices practiced in the markets the producers had few advantages with the prices liberalization; therefore, there is a weak activity in the production field;
- c) Apart from the lack of competition within the trade system, the prices are high due to the high cost of the majority of products caused by the low level of productivity both in the production and in commercialization.
- d) In some cases it is underlined that the price of the products is reasonable, but seems to be high because its level is much more on top of the purchasing capacity for most consumers.

Furthermore, it is argued that the high prices have been declining but there is an important fluctuation originated by the variation of weather conditions, namely the rain conditions in Mozambique, which creates a big variation with relation to the shortage or abundance of products in the two

seasons of the year: winter and summer.

These are the reasons for the undertaking of a research in the trade of vegetables and fruit in Mozambique. Taking into account the previously defined purpose the main aims of this study are the following:

- a) To determine the consumption features in the main urban centres and its main tendencies;
- b) To describe the current production and comercialization systems;
- c) To identify the hindrances that occur in the market system and the reasons for high prices;
- d) To assess the problems facing the producers of vegetables and fruit concerning the increase of production and supply;
- e) To assess the experience acquired in the liberalization of prices since May 1985 and the impact of this measure from production to consumption;
- f) To make proposals for improving the market, i.e., better possibilities of production, better access of products to the market; better transport system, higher productivity of the agents who participate in this process, and so on.

For the undertaking of this study the governmentt appointed the members of the local team, which was co-ordinated by the Trade Minister and lead by the assistant in the Department of Economics at Eduardo Mondlane University, MA Antonio Francisco and composed by three technicians: MA Ana Maria Ribeiro from the Trade Ministry, Agronomist Engineer Marina Pancas and Belmiro Baptista an expert in the trade of vegetables and fruit, both from the Ministry of Agriculture.

At the same time, the World Bank provided a consultancy given by Professor Donald Larson from the Ohio State University for the period of three weeks in July, with two main objectives: 1) To work with the local team in the design of the Research Plan and 2) To make interviews and non-formal contacts with retailers, wholesalers and producers, in the design of a preliminary report describing the commercialization system, indentifying of the system's drawbackd, the reasons for the high prices praticed and make proposals for the improvement of the trade system.

Meanwhile, the World Bank agreed to support the analysis of the data collected and the design of the final report. After the experience of working with Professor Larson proved to be

positive, the Mozambican team proposed that he should keep his technical assistance in the long distance, and this was accepted. Thus, it was agreed that the consultant would receive a draft of the report and information collected with the head of the team and analyse and prepare the final report.

The study focused on Maputo City and its area of influence, that is, the origin of most of the green products sent to it. A total of 14 products was selected for this study: pumpkins, lettuce, cabbages, garden cabbages, tomatoes, potatoes, onions, sweet-potatoes, cassava, pine-apples, bananas, oranges, lemon and mandarins.

The main criteria for the choice of these products was their importance in the daily diet for the different groups of consumers and its big demand in the main Urban Centres like Maputo and its role in the production and market structure. In particular, products like lettuce, cabbages and tomatoes are some of the most important in terms of production and national consumption. In turn, potatoes and onions are products whose import is fundamental for the market Provision.

Sweet-potatoes and fresh cassava are considered important for the diet of most of the people and can be supplied throughout the year. The same criteria was followed for the choice of fruits.

For collecting information the main agents of the whole circuit were included in their multiple kinds: retailers in the urban markets, conveyors and other intermediates and producers.

Modality of Purchase and Market Assessment by the Consumer

4.1. Place and Frequency of Purchase

All the consumers interviewed make the purchase of fruit and vegetables in public markets, but also use other places for purchasing distributed as follows:

Table 23 : Most important places for consumers to purchase greens and fruit

Places of Purchase	# of Consumers	% total interviewed
Public markets (Bazaars)	59	100
Greens Enterprise	26	44
Greengrocers	23	39
Consumption co-operatives	14	24
Others	17	29
Hawking	5	8

Note the importance of the greens' Enterprise immediately after the markets as a place for purchasing vegetables and fruit, followed by the greengrocers as places preferred for the acquisition of these products.

Concerning the frequency of purchase the majority of consumers make them daily, being purchasers of small quantities but having a high frequency during the Week:

Table 24 : Frequency of consumers purchases in a Week

Place of Purchase	Frequency	
	Complete	Relative %
Daily	24	46
Twice a Week	17	33
Once a Week	8	15
Others	3	3
	52	100

4.2. The Impact of Prices Liberalization

Two years after the liberalization of the prices of fruit and vegetables most of the consumers reacted positively to this measure.

As shown in table 24, more than 80% of the consumers thows that quality and quantity of products in creased in the market after the liberalization of the prices of fruit and vegetables. All of them refer to the fact that sellers have in creased their attention to the public.

Table 25 : Consumers opinion about the liberalization of prices

Qualitative Indicators	Relative Frequency (%)				
	Quality	Quantity	Attention	# of Tradesmen	Prices
Increased	85	95	80	93	50
No change	14	3	16	7	9
Declined	2	2	4	-	41
T.of answers	100	100	100	100	100

With relation to prices the majority of the people interviewed (50%) said that they increased, but a big number of consumers (41%) stated that there was a decline in the prices.

5. Conclusions About the Consumption of Vegetables and Fruit

1. The current purchasing capacity of Maputo's population constitutes one of the hindrances for the consumption of vegetables and fruit. The important increase in prices that occurred in 1981, more quickly in Maputo rather than in the remaining part of the country affected the consumption of basic foods particularly. Between 1982 and 1984 the cost of living doubled in this City, while in this index it increased by 3% only during the same period in the country.

2. Considering the evolution of prices to the consumer in the period between 1981 and 1987 it is estimated that real wages have declined to about 16,5% in 1981, while in the country there was a reduction to 1/3 of the values that had been reached in 1981.

3. The consumption of fruit and vegetables in Maputo plays an important role in the families' expenditure. Thus, in 1982 the expenses in fruit and vegetables represented 23% of the total

of expenses for the families, being this index higher than in the urban areas and in the country as a whole during the same period. Within the families interviewed, expenses in fruit and vegetables represented 31% of the total of expenses spent on average in food by August 1987.

4. Per capita consumption levels between 1984 and 1986 were estimated to be extremely low. They did not reach 1/5 of the percentage recommended by the Health Ministry in terms of a good diet. The average consumption percentage of the same products for the families interviewed accounted for 130g per day in August, which although representing the month of the highest sales and the lowest prices during the year, it only accounts for 30% of the minimum consumption required.

5. From the 15 products selected for this study, what equal about 75% of the total of vegetables and fruit commercialized it can be stated that:

- 80% of the total amount purchased by the families interviewed concentrate on five kinds of vegetables and two of fruit : tomatoes, lettuce, garden cabbages, cabbages, Onions, oranges and bananas, which account for 70% of the total value spent in the purchase of fruit and vegetables.
- Potatoes and onions play a major role in the expenditure of vegetables, since they account for around 50% of these and 31% of expenses. Nevertheless, the amounts consumed do not surpass 20% compared to the total of vegetables and fruit purchased.

6. As far as the relation between home income and expenses in vegs is concerned it was noted that:

- In 1986, the home average income within a month accounted for Mt 28.060, 58% of which originated from wages. In 1987, the average income in a month (after the first devaluation) was Mt 34 920, being the wages comprised by 68 % of these.

Between 1986 and 1987 there was an increase in the expenses on food for the family, which increased from 47% in 1986 to 51% in 1987.

- Home expenses in fruit and vegetables compared to income was very important having reached 16 % of this, what amounts to 31 % of the total expenses in food.
- Although it is not completely linear the income used for the purchasing vegetables and fruit has

been increasing (varying between 17% and 23%) for increasing levels of income ranging between Mt 5000 and Mt 3000, what accounts for 78% of the families interviewed, changing gradually (with variations between 17% and 8%) until it reached the highest level of income.

Between 1986 and 1987 it was estimated that the flexibility of rents with relation to monthly average home incomes, the total for different levels of income suggest the possibility of a quick increase in the consumption of vegetables and fruit.

7) From the consumer behaviour towards the market it was noted that most of the people inquired prefer to buy fruit and vegetables in the public market followed by Greens Enterprises and Greengrocers in a decreasing order. The general assessment of the inquiry carried out two years after the liberalization of prices is positive. However, concerning the variation of prices most of the consumers stated that they increased, although a good number of the inquired (41%) declared that there had been a decline in the prices.

The consumers should effectively benefit from the new marketing conditions as a result of prices liberalization, particularly in the following points:

- A higher regularity in the supply of fruit and through the availability of some products in the market during the off-season for production.
- A better and more varied presentation of the products exposed, thus allowing more choice alternatives for the consumer.
- A better relationship between retailers and consumers.

8. Regarding the prospects in the search for fruit and vegetables it is concluded that there is a wide consumption potentiality mainly because:

- On one hand it is necessary to improve the people's eating habits, not only for diet reasons but also because vegetables are the viable alternative to solve the shortage of other basic food products in the short term and,
- On the other hand the high housing rate in Maputo implies that that the consumption of fruit and vegetables will increase according to the rates of population growth.

However, the increase in demand does not constitute a weapon because its implementation includes necessarily a package of measures that can namely assure: i) a more regular supply of these products throughout the year, ii) increase of the production income, decline in production, transport and commercialization costs for allowing the products to become more accessible to consumers and consequently increase its demand.

1. GENERAL FEATURES AND PRODUCTION ORGANIZATION

Agriculture production in Mozambique is divided into four fields namely the state, the private, the cooperative and the home sectors, which differ on the property regime and the labour force used. Presently, there are joint enterprises, that is, the ones which use state and private capital.

1.1 The State Sector

The State Sector was created after independence from the big private properties abandoned by foreign farmers who fled the country, mostly the portuguese. It was created not only from the need to assure the functioning of these properties for their wideness and the then existing framework, but also as a way of solving the food needs in the country and guarantee employment for the properties' workers.

Currently, this sector occupies 140 000 ha, that is, 6% of cultivated area, mainly producing rice and maïse among others, and cash crops (44%) such as tea and citrines.

1.2 The Private Sector

At independence this sector was mainly owned by portuguese farmers and some chinese, particularly in Maputo in the south. The majority of these farmers who made an important contribution in supplying Maputo in vegetables and fruit fled the country immediately after independence.

In 1984, the area occupied by this sector was estimated at about 50.000 ha. The real number of private farmers is not known. However, because most of them abandoned their property and the lack of support that occurred for a couple of years resulted in a decline of production. But because of some measures taken by the government such as the allocation of state land there was an important revitalization of the already existing farmers and an increase of private farmers nationwide.

On the other hand the support granted by the USAID and other world non-governmental organizations by distributing agriculture and transporte equipment among others, thus contributing for strenghtening of this sector.

1.3 The Home Sector

It is comprised by about 2 500 000 land plots, covering 92% of the total cultivated area and employing 80% of the total population.

This is an important field for agriculture production in the country, playing an important role in agriculture production for trade. The principal products cultivated are the preserved cultures like maize, cassava and 'mapira'. In favourable weather conditions this sector can reach self-sufficiency in

basic food products despite the low income obtained. Its participation in certain cash crops such as cashew-nuts and cotton is important.

1.4. The Co-operative Sector

IT was also created after independence, being estimated that there are around 400 co-operatives nationwide employing around 40.000 members who work in an area of 30.000 ha. There are 210 co-operatives with different features from these; they employ 11.000 people in an area of 725 ha in the Maputo valley.

The weak development of this field is a consequence of the low support that has been given to it. Thus, its contribution for trade agriculture is low.

4. The producer and his relationship with the market

According to the 9 Enterprises enquired the elements that determine the kind of product and its placement in order throughout the year are in a decreasing order: the sales facility and market demand, a higher income of the cultures and the agro-technical aspects.

Table 12: Factors Determining the Kind of Product and its Placement in the Enterprises

Factors	%
Agrotechnical Aspects	56
Tradition in the region	33
Sales facility	89
Market demand	89
Higher income	78

For the co-operative, the factors that determine the kind of product and its placement throughout the year are the agrotechnical aspects and the market demand.

The plots of land in the valleys fundamentally produce vegetables for home consumption, but the surplus is marketed. Six of the farmers stated that the factors that determine the choice of cultures are the facility in purchasing products and the regional tradition because the products are sold locally.

With relation to the products' quality for trade the enterprise declared that it is determined, selected and classified in the field. Nonetheless, the main reasons for the slump of products are the difficulties in the sales process, the lack of transport for flowing off, the weak search and the

shortage of agro-chemicals for the treatment of cultures.

Table 13: Principal reasons for the slump of products in the enterprises

	%
Bad quality of the product	22
Weak demand	56
Drawbacks in sales	78
Lack of transport	78
Lack of agro-chemicals	44
Others	22

In the co-operative as well the product is selected and classified in the field; slumps are the consequence of difficulties in selling the product in the market.

4.1 Production and Trade

Concerning the production capacity and productivity rates the data available is not enough. However, it was noted that with the exception of some farmers who reach high profits from the production of vegetables productivity is low as a whole and is far bellow the real capacities of the different regions. Both the enterprises inquired and the cooperatives produce mainly for trade, and their production is fundamentally sold in Maputo City, the main consumer center.

The distance between the field and the main consumer center is higher than 100 km for 5 out of the 9 enterprises, four of which are situated within a distance of 230 km, that is, the distance between Chokwe and Maputo. The cooperative and six enterprises inquired have their own transport for flowing off products.

However, for some of these enterprises one part of the production is flowed off by purchasers.

The production of most of the enterprises and cooperatives is fundamentally traded by the retail trade and the consumer himself to whom the products are basically sold ocasionaly and sometimes by a previous arrangement. However, three of most important enterprises, make their trade through the whosale enterprise "Hortifruticola". All enterprises and cooperative practice cash trade, but seven of these enterprises practice credit sales.

The valley farmers sale their product directly to consumers and retailers in the field itself, using the system of cash

trade but they are not responsible for transportation.

In a meeting with private farmers they stated that the period of work is actually reduced to one third in relation to normal conditions due to the poor security in the roads.

On the other hand, they declared that they face difficulties in placing their products in the market because they do not have enough time to sale them, what means that they leave their transport means idling. Therefore, they suggested the establishment of a wholesale market.

4.2 The activity drawbacks

For most of the people inquired the practice of agriculture has many drawbacks.

Thus, according to 8 of 9 the enterprises inquired this drawback is mainly caused by the product surplus in the market and the slump in prices. However, 5 of the enterprises appointed the actions of armed bandits and natural disasters as serious drawbacks. Apart from this, four of the enterprises stated that the lack of production factors is a very serious problem. For 50% of the farmers in the valley this activity is not safe due to the product surplus in the market and the fall of prices.

Concerning the security situation, the private farmer said the constant acts of sabotage of their equipment are serious and hinder the trade process.

4.3 Credit Appeal

Four of the enterprises prefer the credit system to finance their activities. Two of them declared that their financing amounts to Mt 10 million for a period that ranges between twelve and twenty months.

In order to solve its problems the co-operative was granted credit in the sum of Mt 7 million for 36 months and an interest of 18%, thus guaranteeing its production. However, the credit for valley and home farmers comes from friends. According to this inquiry only one of the farmers obtained a loan worth Mt 500,000,00. This was granted by a relative for a period of one year.

THE IMPACT OF THE LIBERALIZATION OF PRICES AND THE CURRENT SITUATION

In a meeting held with private farmers, they stated they will increase production. However, they consider that the increase that occurred shortly after the prices liberalization was caused by the support provided in means of production and transport. The liberalization brought an incentive to production and increased the number of farmers, who stated

that the benefit from the new prices was a short term one, because when the saler understood the value of liberalization the producer became dependent on him for fixing prices.

On the other hand, the increase in the number of vegetable producers lead the more experienced ones either to reduce this activity or produce another type of culture. For instance, in Incomati vale, some farmers began to produce bananas.

The cooperative and the enterprises also declared that there was an increase in production due to the liberalization of prices, having six of the latter stated that they benefited from the new prices. According to 5 valley farmers they also benefited from the liberalization of prices, which contributed for the increase of their production. For private farmers the Economic Rehabilitation Programme worsened the producer's situation because he can not bear the high cost of equipment, its repair and maintenance as well as the cost of fuel, interest rates and others.

In consequence of the Economic Rehabilitation Programme which was introduced in 1987 there was an increase in production costs, preventing the producer from reflecting them in pricing the products that he sells, what is worsened by the tendency of vegetables and fruit prices to fall.

6. CONCLUSIONS ABOUT THE PRODUCTION

Some regions situated near Maputo used to be the traditional suppliers of vegs and fruit but nowadays their importance has declined drastically.

Despite the high potentialities of the Limpopo Valley there are two prerequisites for the decrease in vegs production, namely: the long distance from Maputo, the main consumer center (230 Km) and this region's tradition of producing grains, particularly rice.

In 1986 the private sector took the leadership in the production of vegs while the state kept its major role in fruit production.

When compared with the total area of cultivated land the area dedicated to vegs production is very small. On the other hand there is an increment of production in the fresh season being the hot one characterized by the shortage of vegs in the market.

The main difficulties facing the producers are related to:

- the production flow off due to lack of transport;
- the production trade due to demand restrictions;
- the worsening of production costs which can not be reflected in the prices;
- the aquisition of production means in enough quantity and on time;
- repair and equipment maintenance;
- technical assistance to the production activities;
- the extension of the production period for lack of proper inputs;
- security instability both in the field and in the road;

On the first stage, the liberalization stimulated the farmers to increase the production of vegetables. However there is a reduction of the area for the production of vegetables in benefit of more profitable culture in consequence of the difficulties facing the producers in placing their products in the market; this demand them to spend their spare time and to leave their transportation means idling. One of the positive aspects of the liberalization is the producer tendency to satisfy the consumer by providing a regular supply in fruits and vegetables for longer periods as a result of the extension of the production season for some products like tomatoes, lettuce, cabbage and so on.

9 - IMPACT OF PRICES LIBERALIZATION IN THE MARKET BEHAVIOUR

For the retailers vendors the only drawback that is more or less serious is the break of prices. The remaining drawbacks do not affect the activity of Maputo's retailers. For comparing the the assesement that the retailers make about the market situation before and after liberalization refer to table 26.

Table 26 : Frequency of answers comparing purchase ways before and after liberalization

	Before %	After %
Outside the market	7	4.2
Client chance to make a choice	39.9	67.8
Saling in small amounts	40.7	41.1
Pricing publicity	53.3	78.1
Product selection by the vendour	38.8	69.7
Products sorting	29.47	54.2
Credit sales	30.8	45.3

It is noted that the sales outside the market declined and the trade competence improved, particularly the clients possibility to choose the products and confront with the different prices, select and classify the products by the vendour and even the credit sales.

Regarding the general situation in the market for the last two yaeears, table 26 proved the vendours opinion that it improves significatively.

Table 27 : The market situation in the last two years

	Relative frequence of answers	
Improved	too much	26.8
	little	17.8
The same		15.1
worsened		24.4
others		5.9

In real terms, the number of clients, the number of businessmen, the prices and breakages with the relation to the product, table 27 gives the answers obtained from the inquiry to the retailer for each point. In general, the retailers argue that there was a sharp increase in the quality and quantity of products, as well as the number of businessmen, the prices and the disruptions. Nonetheless, most of the inquired said that the number of clients decreased and this is the only point that constitutes a contradiction with the answers in general.

10. CONCLUSIONS

1. At the moment, the most important agents in the wholesale trade are the producers followed by the unique enterprise specialized in this type of activity, the 'Hortofruticola' State Company. As a whole, the shortage of regular wholesale agents limits the efficiency the entire circuit between the producer and the consumer.

2. In the retail trade, the high number of small sellers, its composition and framework forces the retail trade to have features of of a comprtitive market.

With such a high number of sellers, to the poit of equalling 20 families per seller it is difficult for them to have a monopoly role in the trade process. But the trade productivity rate of the retail agents is very low; therefore, this field is heavy, slow and less efficient compared with the behaviour of other retailers, that is, the greengrocers and other delegations of 'Hortofruticola' Enterprise.

3. The retail trade is carried out in very difficult conditions because of transport shortage, the markets' physical condition, the shortage of measurement and weighting instruments, the low technical level and the weak professional experience of retail sellers and so on.

4. With relation to prices, the big differentiation of weather conditions is a decisive factor; in the hot season, the productivity falls, thus extending the period of shortage of products and the increase of prices in the market. Besides, the prices practiced even during the fresh season are very high when compared to the producer/wholesaler.

Public market sellers prefer to buy rare and expensive products in small amounts and try to increase their profits by resisting to the fall of prices and promoting the sale of products that already existed in abundance as a way of profiting from the products available.

5. It is estimated that public market sellers have an average monthly net profit higher than the national average income. Thus, it is obvious that that sector attracts an ever-increasing number of members.

6. There is no doubt in that it is necessary to surpass the problems and drawbacks facing the retail trade with actions that will help in the improvement of its framework, behaviour and efficiency of the marketing system in general. However, it can be concluded that the instability and irregularities of demand contribute highly for the retail system to benefit from high marketing opportunities. Because of the limited and rigid demand the retail agents get higher benefits from the big supply variations throughout the year.

TRANSPORT, STORAGE AND PACKAGE

1. Transport

Given the decaying nature of vegg and fruit their quick and adequate transport is a decisive factor for the production to reach its social and economic objectives. But there have been many hindrances in this area, namely:

- The vehicles of old producers break down because of the lack of spare parts for their repair, thus becoming worthless.
- New producers do not have neither means of transport nor the possibility of getting them;
- The desintegration of specialized transport agencies and singular transports like truck taxis that used to operate in the squares near the markets and used to be the main support for the transport of products traded by the retail sector;
- Currently, the conveyors face difficulties in the replacement of their fleet which has become obsolete due to the lack of spare parts and inadequate technical assistance in reparation;
- Practice of non-official and high tariffs, onerating the cost of the load transported;
- The bad security situation conditionates the free circulation of vehicles reducing their operationality to between 30 and 40 % of its real capacity.

There are some private companies and a state one whose fleet functions with inadequacies due to the difficulty in the acquisition of spare parts for reparation. Because of transports shortage the private companies are attracted to carry more profitable loads such as wood transport in detriment of other type of loads.

Hortofruticola wholesale enterprise has a fleet of 8 trucks but faces the same problems for the prejudice not only of flowing off production but also the distribution of products to retailers and giant consumers.

In 1985 the transport of vegg and fruit improved highly as a result of the support that the farmers received from world non-governmental organizations, particularly the USAID. However, the transport of products continues to be inadequate and worrying because many private and state farmers and

agriculture co-operatives still face problems in flowing off their production. In spite of the fact that many giant and average producers have their own transport the majority expressed the will to obtain some units. In the retail sector most of the vendors in public markets use rented transport but this does not satisfy their needs. Regarding greengrocers, most of them use their own transport in the acquisition of products for trade.

From the data collected in the markets it was noted that from the 92 participants in the transport of vegs and fruit from the fields to Maputo City only 10 constitute specialised transport and 8 out of these use proper transport. The remaining transport is made by the producers themselves (64 % of the participants), the Hortofruticola Company and others.

The official tariff of prices for surface and load transport is shown in the following table:

Distance	Load (tons)	Tariff	
		Mt/h	Mt/Ton-Km
until 30 Kms	until 4.5	2 300.00	-
	5.0 - 7.5	2 680.00	-
	7.5 - 10	2.805.00	-
	10 - 16	3.355.00	-
	more than 16	4.355.00	-
30 - 200 Kms	-	-	36.00
higher than 200 Kms	-	-	26.00

Despite the recent publication of this tariff the conveyors continue to practice higher prices.

With relation to vegs and fruit particularly, there is not data that can allow for an assessment of the incidence of transport costs in prices fixing for these products. Meanwhile, according to the information available from the inquiry carried out among vendors who work in the outskirts of Maputo, city transport represents about 8 to 10 % of the value of the purchases made.

2. Storage

In the period before independence the wholesale trade was fundamentally carried out by the producers' trucks, conveyors and other intermediate people. This type of trade did not require the existence of an important storage and handling framework. But the framework for storage and freezing was aimed towards the maintenance of potatoes, onions, fruit imported from temperate climates and citrines for export.

With the purpose of reducing fruit and vegs loss during their season and guarantee their preservation, specially potatoes and onions, thus extending the supply to Maputo, it was decided to build a refrigerator warehouse in 1981, which began functioning in 1987.

Therefore, the framework for freezing available for Maputo City and its sphere of influence was estimated at 57 041 cubic metres distributed as follows at that time:

TITLE	Capacity		State
	# of cells	volume in cubic meters	
Matola's warehouse refrigerator	56	39 340	Functiong
Umbeluzi warehouse	06	2 796	Functg/difcl
Chokwe warehouse	03	1 405	Not functng.
Harbour refrigerator			
- new ones	04	6 300	Functng
- old ones	100	7 500	Functg/difcl

Matola's warehouse refrigerator was specially designed for the handling, preservation, selection, gauging and the packing of bulk potatoes and onions. With some changes this warehouse can handle and keep other tyoes of fruit and vegetables.

The port freezers are specially designed for the handling and conservation of citrines in transit and produced locally for export. They can also be used for the storage of fruit and vegs during the citrines' export off-season, that is, from October to February.

There is one more framework for storage in the commercialization circuit, that is, the Hortofruticola warehouse Company located in Maputo City and in Umbeluzi, with a capacity estimated at about 30 000 cubic meters. According to the inquiry carried out on producers, most of them possess domestic warehouses for the storage of production factors and agriculture products.

3. Packages

The utilization of packages in the transport system, handling and storage of fruit and vegs is an important way of reducing

their loss and improve their quality in order to increase their availability to the consumer.

On the other hand, the shortage of packages and their poor quality is reflected in the rational utilization of transport means and the consequent worsening of transport costs and trade charges.

The most common packages used in the commercialization of vegs and fruit are the raffia sacks for the packing of potatoes, onions, garlic, carrots and citrines and wooden boxes for the remaining products.

Furthermore, with time this market is regulated, quality demands on one hand and prices competition on the other require the provision of packages in sufficient quantity and quality for the handling of products and their conservation in refrigerators.

Currently, it is estimated that more than 60 % of vegs and fruit is flowed off and traded in bulk from the producer to the retailer.

Concerning raffia sacks the national production is able to satisfy the market needs, although having supply inadequacies because of raw-materials shortage.

The utilization of wooden boxes has proved to be less profitable with regard to the cost and durability, apart from being heavy, what worsens the transport of the products handled.

The right solution for the reduction of these problems should be the introduction of plastic boxes, which are cheaper than other kinds of packages and has the advantage of being more resistant and light, what enables the handling of products.

To give an example, hereby are presented in this table the differences in cost of wooden and plastic packages and their influence in the cost of trading different kinds of fruit and vegetables, where they are normally packed:

Type of package	cost/ unit	capacity kg	Products packaged	No of users	cost/ product
Wood cm 50x30x20	1 307.00	15	tomato,mango, cucumber, cittrines,etc...	8	10.90
wood cm 80x50x30	2 705.00	30	banana,cabbage lettuce, pepper, 8 pine-apple, paw-paw,etc...		11.30
Plastic 60x40x30 cm	2 210.00	20	tomato,mango, avocado,cucumber, 40 cittrines,etc...		2.80

It is worth stating that for example in some products the cost of wooden packs can surpass 30% of the prices practiced by vegs producers, particularly during their season, i.e. during the cabbages' and and tomatoes' season.

Plastic boxes are imported at the cost of US\$ 4.5 a unit but it is possible to produce them locally if the pattern is imported and the supply of raw-materials guaranteed.

CHAPTER VI

AGRO - INDUSTRY

Although the industrial processing of fruit and vegs is not the subject of this study it is convenient to make a general assessment of the agro-industries in their areas of scope because of the link existing between this sector and production development and trade with the purpose of using its potentiality and create other alternatives for the exploitation of vegs and fruit production.

There are 4 companies comprised by 5 industrial units located in Maputo City and Maputo and gaza Provinces (see table 1)

With the exception of 'Loumar' and 'Hortil' the factories operate inadequately due to these factors:

- they are too old, having existed for 20 years on average;
- the equipment was bought on second hand;
- the processing is mainly hand-made;
- the installations are inadequate and inappropriate;
- the inadequate maintenance of equipment and the lack of spare parts for it.

Consequently, the productivity levels decline in the factories and the final product shows a weak quality.

As far as the factories' capacity is concerned the installed capacity can only be referred to in relation to 'Loumar' and 'Hortil'. For the other ones the processing is fundamentally hand-made with some mecanization inserted; that is why it is only possible to indicate an estimated capacity.

Thus, for the different products processed in the five factories the installed working capacity is the following in tons/day:

Table 1: Processing industry of fruit and vegetables around Maputo

Product	Somopal	Palmar	H. Jones	Hortil ¹	Loumar ¹	Total
Tomato	15	5	30	76	-	126
Pine-apple	15	-	10.5	-	-	25.5
Various fruit	6	5	8	-	-	19
Various vegs	-	-	5	20	-	25
Citrines (for juice/reserves)	-	-	-	-	20	20

dia = 1 shift = 8 hours of labour

The supply of raw-materials in the last few years has been poor, both in quality, quantity and regularity. This situation is the cause not only of under-utilization of the available capacity but also for the poor quality of the final product. The main problems that affect the provision of raw

¹capacidade instalada

materials are the following:

- There are no agriculture companies specialized in industrial production;
- The variety of products supplied does not follow the right standards for industrial processing
- The supply to the industry depends on the situation in the market. Thus, the industry is supplied when there is a surplus production;
- Regarding the prices the industry has to compete with those practiced in the market for fresh products, so this situation affects the production costs and consequently the price of the final product.

The subsidiary material which which is an imported component comprises various additives, preservatives and chemical products for several purposes.

The agro-industrial sector does not have "plafond" to import indispensable subsidiary materials, what limits not only the production but above all affects negatively the quality of the final product.

In a contact with the farmers, they stated that one of the possibilities for increasing production should be the rehabilitation of the agro-industrial park.

Some research about the rehabilitation of agro-industry has been made with special referenc to the one made in 1983 under the title: "Rehabilitation, Modernazation and Agro-industry Extension in Mozambique". The implementation of the proposal made in these studies should on one hand provide the solution of some problems facing the productive sector for increasing the production of vegetables and fruit. On the other hand it should increase the availability of these products for the consumers during the off-seasons and absorb the surplus during the production seasons.

Another special reference is the fact that this sector can fundamentally incorporate local raw materials, what should allow to obtain hard currency through the export of some hand-made products.

CHAPTER VII

CONCLUSIONS AND FINAL RECOMENDATIONS

After a thorough analysis of each level of the market of fruit and vegetables in Maputo and its surroundings this study will be concluded by analyzing the inter-relationship and dependencies between the main aspects presented in each chapter in order to end the report with a general overview of the whole market process.

We do not intend to reduce this chapter into a summary of the conclusions formulated at the end of each chapter, but trying to find solutions for the problems exposed in the "Reference Terms" and appointed in the introduction of this report.

The assesement of the impact of prices liberalization will be carried out according to the efficiency of the current trading system with relation to consumers' purchase capacity and the situation of production.

1-CONCLUSIONS

1.1 - Information Available in the Area of Vegetables and Fruit

The re-organization of production and trade of fruit and vegetable to supply the big urban centers require the knowledge and follow up of the market evolution in this area from production to consumption. Therefore, it is necessary to get detailed information about the production and the market prices for each of the main products.

It is noteworthy that during the undertaking of this job the team faced the porblem of lack of detailed information. The information available is inadequate and the positive one is the result of private initiative and not a coordinated and systematic process organized by the institution indicated for collecting and making statistical processing.

1.2 The Supply of Vegetables and Fruit and the Production Behaviour.

From the study carried out it can be concluded that at first stage the producers where incentivived by the liberalization of prices to increase their production, particularly the flowing off and trade of their products to Maputo City, the main consumption urban center in Mozambique.

However, in the years that followed the liberalization of prices, the private farmers in particular increased their

production because in the previous two years they had benefited from state support and investment made by foreign countries and international organizations, in production means and several transport units.

The combination of these two factors which focused in the production process and the market efficiency brought a sharp increase of production and the supply of fruit and vegetables in the private and home sectors in 1986.

On the contrary, the state companies that cultivate the same products and supplied the bulk of vegs and fruit to Maputo until 1984 registered a drastic reduction of their production in 1986. Since then, the state sector lost its dominant position in the production of vegetables, but it continues to play an important role in the production of citrines.

The diametrically opposed conduct in production of the state and private sectors resulted in a reduction of supply because the increase in production registered in 1986 was mainly due to the increasing participation of the private sector.

But the big scattering of production by many and small producers worsened by the reduced participation of some state enterprises specialized in the production of fruit and vegetables created problems in production programming and the trade of the most important vegetables and fruit to supply Maputo in quantity and regularity throughout the year. In this context Lomaco, a British Enterprise made a positive contribution.

The main difficulties identified in the production sphere are the following:

- The conditions of production depend strongly on the seasons;
- the inefficient and irregular provision of factors of production, mainly seeds and pesticides for different seasons;
- labour force instability and weak organization, due to the lack of security conditions in some of the places where these vegetables are produced.
- low supply in production and transport means and lack of technical assistance to producers.

Apart from these difficulties the producers are facing problems in increasing production due to the market instability that causes low levels of production. This is evident if we compare the levels of production commercialization during the last nine months of that year and the same period of 1986.

The reasons for production decreasing trends in 1987 are the problems faced by producers on one hand, for the fact that they have not been able to reflect the production costs on sales' pricing due to the Economic Rehabilitation Programme. The most important costs are the increase in equipment prices and its assistance, fuel and banking charges for medium and giant producers. On the other hand, the producers in 1986 had experienced this and in 1987 it was even more difficult to place and sell their products in the market.

Two factors determine this situation in the market:

- 1) the organization and frame of wholesale and retail trading;
- 2) the poor purchasing capacity of the majority of consumers living in Maputo.

1.3 The Trade of Vegetables and Fruit

Some trading agents that had benefited from the liberalization of prices played a role among other factors on the improvement of supply. In the last 2 years the flow off and trading of vegetables and fruit has gone up and came from a number of places such as districts and provinces far from Maputo including neighbouring countries. For instance, cassava and mandarins from Inhambane, onions and potatoes from South africa and Swaziland.

At the wholesale level, the trading frame is simple and straightforward in that most of the products are available to the retailers and giant consumers.

There were newcomers in the wholesale trading after the liberalization of prices, although it happened from time to time.

Nevertheless, the existing frame is too weak and enable to cope with the demands of production and the market, due to the following factors:

- a) the producers are not capable of developing a dynamic and active commercial strategy that can improve the performance of the trade circuits and stabilize the market and prices according to the law of supply and demand;
- b) the conveyors and others participants in the wholesale trade played an occasional role mainly on products of easy profit;
- c) the wholesale trade had little influence on production depending on demand;
- d) lack of wholesale agents and framework to guarantee the storage of vegetables and fruit, mainly those with a longer life cycle, to assure the consumer market on a more regular basis even during the off-season time.

In this context, we do mention the role played by the "Hortofruticola" Enterprise, which is a specialized in the trade of vegetables and fruit. Its action and strategy is crucial in stabilizing the market, for trade circuits' survival and for pushing down consumer prices and promoting competitiveness among the participants.

Concerning the retail system, the vendor's attitude towards the consumers improved substantially after the liberalization of prices, particularly in servicing, handling, selecting, classifying and presenting of products. In the last two years, the retail system network became complex and less efficient.

The number of traders has increased specially in the public markets but most agents have no expertise in the sale of vegs and fruit. They do not make capital investment for their activities, materials means, operat in dispersed markets with precarious frameworks and do not have measurement and weighing instruments.

The most famous retailers are women vendors whose activity is turned to self-sufficiency for the improvement and increasing of their low income. These vendors sell small volumes of goods daily (10 to 15 kgs), what influences the prices at this level. The trading strategy is to seek the highest profit possible by increasing prices, not the volume of goods sold.

Thus, there is not competition in the retail system what is indispensable for its vigour. If changes are not introduced in this system the trading opportunities will be blistered, thus retracting the demand and the ever increasing difference between the price used by the producer and what the consumer pays. In comparison with the investment made by the producer, the retailer gets higher trading opportunities, what allows him to accumulate a substantial part of the market profits. This problem is worsened by the fact that the producers cannot assure a regular supply of fruit and all kinds of vegetables even during their season.

Now there are frequent examples of producers who reduce the cultivation of certain cultures or abandon them completely, in spite of having a tradition and experience in their production.

In conclusion, the actual level of production is not satisfactory for the consumption needs of Maputo's population and is not capable of supplying products regularly; thus, the market is not stabilized.

1.4 The Behaviour of Household Income and the Demand in Vegetables and Fruit

The consumption habits and diet influence the demand but for vegetables and fruit the demand depends upon two factors: the

household income and the price of products.

From the study carried out it can be concluded that the purchasing capacity for the majority of consumers has decreased drastically. The consumption levels reached after the liberalization of prices are very low in comparison with the population's capacity and the daily recommended food needs.

The unitary prices of products in turn constitute a decisive factor in the behaviour of demand and the possibility of increasing and improving consumption. In the current year the average cost of fruit was Mt 200,00/kg in August, what equals around 4% of the minimum monthly wage in the country.

Even knowing that the real prices for the consumer registered a decreasing trend, the decrease of the consumers purchasing capacity is more emphasized, not bearing the level of prices reached throughout the year.

Then, it is concluded that as well as the increment of trade, consumption depends on the changes and improvements that might be introduced in production, so that it can assure the increase and regularity of supply in fruit and vegetables in the market throughout the year.

1.5 The Impact and Meaning of Prices Liberalization

In general, the producers, wholesalers, retailers and consumers find the liberalization of prices as a very positive experience.

It was concluded that the liberalization of prices allowed for a better involvement in the production and trade process. The attitude of the participants in this process at all market levels is already following a trade ethics which benefits more the consumer. He now gets more opportunities to choose the product, negotiate prices and benefit from a better consideration by the vendor.

The state itself is not as an agent that disturbs the free intervention of economic agents on a mutual basis for the interference in the exchange process.

The uncountable difficulties of this process are no longer interpreted as resulting from the administrative interference of the state, which is no longer the agent that disturbs the economic process just because of its participation in the fixing of prices.

In comparison with the period where the prices were fixed but whose up-dating, control and fiscalization were limited and inadequate, it can be concluded that from the current free market prices the difficulties and drawbacks of the framework itself, organization and functions of each market level can be easily identified. Different agents now benefit from equal

conditions and opportunities in the process of exchange. The decision to enter or abandon the productive and trade activity depends solely on the organization and distribution of work among the sectors and the technical, economical and financial capacity of the participants.

However, from the assesement of the liberalization of prices it is concluded that it does not constitute a factor that can regulate economic activities in the scope of fruit and vegetables nor establish balance in the market.

For enabling the dynamic and progressive functioning of market laws the state must intensify its support and participation in the improvement of production, trade and consumption and regulate the activities of the agents of the economic process.

Thus, the liberalization of prices is not satisfactory, no matter how much it is needed.

The current situation at all market levels demonstrates that it is indispensable that other framework and functional measures must be taken specially, and efforts must be gathered for the increase of production and guarantee a regular supply throughout the year.

This is the only way of assuring a major participation and a more efficient interference of producers in the market, that is, a higher quantity of products traded at more profitable costs and more adequate to the jobs made by the people interfering in trade and more accessible to the consumer.

2. Recommendations

From the analysis carried out, in particular arising in the production, trading and consumption of fruit and vegetables in Maputo City and its sphere of influence the main recommendations are the following:

2.1 Production

It is necessary to establish programmes of research and extension for the undertaking of a research on the development of fruit and vegetables in the three southern provinces of Mozambique - Maputo, Gaza and Inhambane with the following actions:

- a) selection of the best varieties of vegetables for different sowing seasons, in special summer vegetables that can be adjusted to local weather conditions in order to extend the production season.
- b) the establishment of experimental fields in which different treatment will be used (varieties of seeds, fertilizers, irrigation, etc) to determine those that

provide better results and will be used in the attachment of producers;

- c) Producers attachment in the rentability of means and factors of production in order to obtain higher productivity levels and reduce production costs; provision of personnel for medical assistance to plants.
- d) Study of the establishment of a medical network and training of personnel for medical assistance to plants.

The undertaking of a study of the current provision system for identifying the main drawbacks that occur, making proposals for improvement and measures to be introduced for its better functioning, in order to provide the producers with factors of production in quality and quantity at the right time. Provide an opportunity for the producers to obtain the means of production that they need, such as irrigation pumps, agricultural implements, ploughing motors, sprayers, farm tractors among others, as well as the respective spare parts. The organization of fruit and vegetables producers in collective groups for the direct trade of their products.

2.2 Trade

In the application of measures for the improvement of trade it is necessary to consider the specific situation of this market, the knowledge of the different expertise alternatives existing in the trade of fruit and vegetables, choosing the ones that contribute for the economic and social development of Mozambique.

2.2.1 Wholesale Trade

The elaboration of a project for the creation and organization of a wholesale market of fruit and vegetables with the purpose of creating conditions for allowing the producer to expose his products, thus allowing for a higher adjustment of prices according to demand and supply.

Adjustment of Hortofruticola Enterprise with means that allow the improvement of its activities, particularly in transport, packages, weighing and handling instruments.

2.2.2 Retail system

Elaboration of a project for the improvement of public markets, particularly those which are in precarious conditions of functioning.

The undertaking of this programme must assure a higher productivity in the handling reduction of surplus, improvement of the sale areas with the aim of a better exposition of products. The programme must include the building of warehouses or improvement of the existing ones attached in the markets.

The design of a programme for the supply of sales and weights with the finance for the acquisition of those equipment assured.

The undertaking of a study on the adjustment of vendors in order to allow not only the improvement of their training level but also to give basic notions of administration and commercial ethics within the current programmes of literacy and adult education under way in the public markets.

2.3 Transport

To carry out a study about the situation of transports for the flowing off and trading of fruit and vegetables including these areas.

- a) Rehabilitation of the network of transport currently available for this activity;
- b) Supply of means of transport to the people who participate in production and trade, giving priority to the producers for the main markets;
- c) introduction of taxi vehicles (for hire) near the main markets;
- d) supply of trucks to the greengrocers;
- e) distribution of motor tricycles to some vendors and producers not only for mobile trade but also for the provision of their market stands;

2.4 Storage and packaging

To formulate a study for the rehabilitation of part of the freezing framework already existent as well as the repairing of warehouses currently used for handling fruit and vegetables.

To create conditions for the national production of packages, namely plastic ones, by financing the import of patterns and raw materials to assure their manufacture according to the national needs.

2.5 Agro-industry

The rehabilitation of agro-industry units with the aim of taking full advantage of vegs and fruits' season as well as to keep the units busy during the season of shortages.

Considering the projects already existent for this area's rehabilitation, they must be analysed in order to decide which one are viable to be carried out.

To formulate a study for the rehabilitation of part of the freesing framework already existent as well as the repairing of warehouses currently used for handling fruit and vegetables.

To create conditions for the national production of packages, namely, plastic ones, by financing the import of patterns and raw materials to assure their manufacture according to the national needs.

2.5 Agro-industry

The rehabilitation of agro-industry units with the aim of taking full advantage of vegs and fruits' season as well as to keep the units busy during the season of shortages.

The ongoing project will be analysed to decide which are profitable to be carried out.

2.6 The system of Information

The parts involved in this activity should hold a regular and longterm statistical system of information to keep the production, sources, endusers and price records.

In future inquiries about the population expenses and income it should be better to include surveys about the evolution of consumption standards.