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A PROPOSAL FOR IMPROVED EFFECTIVENESS

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By

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From 1973 to 1976 the author of this paper was attached to the Maize and Produce Board as Economist/Statistician. The contents of this paper originate in the work performed during that time, but all opinions are exclusively those of the author and do not reflect the policy or the opinions of other officers of the Board. The views expressed in this paper should not be interpreted as reflecting the views of the Institute for Development Studies or of the University of Nairobi.

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ABSTRACT

Continuing the discussion by O. Hesselmark and G. Lorenzl in "Structure and Problems of the Maize Marketing System in Kenya", Zeitschrift für Ausländische Landwirtschaft, Berlin 1976, this paper attempts to give additional information on the functioning of the Maize Marketing System, and to give suggestions on how its functions could be improved.

There is a long history of market regulations in Kenya which is important for an understanding of the present situation. A brief historical description is given, including past legislation and an attempt to identify the beneficiaries of earlier systems, and how the present situation has grown out of the past. The present functioning of the system is illustrated with the help of four cases of the actual behaviour of the MPB and the produce markets, and a number of deficiencies and inefficiencies are described. The possibilities of redefining the role of the MPB within the framework of the existing legislation are discussed. It is concluded that a great deal can be done to improve the functioning of the system without any fundamental changes of the legislation; the MPB has a statutory responsibility for effective functioning of the marketing system, the possibilities of which are not exhausted.

For a more fundamental improvement of the effectiveness of the marketing system, however, far-reaching changes will be required. A redefined role of the MPB in a situation of free trade is described in detail down to the operative functioning of a reorganised and reoriented MPB. In this situation, the MPB is seen as an organization playing the part of primus inter pares, provided with the operational and financial resources necessary to perform the role of active market stabilizer. The set of objectives, policies, decision rules and operational rules necessary for this function are outlined together with a discussion of the information needed. The financial implications for the MPB of a market stabilization are discussed briefly, together with the needs for training of personnel for the new functions.

In two appendices, a resume of earlier discussions of the problem of free trade and of the frequent discussion of the smuggling problem is given.

1. INTRODUCTION

In the paper "Structure and Problems of the Maize Marketing System in Kenya" by O. Hesselmark and G. Lorenzl (5), a general description of the Maize Marketing System was presented. That paper did not go into detailed descriptions of the problems, nor did it present any specific suggestions for improvement of the marketing system. The discussion started in the paper by Hesselmark and Lorenzl is continued by Gsanger and Schmidt in a paper presented jointly with this paper (3) and it is hoped that these three papers together will constitute a sufficient foundation for further research, as well as providing a basis for Government decisions with regard to the future functions of the Kenyan marketing system.

In this paper it is intended to give some detailed information on some of the problems mentioned in the paper by Hesselmark/Lorenzl, and to give specific suggestions on what can be done to improve the marketing situation. Not only maize, but also other produce handled by the Maize and Produce Board - such as beans and millet - will be dealt with. The description starts with an exposé of the historical development of the grain markets in Kenya. This has been included for two reasons: In earlier documents concerning the grain markets (of which there are many) the heritage institutions like the MPR owe to the colonial administration has not always been recognized, and a comprehensive historical analysis based on available documents has not been undertaken. It is my view that much of the behaviour of the marketing system today can best be explained through reference to the historical situation on which the present legislation is based.

2. THE HISTORY OF MARKETING REGULATIONS

The marketing of maize is regulated in the Maize Marketing Ordinance, that of other produce in the Marketing of Agricultural Produce Act (and subsequent amendments). Both laws give similar rules for the marketing of maize and produce, and they are incorporated in the organization and functions of the MPB.

The existing laws are both the product of post-independence legislation, but their origin can be directly traced to the Defence Regulations introduced in 1944 (15). In those regulations, most of the detailed rules regarding movement control and compulsory sales to the Board were introduced. The Defence Regulations were in force as the basic legislation regarding grain marketing until 1958, when the Maize Marketing Bill was introduced. This Bill led to the formation of the Maize Marketing Board, substituting^{for} the previous Maize Control. The new organization did not, however, change the structure of the marketing system significantly, and the main purpose seems to have been to get all the legislation regarding maize together into one act. (16).

The original Maize Control had the clear objective to produce an export surplus for the allied war effort. (6.p.5f). It was made compulsory to sell all maize produced to the Maize Controller, and a system for control, finance and purchases was set up.¹⁾ After the war, the Defence Regulations were kept in force, and the Maize Control organization grew bigger and more efficient.

There seems to be a connection between the regulations and the different treatment of European and African producers;

1) The success of this organizing of the maize market was remarkable, and illustrates convincingly the importance of a well functioning institutional framework in any attempt to induce subsistence farmers to enter the market economy. Thus, the delivered quantities from African farmers grew from nearly nil to a million bags in two years. Immediately after the introduction of the purchasing organization, consisting of a system of agents and depots, cash payments on delivery and attractive prices, the maize delivered from African farmers became equal in volume to what was delivered from the European farmers. A large production surplus was already available, only waiting for the marketing institutions and opportunities. (6, 12, 19).

the strong Maize Control made this difference possible through ruling out any alternative outlet for African surplus maize. In the period up to about 1952, there was no difference in the prices paid to the two groups. In those years, the producer prices were kept below the export parity price (12, p 16). The profits of the Maize Control were transferred to a Maize Fund, in essence an equalization fund for export losses and profits. At times refunds were paid to the farmers out of the fund. Since only European farmers could be identified, only they got direct and individual payments in the form of mechanization subsidies, acreage allowances and direct money payments. For African farmers, the bonus was paid partly to the Agricultural Betterment and African Trust Funds, and partly as a direct bonus to farmers who had been given a certificate of good husbandry by the Agriculture Department. (These farmers were not necessarily those who had produced the maize for which the bonus was paid). European farmers were thus paid ^{directly} for their actual production, and African farmers were made subject to an indirect taxation, the revenues of which ^{were} used for community development and income redistribution.

In later years export losses re-appeared and the procedure was reversed. (13) A quota system was introduced under which European and African farmers were given annual production quotas that should not be exceeded. If the African producers due to a good season exceeded their quota, they were paid only half price for the excess. For European producers, no such deduction was made. In addition to this, a cess was levied on all African production to pay for export losses. Thus a rigid system for price discrimination and for shifting the whole burden of export loss financing to one group of farmers had been introduced. This was possible because of the strength and effectiveness of the Maize Control organization. The situation illustrates how an organization originally set up for one purpose came to be used for quite another.

In 1962 and 1963 (the year of independence) political resistance against preferential treatment of European farmers grew, and the quota system was abolished. (This was facilitated by the fact that 1962 and 1963 were years with a maize deficit, and no production took place above the quota.) The marketing controls were not removed, however. The purchasing system remained the same, although a new system for pricing was introduced with basically uniform prices for the whole country. (13). The rationale for strict marketing controls - to encourage a maximum production for defence purposes or to make it possible to finance export losses from one group of farmers only - were no longer there. And yet the organization and legislation needed for these purposes were kept intact. Perhaps nobody thought of the connection between purpose and method in the general struggle to cope with all legislation problems at the time of independence.

At that time, the marketing system in the previous African Reserves was much less developed than now. Large-scale black market operations were rather uncommon, probably because of poor infrastructure and a general unawareness of the business opportunities involved. For several years, no demands for free trade were heard, and only isolated instances of large-scale black marketing were reported, usually involving forged movement permits or some kind of political pressure. From the end of the 1960's demands for free marketing became more common, as has been recorded in several reports on the maize market. (see 18,21,22) Grain marketing was still closely controlled by the MPB, but it was increasingly recognized as being a suitable field for the development of private, African owned trading enterprises. There was still not much evidence of any large-scale and well organized illegal trade, utilizing the tremendous differences in prices between areas, created as they are by the MPB market controls.

3. ILLUSTRATIONS OF THE CONSEQUENCES OF RESTRICTED MARKETING

In recent years (after 1974) the illegal trade has become more and more active and voluminous. In the 1975/76 season, supplies from Kirinyaga and Embu Districts have moved to Machakos and Kitui amounting to perhaps 500,000 bags. The result was—in spite of a good crop— a relative maize shortage in Central Province from March onwards with sharply increasing prices in Nyeri, Kirinyaga and Embu Districts. This deficit was covered with large supplies from Nyandarua District, of which some also was transported as far as Kitui. The MPB was not involved in this massive transfer of maize, which was done in a well organised way, involving false movement permits, forgeries and a good deal of bribery. After this highly profitable exercise has taken place, the benefits of a strictly controlled market for those very few large-scale traders who are in the position of not getting caught, should be clear to them. It is not very likely that demands for a free market (which would take most of the profit away through increased competition) will be well received by the local Establishments, to which those belong who get the profits.

Case 1. Beans

During 1975 and 1976 there has been drought in Kitui District. Food has been scarce, and particularly bean prices have been high (up to shs 350 per bag, or shs 3/80 per kg.). Meru District on the other hand has, due to favourable weather, produced a surplus of beans, which is demonstrated by the fact that a few thousand bags were delivered to the MPB. The farm gate price for these beans in Meru was about shs 150 per bag or shs. 1/67 per kg. (That was also the official MPB price). The price difference between farms in Meru and consumers in Kitui was thus shs. 200/- per bag, equivalent to a mark-up of 133%. The gross margin on one lorry-load (7 tons) is $200 \times 77 = \text{shs } 15,400$, a comfortable margin for a 200 km haul. A net profit of 10,000 shs per load is not on the high side. (see 10).

Clearly, this trade is very attractive to the traders who have the capital, talent and information to identify and utilize the business opportunity. The trade is illegal, however, unless a movement permit is issued by the MPB. It is hardly remarkable, then, that given the enormous profits involved, some traders try to legalize the trade by sharing some of the profit with the MPB field officer who can issue movement permits. This has happened in a number of cases, and it will continue to happen, simply because supervision of field staff is difficult, and the temptations and gains are enormous to people earning £ 100 per month.

The bean surplus collected by the MPB is not sold directly in deficit areas, but auctioned or tendered in Nairobi. The bidders in this business are a handful of commodity dealers. What happens to the beans after they are sold is outside MPB control, and little is known about it. It is believed that they are sold to retailers mainly in urban areas. This practice excludes most rural areas from supplies channeled through the MPB, although the market prices in local markets can be much higher than in Nairobi.

When there is a deficit and high prices in an area, e.g. Kitui district, the MPB does not transfer beans to that area. No beans will be sold at the Kitui Depot (except some small quantities to schools). The central sales office in Nairobi does not collect any information about local market prices, and is unaware of where the demand areas are. It is also not interesting to them, since the policy has always been to sell all the surplus through the Nairobi office.

Transfers are thus not undertaken by the M.B, nor are private traders allowed movement permits to transfer beans from a surplus to a deficit area. The reasons for this are not entirely clear; there is no written policy on the matter. Enquiries with MPB officials will reveal little but rather vague references to "this is how we always have done it"; the MPB wants all beans in one place in order to achieve a nationally planned distribution of beans. Another reason seems to be a

genuine wish to protect the public from exploitation by "unscrupulous traders". Unfortunately, neither of these actions will provide the people in Kitui with cheaper beans. Quite on the contrary, strict enforcement of movement controls will only block Kitui District off from supplies from Meru, and prices in the local Kitui markets will increase even more. These prices can go down only if the supply is increased, and the only sources for increased supplies are MPB sales through its Kitui depot, legalised movements by private traders or through the black market. The choice between these alternatives belongs to the MPB, and it should be pointed out that failing to select one of the two first, implicitly means selecting the third alternative.

These problems have been commented upon in two separate reports on bean production in recent years. (2,11) The recommendations made in the reports are to a large extent similar to those we are going to offer in a later section of this paper.

In a price survey by the author in May 1976 in the Eastern and Central Provinces, a range in market prices from shs. 2/67 to shs. 3/89 per kg was found. The MPB purchase price paid by agents in the same markets was then shs. 1/67. No beans were bought by the agents. Partly based on the above reports, the MPB decided to increase the purchase prices for beans substantially in July 1976, to shs. 2/45 per kg. This made the MPB price quite competitive, and substantial amounts of beans were purchased. But an increase in price is not enough. Most of the beans purchased were brought to Nairobi, where they were put to tender. This brought difficulties, for the handful of large traders who usually participate in this trade could not sell the beans in their traditional urban markets even at the lowest price the MPB was willing to accept. At the same time, the local market prices were well over shs. 3/00 per kg. in the deficit areas, but no attempts were made to involve local traders in the sale of beans.

In order to solve the problem, the MPB must follow the advice given in several of the reports mentioned above. (21,22) The MPB must improve its selling activities. The present stocks of beans (which are the result of the response to a substantial increase in price; they do not reflect a particularly good season, and to export them - as has been suggested recently - would be to deprive Kenyan consumers of an important source of protein) must be made available to the areas where demand is high. It is time the MPB starts recognizing the existence of local markets and local traders, and starts co-operating with the traders.

Case 2. Wimbi (Finger Millet)

Apart from the cases of beans and maize, there are many other instances where the MPB's interpretation of marketing effectively hinders regional and temporal re-distribution. Finger millet, for example, is grown in surplus quantities only in Busia and South Nyanza Districts. The demand for this crop is high throughout the Rift Valley and Central Provinces, where retail prices often are three times the farm gate price paid by the MPB. Yet the MPB depots in these areas do not distribute any wimbi to traders or individuals. As in the case of beans, wimbi is sold through tenders in Nairobi, after which the MPB has no control over it. In May, 1976, for example, wimbi cost shs. 3/68 per kg in several places in Central and Eastern Provinces. At the same time, the MPB had 13,000 bags in store in Nairobi, offered the wimbi at shs. 1/15 and could not get any buyers. It is hard to believe that the price elasticity is so high as to make redistribution unprofitable. It would be perfectly legal to buy wimbi from the MPB in Nairobi and to drive ^{around} a circuit of markets in Central Province and release a few bags at each stop. Each lorryload would give at least shs 5,000 net profit. Why does nobody do it?

Case 3. Maize in Kirinyaga and Kitui

The work by Kariungi and Ireri (7,8) in Kirinyaga and Kitui has been extensively referred ^{to} by Hesselmark and Lorenzl in (5). The most important finding was that the illegal private trade is often supplying deficit markets with maize more rapidly and at lower cost than ^{the} MPB, and that this trade in some areas and at certain times takes on a quite substantial size.

Case 4. Maize at Luanda market, Kakamega District.

A marketing experiment carried out jointly by the MFB and the SRDP project in Vihiga in 1974 (4) demonstrated that active selling activities by the MFB, and active co-operation with local traders, can be used to avoid that commonly experienced steep increase in prices, which occurs before harvest. In this experiment, two traders at Luanda market were encouraged to bring in maize from the MPB store at nearby Yala for re-sale in the market. Substantial increases in local supply were achieved this way, and (predictably) prices in this market were stabilized. Prices at Luanda were monitored for about six months and compared with another market about 20 km. away, in which no such increase in supply was undertaken. In this second market (Mbale) prices continued to increase in the usual seasonal pattern. Normally, Mbale would have experienced lower prices at the period of lowest supply, but because of the increased supply at Luanda the reverse was true in 1974.

It is remarkable that although the traders are at liberty to repeat the activity at any time they wish, and although they demonstrably made money out of the experiment, they did in fact not repeat it in 1975.

Other Research

A project to study the marketing system for maize and beans in Kenya is presently ^{being} carried out by a team at the Institute of Development Studies (10). Knowledge from that

study, together with the detailed information on markets and prices which will be collected by a marketing project in the Central Bureau of Statistics and Ministry of Agriculture, will be of great value to perfect the understanding of the marketing system. Until that information becomes available, however, a great many things can be done by the MPB to improve the situation. This will be dealt with in the next sections.

4. THE ROLE OF THE MPB REDEFINED

It is quite reasonable that ^{the}MPB should have some control over the commodity markets in Kenya, as intended in the Maize Marketing Ordinance and the Marketing of Agricultural Produce Act. It is stated in these laws that they serve to protect the interests of producers and consumers, presumably against traders with various types of monopoly power over the markets. But it is in the interests of consumers and producers not only to be protected from monopoly, but also to have an efficient distribution system. The system of logistics in Kenya is well enough developed to provide for a reasonable redistribution of agricultural commodities, i.e. in a physical sense. And yet the MPB concentrates only on the "protection" and neglects the distribution. Below follows a discussion of what can be done. In the discussion, maize and produce have been separated. We will start with produce, since that is less complicated.

In the first part of the following section, it is assumed that no changes in the legislation will have taken place. It illustrates a re-interpretation of the present marketing situation. Later a situation will be described where a more substantial change in the objectives and the policies of the MPB has been assumed.

Produce

For produce with an internal market, the problem is quite simple. Instead of selling it all to Nairobi dealers, the produce should be distributed to various depots according to a simple formula, including the total population served by each depot and the average local market price level in the area. The amounts distributed could be made to depend on requests from the depots, indicating the current price level in the area. In this way a reasonable distribution over time can be maintained.

The sales price of the MPB should be set for each depot, taking into account the local price level. It should, however, not be low enough to create excess profits for the traders. Having brought in a stock to a depot, and after establishing a depot sales price, local traders would be encouraged to come and buy the produce in question for distribution in the areas, selling at the prevailing market prices. As long as the margin between the MPB and the market prices is attractive to them, they will continue buying. When there is no longer a margin, they will stop buying, at which point either the market price has been lowered to a level near the MPB break-even point, or else the MPB reduces its price in order to get the market price down to a reasonable level, in which case the traders would resume buying. The effective results of this exercise will be better distribution of available resources to deficit areas and effective price control in the local markets, both to the benefit of the consumers, and to the disadvantage of nobody. 2)

2) It is possible that some kind of trading credit, for example bills of exchange (as they are commonly used in continental European business systems) should be introduced to facilitate this kind of trade.

With beans and pulses, there is a special problem. It has been the practice of the MPB to sell beans directly to schools, hospitals and other institutions, in practice often at subsidised prices. Giving preferences to institutions, whether private or public, in terms of deliveries and/or prices is not covered in the legislation, but it has been done because of the difficulties for such institutions to get any beans at all at certain times and places.

With a decentralized system of distribution there will be no need for this practice, since beans will be made available according to the demand in respective areas.

To implement this distribution system, no extra people will have to be hired at the depots, since selling produce is their task anyway. In the head office, it will be necessary to collect data on prices and to co-ordinate deliveries to the depots requesting supplies. The field officers will be required to supply the head office with price information if it cannot be obtained elsewhere.

The MPB purchase price (at farm gate) for beans is at present nearly uniform throughout the country. This totally disregards the fact that a surplus of beans only occurs in some areas and in some years. Moreover, the local market prices can differ by up to 100-150% of the price in the lowest area. Regional differentiation of purchase prices is therefore necessary if the potential of inter-regional trade is to be utilised. It is likely that if prices are better adjusted to the local market prices, this will bring larger quantities of beans to the market. (Since beans are mainly a subsistence crop, with the MPB performing the limited function of redistributing regional surpluses and deficits, there is not much point in increasing the prices substantially in deficit areas. This will only increase the marketed share in the deficit areas, reducing the already limited amount of beans available for home consumption.)

It is generally considered desirable that producer prices are announced before the planting season, so that farmers can plan accordingly. In Kenya, however, the regional distribution as well as the total size of the bean crop is not determined by the farmers' decisions, but vary mainly with the amount and distribution of rainfall, and with the incidence of pests and diseases. A firm advance commitment by the MPB to buy at a floor price can therefore in years with low yields be a blow in the air, and lead to practically no purchases because market prices are way above the floor price. Floor prices should therefore not be fixed, but should be adjustable upwards on a regional basis.

Maize

Several field studies have indicated that large quantities of maize are distributed and traded outside the MPB marketing system. Since these are ^{not} legal movements, risk premiums and profits are high, and local market prices fluctuate considerably. The MPB marketing policies do more to prevent trade than to facilitate it, thus making the illegal trade both more important and more profitable.

It is of course legitimate to move maize from where it is cheap and plentiful to where it is dear and scarce. It is also clear, that the MPB cannot buy up all local supplies through its system of depots and agents. This leads to lower prices at harvest time than those guaranteed in some areas, and private (illegal) traders step in to buy the maize. Because of the remarkable differences in harvest times in Kenya, there is nearly always a demand for the newly harvested maize in another not-too-distant area. Because of low efficiency in its selling activities, the MPB does not distribute maize from its stocks in such areas, and market prices are therefore high. There exists then a business opportunity for the traders in the first area to try and sell in the second area with high prices.

With increased supplies in the deficit area, prices would clearly go down or at least cease to increase. Through strict enforcement of movement controls, the MPB now reduces the amount supplied in the deficit areas, and prices remain high. This would not be so bad if the MPB were effective in increasing supplies, but there is no encouragement from the MPB to local traders to come and buy maize. In fact they are sometimes discouraged by the MPB's own staff.

There are thus two simple methods to increase supplies in deficit areas. One is for the MPB to introduce a more active selling policy³⁾ and the other is to facilitate movements from surplus to deficit areas, through a more liberal policy on movement permits. Neither of these actions would be in conflict with the objectives of the MPB, as stated in the legislation. The MPB should ensure that the distribution system of maize functions "to the benefit of producers and consumers". When this is interpreted by the MPB to mean "make sure no maize travels from producer to consumer except through the MPB system", then I think the MPB has not acted in the interest of the welfare of consumers and producers. There has been far too much policing of people and far too little interest in the distributive system in the MPB's interpretation of its work.

There is finally another point. The clandestine, illegal business of moving maize with very high profit margins leads to all sorts of corruption within and outside the MPB. Field officers are bribed^{with} substantial amounts for movement permits, police officers are offered (and sometimes demand) bribes to allow lorries to pass roadblocks, administrative officers are offered money to keep their eyes closed.

³⁾ This has been strongly advised by official committees writing on the maize market. See (21) and (22).

There are also many reports of police harrassment of perfectly legal transport, e.g. of small quantities on buses where movement permits are not required. At least one case of a serious misinterpretation of the law by a magistrate has been reported. (In this case the magistrate unlawfully forfeited a lorry and a load of potatoes (!) citing the Maize Marketing Act.)

If the MPB helped rather than prevented the legitimate flow of goods in the marketing system, many of these practices would disappear, for they are paid out of profits from the black trade. The best way to make black markets disappear is to make them legal. This is a truism, but in this case it would be to the benefit of wananchi, and to the disadvantage of only a few people such as have been indicated above.

All this has been said before by an almost unanimous group of researchers, public commissions and other observers. In Appendix 1 a list of quotations from earlier reports is given to illustrate this. Oral support for some of the views has sometimes been given by the officials concerned, but little action has been seen. Quite often the freeing of trade has been opposed on the grounds that smuggling there would occur or increase. Since this is such a widely held opinion, and since the understanding of the marketing mechanisms connected with international and inter-regional smuggling usually seems rather poor when it is not completely non-existing, a section dealing with the smuggling argument has been included in Appendix 2.

What is needed is not words and a general intellectual consensus over the issues, but a firm commitment by the Government to really improve the functioning of the marketing system. The legislation is there, and it is not ambiguous. The knowledge of what methods to use is available. The resources are there: Administration, storage, transport facilities. There is just no excuse for not doing anything.

5. A NEW MARKETING ROLE FOR THE MPB

In the previous sections, an outline of the history and the present functioning of the maize and produce marketing system has been given. Certain criticisms of the role the MPB plays in the system were offered, together with a rough outline of how some of the problems might be overcome. In this section a more detailed description of MPB activities in a changed system are given.

It has been suggested that the MPB should co-operate with rather than ignore local traders, in order to utilize their resources to provide a more efficient marketing system. In the remaining part of this paper it will therefore be assumed that all movement restrictions for MPB controlled produce and maize are abandoned, and that all traders are allowed to carry out inter-regional trade without any direct controls or restrictions. In such a situation, market control will be obtained in such a way as is described below.

An Outline of a Decision System for the MPB

In the present situation, the decision making process in the MPB is relatively simple for marketing decisions. For both maize and produce, the rule is to purchase all that is brought to the Board, to sell maize to those who ask for it and to sell produce on a tender basis. The decisions are simple in principle, although administrative red tape sometimes make them appear complicated. The main decisions are when to start purchasing at a certain depot, and to provide that depot with finance. Sales of maize also involves a decision on where to take the maize from.

On the local level, decisions about what store to use, when to issue movement permits and when to reject maize are routine.

In a situation where the MPB will play a more active and regulative role in the marketing of maize and produce, and where private traders will co-exist and compete, the MPB's

decision-making will become more complex than today. The MPB will then have to decide on when, where, for what product and how to intervene in the marketing process. This will require a substantial change in the MPB's perception of the marketing system and of its own role, and a number of tools will have to be developed to facilitate the decision-making. Basically, the following things must be available:-

Basic Objectives

Consistent decisions clearly require a consensus concerning what one wants to achieve. A goal structure must be developed. This may be rather general, but at least it must indicate who and what is to benefit from the activities of the MPB. In the present Maize Marketing Act, for instance, it is stated that both consumers and producers are to benefit from the activities of the MPB. This is rather too general. First of all, the groups are not defined precisely enough. Every producer is also a consumer. Additional classification must be made, to distinguish between urban and rural consumers, farming and non-farming areas, and possibly also between high and low income groups of farmers. After that has been done, it must also be stated in which way the benefits should accrue to each of the groups defined. There is a conflict between the interests of e.g. rural producers and urban consumers, which can only be resolved satisfactorily (to both groups) after a compromise has been reached. Such a compromise can be expressed (for example) as a basic objective: "the prices paid to farmers should be as high as possible, under the restriction that no income transfers from the urban consumers to the farmers may occur at any time"; this formula would exclude ^{the possibility} that export losses are financed through higher sales prices for maize.

It is recognized that the basic objectives have strong political potentials and contents, and that explicit statements on how to resolve the contradictions inherent in this type of goal formulation may not be immediately expected from the Government.

Policies

A policy is defined as a rather general decision rule, guiding the decision-maker ^{concerning} what action to take in a particular type of decision situation. In the ideal situation, when the basic objectives are precise enough, policies are derived directly from them through a logical process. When only very vague basic objectives exist, it is difficult to formulate precise policies, and as a consequence many decisions will have to be made ad hoc, after consulting the next level of authority. One example is the treatment of export losses in pre- and post-independence Kenya. Before independence, the phrase "to the interest of farmers" meant European farmers, and export losses were financed through a cess and through reduced prices for maize from African farmers. The policy was then that African farmers paid the export losses incurred from over-production of maize. After independence, the policy has been different every time the problem of financing an export loss has occurred.

A more active MPB will require a set of policies to guide decision-making, particularly in questions concerning market interventions. These policies should be formulated with reference to the instruments available to the MPB. These instruments are basically the physical and financial resources available to the MPB, enabling the MPB to effectively control segments of the markets through sustained buying or selling, until all excess supply or demand has been exhausted and a desired level of equilibrium has been reached. With reference to resources, the policy could be formulated in the following way:-

- a) The MPB is required to maintain stability in the maize and produce markets throughout Kenya. Stability is considered to exist when the market prices (at farm gate and to consumer, respectively) are within the limits specified below for different areas and products. (See schedule (f) and (g)).

- b) To maintain stability, the MPB is required to purchase or sell the different products whenever there is indication that local market prices are outside the specified limits.
- c) It is the MPB's responsibility to maintain sufficient stock levels of all products to facilitate interventions.
- d) The geographical distribution of stocks is decided by the MPB with reference to the market interventions considered necessary.
- e) To enable the MPB to perform the market interventions considered necessary, the MPB is authorized to borrow money from such financial institutions in Kenya as it may see fit. In addition to financial resources, logistical resources, consisting of storage facilities and transport facilities will have to be procured and maintained by the MPB. Finally, the MPB will develop the organizational resources it considers necessary to carry out its tasks.
- f) Schedule of price limits. When the MPB has indications that market prices in an area are outside the limits indicated in schedule (f), it will initiate purchasing and selling activities from its stores in that area. The prices paid or charged at the different stores are given in schedule g.

Schedule (f) price limits.

Product		Area				
		a	b	c	d	e ...
Maize	upper	75 ⁺)	80	70	etc.	...
	lower	50 ⁺)	55	45	-	...
Beans qual.1	upper	220 ⁺)	250	260
	lower	180 ⁺)	200	210
beans qual.2	upper	-	-
	lower	-	-	-	-	-
peas 1	upper	-	-	-	-	-
	lower	-	-	-	-	-
:	:	:	:	:	:	:
:	:	:	:	:	:	:
:	:	:	:	:	:	:

Schedule (g) Purchases and Sales Prices at different MFB Depots

Product	Depot					
	a	b	c	d	e	f
Maize Purchase	60	65	55	etc	...	
Maize Sales	70	75	65	-	...	
beans Purchase	200	220	230	...		
(1) sales	210	230	240	...		
beans Purchase	-	-	...			
(2) Sales	-	-	-			
:	:	:	:	:	:	:
:	:	:	:	:	:	:
:	:	:	:	:	:	:

+) Example

h) The prices in schedules (f) and (g) will be announced from time to time by the Minister of Agriculture after consultation with the MPB and the Price Controller. All decisions regarding more favourable treatment of certain areas should be taken at this level.

Decision Rules

Having formulated a policy, the rather general rules laid down must be interpreted into operational decision rules, that can be converted into action by the MPB's officials. Such rules will be described and exemplified in this section.

The policy statements above can be interpreted to mean that when the market price is increased above a certain level, the MPB should initiate sales of the product in question from the nearest depot to where the price increase was observed. This implies a number of things. First, the MPB must know what the market prices are for all products in all areas at all times. (This is a quite considerable increase in knowledge compared to what is available now in the MPB.) If this is known, a simple comparison with the figures in schedule (f) will then trigger the necessary decision to start buying or selling activities. Second, a decision must be made on what quantity to buy or sell. This is necessary because the MPB's stocks of the product in question may not be at the right depot. This decision when compared with what is available in various parts of the country will trigger a stock transfer decision. Third, the local traders who are going to perform the final step in the distribution will be contacted to be informed that there is business at hand.

The different decisions mentioned above can be made at different levels in the organisation. If the price observations are carried out according to a fixed procedure (which must always be the same if this system is to work at all) and give reliable data, then the decision to call for intervention can be made at the local level through a simple comparison between observed prices and the prices in schedule (f). Since it is the MPB's objective to ensure a regional distribution of goods in the country, the decision to transfer stock, however, must rest with the MPB Head Office, since this decision needs total overview to be effective. Having determined the stock transfer, the decision to buy or sell will rest with the depot, using the rules about prices laid down in schedule (g), but at their own discretion with regard to the speed of the distribution, the numbers of traders to employ and so on. The performance of the distribution will be judged by continuous comparisons between the market price readings and the scheduled prices. All attempts of abuse, e.g. hoarding by one or more traders, can easily be dealt with through the vast financial resources of the MPB.

The Price Schedules

The actual contents of the two price schedules must be carefully considered, since the whole effectiveness of the system will rest with them. There are four different types of prices.

- a) Lower intervention price - triggers purchases
- b) Upper intervention price - triggers sales
- c) Local depot purchase price
- d) Local depot sales price

The four prices should exist for each product for each depot or area. They are related to each other in the following way:-

Lower intervention price
+ local transport cost to depot (average)
+ agency element
= depot purchase price

+ MPB handling and storage costs
+ transport cost from other area
= local depot sales price
+ local distribution cost
+ maximum allowable profit level
= upper intervention price

In order to allow for shifts in local demand, a certain amount of flexibility must be provided. For example, if no traders are willing to do business when a particular combination of depot sales price and local market price (above the upper intervention price) exists, it may be necessary to lower the depot sales price to make the deal attractive enough.

Operation Decisions

The basic objective of this pricing and intervention system is to ensure that all farmers are paid a net farm gate price of at least the lower intervention price, and that maize is always available for all consumers at a price not exceeding the upper intervention price. It will then be necessary to know what the market prices are exactly, and this will require a systematic collection of market data, mainly price data, for the local decisions.

Above a number of decisions have been indicated which will require information of different kinds. The information needs, and data collection will now be analysed for each type of decision.

a. Decision on the Local Level

- To call for intervention.
This will be done when the local market prices go outside of the limits allowed. The information needed is local market prices for a standardised unit of sale. This price reading must be an average, based on observation of a number of representative actual sales/purchases transactions in one or more markets at one or more points in time.
- To change the rate of intervention, sales or purchases. If market operations have been initiated, and the prices do not move in the desired direction, or move too fast, then the rate of intervention has to be changed. Decisions to this effect are also based on the local market prices and how they change.

b. Central Decisions by the MPB

- To initiate intervention at a particular depot. Local market prices and their changes for different areas will be compared, to establish the regional pattern of supply and demand as reflected in the prices. Thereafter, certain areas with marked dis-equilibria will be selected as potential targets for intervention. Next, the MPB regional stock position will be assessed, to determine what resources for intervention are available. Then an intervention programme can be formulated, indicating selected depots and initial intervention volumes. If local supplies are not adequate, a stock transfer takes place. Finally, orders are issued to the units concerned.

This process is continuous and iterative, i.e. some intervention will always go on, and the process is always in a state of change.

Information Needs and Data Collection

There are five types of information required to implement the intervention system discussed above:

- Market prices in farmer-to-wholesaler(assembler) transactions for all areas.
- MPB supply forecast per depot
- MPB demand forecast per depot
- MPB stock information
- Market prices in farmer/trader -to- consumer transactions for all areas.

The supply demand information can be calculated from the MPB yield survey results, particularly in some years' time when that system is fully developed. The stock information is available from the weekly stock report of the MPB. The price information must be collected. With proper training and supervision, I am sure that the MPB Field Officers and Field Assistants can carry out a simple task like this. The major problem here is to establish a representative sales unit (kimbo tin, 15 or 19 kg debe, small or large bag, etc.) for each market and transaction type and to identify a representative price for the market at the market day. This will require some research to establish the selection criteria for what markets to visit and also for typical sales units and their weights in various markets. In order to get a continuous reporting system, a time schedule for the field Officers' visits to different markets must also be created.

In the Ministry of Agriculture and in the Central Bureau of Statistics a market information system is currently under consideration. One of the objectives of such a system is to collect and disseminate price information regarding a great number of agricultural crops from a large number of

market places throughout Kenya. The aim seems at present to be to publish a bi-weekly summary of local market prices. When this system is implemented, the information needed to perform the control functions outlined above will be readily available. Decisions about what quantities to release, transfer or buy can then be made on the basis of correct and timely information coming to the MPB from the published reports.

In relation to this, it is important to give a warning. Publication of price data under the present system, i.e. with the present movement restrictions in force, will of course not lead to any equalization of prices in various parts of the country, since it is not allowed to move produce without a permission from the MPB. As it has been pointed out above, the present policy of the MPB is to restrict private movements to a minimum. The publication of price data will therefore only increase the awareness of those businessmen who can move produce without the permission of the MPB of the business opportunities involved. It is therefore important to point out that unless movement restrictions are relaxed, or the movement permit policy of the MPB changed, publication of price data will certainly defeat its own purposes. However, in a situation where trade is free and a reasonable degree of competition exists, a price information system is a very useful tool to ensure competition.

Financing

The present financing needs of the MPB are for a crop of 6 million bags of maize and 1 million bags of other produce. The total purchase value in 1976/77 will be between 500 and 600 million shillings. The maximum stock levels occur in May to July each year, and the maximum financial commitment in that period in 1977 will probably amount to over 400 million shillings. The minimum stock levels occur

in October, and the minimum commitment will amount to about 200 million shillings. These are the financial facts facing the MPB, and the indicated amounts of finance must be made available if the MPB is going to uphold its commitment to cash payments for all produce sold to the Board. The amounts of maize purchased has been steadily increasing since about 1970, and by 1980 purchase volumes of 8 or 9 million bags may well be realized. (17)

Under the marketing system which has been outlined above, one of the necessary conditions for its functioning will be that the MPB has a very strong financial position. The Government can still control farmers' income levels by requiring that the MPB pay a floor price at a certain level, but the performance of the marketing system, and the producer prices actually paid, will depend on the ability of the MPB to uphold the minimum price at all times. If the MPB is financially unable to purchase all excess supply on the market at a certain time, the producer prices will fall. It is therefore necessary that the MPB be provided with access to sufficient funds to enable it to perform the function of "buyer of last resort" at all times.

The present financing arrangements are not adequate to deal either with the present marketing system or with the proposed one. This is demonstrated at present (October-November 1976) when the Government has decided to increase the price of maize paid to the farmer, holding the MPB selling price constant. In order to deal with this situation, the MPB requires additional finance for crop purchases until the selling prices have been increased, but such financing is not automatically forthcoming. Under the proposed marketing system, the MPB must be given some independence over its finances, lest it will not be able to face its competitors in certain areas and at certain times, and prices may then fall below the intervention levels.

It is beyond the scope of this paper to deal with the details of a future arrangement for crop financing. It is sufficient to point to the need for autonomy on the part of the MPB, and to suggest that an arrangement for either an equalization fund or for an unlimited overdraft guaranteed by the Government be worked out.

Training

The personnel of the MPB will need substantial training in order to master this rather more complicated marketing system. The categories concerned are all depot managers and field officers, and certain head office personnel. The training should consist of several courses, giving a general understanding of what marketing and business is, as well as a detailed training in the decision making process outlined above.

The training could be best accomplished through a series of short (oneweek) intensive courses for 10 to 15 participants. The courses should be based on cases and role-games, simulating the actual work conditions with traders, purchases and sales. Three or four courses should be enough and the participants should be closely monitored in the field for possible repetitions of specific courses.

Final Remarks

This paper has attempted to provide a detailed description of some of the problems facing maize and bean marketing in Kenya. It was noted that particularly the market for beans is completely chaotic and needs drastic measures to reach an acceptable level of effectiveness but that also the maize market functions rather badly in some areas.

To improve the situation, a change in the goals and policies of the MPB is necessary. Private traders must play a more active role in inter-regional trade. This trade must be legalized, but the MPB should exercise control over the various markets, to avoid exploitation. The last part of the paper contains a fairly detailed description of how the regulatory functions of the MPB could be designed and implemented.

The Brown-Havelock report (1963) - Report on the Kenya Maize Industry (I)

Only organized marketing can ensure the provision of maize throughout the year at a constant price. This statement is not substantiated in the report. It is suggested that the Board's marketing policy should be to stabilize the price of maize for the consumer. Finally, the alternative is seen as a total abolition of all controls and a complete free market. The kind of control which is suggested is a total abolition of all controls, but regulations on quality and quantity of maize should be maintained. It is suggested that the Board should have a more active role in the internal market and should be freed from restrictions. The Board would become a buyer of last resort. The Marketing Boards would be effective instruments for implementing such a policy.

Working Paper, Studies in Maize and Tobacco Board (1963) (II)

It was suggested that the Maize and Tobacco Board was to become the buyer and seller of last resort, with floor and ceiling prices. It was suggested that the marketing of maize was to be made open for everyone. The reason was that

APPENDIX 1QUOTATIONS ABOUT ADVANTAGES AND DISADVANTAGES OF A
CONTROLLED MAIZE MARKET

In the past, the question of free marketing has been debated for many years. Below follows a collection of arguments, each with a comment. The arguments appear in chronological order starting in 1963.

The Brown-Havelock report (1963)- Report on the Kenya
Maize Industry. (17)

"Only organised marketing can ensure the provision of maize throughout the year at a constant store price." This statement is not substantiated in the report, it is just made. It refers only to the Board's selling price, not to the stabilizing effect on producer prices. Finally, the alternative is seen as a total abolition of all controls, i.e. completely free markets vs. "some kind of control". Thus it is a statement everybody can agree upon, but useless if one wants to formulate a policy.

Dr. Hopper's Report - Marketing of Grains in Kenya (1968) (19)

Here it was suggested that the producer prices should gradually come down and approach the export parity price. Domestic prices would then move with world prices, and the Board could revert to a more passive role. The internal market should be freed from restrictions. The Board would become a buyer of last resort. The Marketing Boards would be effective instruments for implementing such a policy.

Working Party. Studying the Maize and Produce Board (1969) (21)

It was suggested again that the Maize and Produce Board was to become the buyer and seller of last resort, with floor and ceiling prices. It was suggested that the marketing of maize was to be made open for everyone. The reason was that

the Party predicted a permanent surplus of maize. An important additional argument was to relieve the Maize and Produce Board from the bureaucratic task of issuing movement permits. It was argued before the Working Party, that allowing maize to by-pass the ^{the} Maize and Produce Board would raise the unit costs for Maize and Produce Board. The Working Party contended that this was not true because:-

- Maize and Produce Board's total volumes increase from year to year
- Variable overheads are predominant
- Administrative costs (movement permits) would disappear.

It was argued that freedom would lead to black markets and exploitation of consumers. But how can there be a black market when there is no controlled market?

The Working Party contended that the solution would be not to prevent movement but to cut costs. Restriction creates imperfections, and thus large price differentials that make it worth while to smuggle.

It was finally suggested that the Maize and Produce Board should sell more actively.

Select Committee on the Maize Industry (1973), (22)

"A free internal market can work well especially if the commodity is in adequate supply." The Committee recommended a reserve of 2 million bags to be held. (This is now implemented.) It noted the confusion on how a free market would work and took notice from the 1969 Working Party.

The Committee did not indicate in detail how the free market would be organised, and nothing was said on the financial effects on the Maize and Produce Board.

Clearly the Maize and Produce Board would perform a marketing function different from that of the independent traders. The Maize and Produce Board would store maize for a longer period of time and transport is over greater distances. Therefore its unit costs would be higher.

Who will pay for the strategic reserve?

Who will pay for the Board's higher relative storage costs (handling plus storage)? These questions have to be resolved.

OBJECTIONS TO FREE MARKETING

In a letter from the Kenya National Federation of Co-operatives Ltd. to the Ministry of Agriculture in 1970, a very comprehensive list of objections to free marketing is presented. Below, these arguments will be dealt with one by one.

Argument

(a) It will be appreciated that in the pre-second-^{world-}war period when Kenya had a free marketing system for maize, the small-scale maize growers were at the mercy of traders who exploited the producers greatly.

Answer

It is not possible to compare marketing conditions 30 years ago with those of today. In those days, marketing was concentrated around settlers' farms, leaving the small-scale farmers to fend for themselves. Then there were other restrictions to marketing, which are no longer there, e.g. lack of roads, lack of communications, a wholly different level of subsistence farming, etc.

Argument

Answer

(b) The co-operative movement which flourishes in Kenya today came about as a result of an organised marketing system for major agricultural products. The proposed free marketing system would therefore cut across the policy of building a strong co-operative movement in the country and weaken the co-operatives in areas where farmers depend largely on maize as their main cash crop such as Western and Rift Valley Provinces.

The objectives of the co-operative movement with regard to marketing is to strengthen the bargaining position of the smaller producer. This is done through the organization of the marketing system. Thus the co-operatives themselves are creating organised marketing through their own activities. Since the co-operatives' business options are affected in a positive way - it gives more freedom - by the removal of movement restrictions, it is difficult to see how the above point is valid.

(c) A free marketing system will disrupt the well established organised system which Kenya has enjoyed for nearly 30 years and has been a model system to other developing countries, particularly our neighbouring states.

That is precisely the idea behind it. As has been shown above, the present system is inflexible, costly and to the benefit of neither producer nor consumer.

<u>Argument</u>	<u>Answer</u>
(d) The small growers and consumers would be exploited by the unscrupulous traders who would buy maize at a low price and sell it at a high price.	This reflects the general misconception about "free marketing". It will not be that free; the Maize and Produce Board will always stand ready to buy at a fixed price, and to sell at a low price when demand increases.
(e) Credit facilities would be difficult to obtain by farmers and, even if there were a method of providing such facilities, it would be extremely difficult and onerous for any financing institutions to recover the debts.	The Maize and Produce Board is a marketing organization, not a finance institute. The fact that the Maize and Produce Board has acted as an agent for A.F.C. in debt collection, has nothing to do with the relaxing of movement control. Besides, that system doesn't work anyway. If a farmer wants to avoid selling to the Board, he can.
(f) The small maize producers would experience great difficulties in transporting their maize if they were to opt to sell the crop to the Maize and Produce Board and would be forced to pay high transport charges to transporters, hence the return to the farmer would be adversely affected.	If the small-scale farmer is in a producing area, the price paid by the traders that collect maize at the farm may be depressed below the price paid by the Maize and Produce Board. It may then be desirable for him to sell to the Maize and Produce Board and the Maize and Produce Board should have a decentralised collecting system, based on the present traders. The incentive system for these agents has to be solved so that there is no systematic exploitation of small farmers. There is also a great

ArgumentAnswer

need for improved information about the Maize and Produce Board's obligation to buy at fixed prices through its agents. This is a valid objection, but it can be overcome through careful organization, i.e. by expanding the Maize and Produce Board's field organization.

need for improved information about the Maize and Produce Board's obligation to buy at fixed prices through its agents. This is a valid objection, but it can be overcome through careful organization, i.e. by expanding the Maize and Produce Board's field organization.

(g) Co-operative organizations which provide credit facilities to their members such as the Kenya Farmers' Association (Co-op) Ltd., would not be able to recover their debts.

This point is irrelevant to the discussion of free movements of maize.

(h) The system of fixing a floor price will be abused by the businessmen whose interest would be to get big profits in the transaction.

Since the Maize and Produce Board stands by to buy at a fixed price, the option to sell to the Board's agents is always open to the farmer. See also point (f) above.

(i) There will be no effective machinery to guarantee a floor price on maize and a ceiling price on posho.

As has been pointed out earlier, it would be irresponsible just to announce that movement controls are to be abolished. The freeing of the maize market has to be carefully planned. A machinery to ensure that every farmer can get at least the floor price for his maize has to be designed and implemented. This must also be done on the selling side. The Maize and Produce Board must intervene actively in the

Arguments

(j) With a freemarketing system in force the maize growers would naturally be tempted to sell the bulk of the crop to the neighbouring countries at higher prices and this would affect the quantity of maize available to meet the local needs and the country would be forced to import at higher prices.

(k) Farmers will not take the trouble to produce quality maize as they do at the present time, hence the quality of maize will become appallingly poor and unfit for human consumption over a long period.

GENERAL COMMENTS

Over the years, a great number of people and organizations have expressed their views on maize marketing. The sample above is not fully comprehensive, but it is thought that the most common and important views have been reflected.

Answer

local markets when maize prices go up. This can be done through agents selling maize in the markets on behalf of the Maize and Produce Board. Trials of this method are already under way, as indicated above.

The Maize and Produce Board is to remain the sole exporter of maize. Export may only take place with the permission of the Ministry of Agriculture. The problem of illegal exports is a matter of enforcing better border controls, and has nothing to do with internal movements.

This argument has no merit and deserves no answer.

On the whole, the objections seem - from an economist's point of view - to be less well founded than the arguments for removing the restrictions. The most common objection of all - that all the maize would disappear to other countries - can easily be disputed simply by stating that restrictions will remain for international trade. It is as though the word "free" leads people to envisage a totally uncontrolled system, a marketing anarchy. This has, of course, never been seriously suggested. It would naturally be foolish for any Government to disclaim authority over the food supply in a country.

On the other hand, the suggestions for removal of some of the controls have generally been lacking in specificity, and yet it is impossible to judge and to predict the behaviour of a marketing system unless a precise description of the institutions and marketing mechanisms is provided. There is a great need for a more precise description of a suggested marketing system.

APPENDIX 2THE SMUGGLING ARGUMENT

When grain marketing in Kenya is discussed, the present restricted system is frequently defended on the grounds that a less restricted system would induce a considerable amount of smuggling. There is, I think, a need for a critical review of the arguments usually involved in this discussion.

We shall start by defining smuggling as illegal movements of grain across administrative boundaries, regional or international. The cause of smuggling is, of course, when institutional barriers to trade create markets with different price levels. If the price differential is greater than the transport cost and risk payments (which are proportional to the probability of getting caught and to the level of punishment if caught) smuggling will occur. Smuggling across national boundaries affects the national supply situation, but smuggling across regional boundaries does not.

We can now examine the arguments against less controlled marketing. It is often argued that "free" marketing would lead to increased smuggling. If the barriers for interregional trade are removed, it is needless to say that the only smuggling that can then take place is across the national boundaries, since interregional movements would then be legal. Would then free interregional trade make smuggling across national boundaries easier, as is sometimes suggested? This argument is based on the belief that if internal movements were free it would somehow be easier to move grain across the international boundaries. This argument gives a rather low credit to the country's border control organisation, and I think it is fair to say that the argument stands on very shaky ground.

Let us now turn to the economic effects of smuggling. The word "smuggling" is highly value charged. It is illegal, and therefore it is bad. When internal movement restrictions exist, regional markets are blocked off from each other, and the markets are used to achieve goals which they are not capable of reaching in an unrestricted situation, such as income policy goals. Smuggling will occur when law enforcement is not totally effective, and when differences in prices are high enough to make it profitable. Goods will then flow from where supply is high and demand and prices low to areas where the opposite is true. This will increase demand and prices in the first area and increase supply and decrease prices in the second area. A new interregional equilibrium will be reached when the marginal revenue from selling in the second area is equal to the marginal cost (including the risk payment).

In the Kenyan situation, the MPB has been responsible for all interregional maize movements, under the assumption (in later years) that a monopoly organisation would perform this transfer more efficiently than private traders. The goals of the MPB have lately been rather free from income policy considerations, since the buying price has been nearly uniform throughout the country, and the selling prices have differed by transfer cost from the main producing areas to consuming areas. In many cases, however, movement restrictions combined with MPB inefficiency have created market situations where actual consumer prices are considerably higher than the MPB selling price, and this has from time to time induced considerable smuggling. It has been shown in a number of cases (see 5) that the enforcement of movement restrictions has produced results contrary to the goals of the MPB. A modification of the movement control system is therefore desirable. This has been dealt with elsewhere.

The economic effects of international smuggling are based on similar factors when the market equilibrium mechanism is considered. In addition to this, the problems of total national supply and income transfers between nations must be considered. We shall limit the discussion to border trade with neighbouring countries, and leave out the possibility of large-scale smuggling overseas (which can hardly take place on a large scale, i.e. quantities in excess of 10-20,000 tons, without being known).

a) Effects on the supply situation

Kenya produces about 2 to 2.5 million tons of maize annually. In order to affect the total supply substantially we can assume that 5% will have to be removed, or 100,000 tons per year. To give an indication of the bulk involved in such a quantity, the following conversions are made:

100,000 tons = 1.1 million bags
= 15,000 7-ton lorry-loads = 40 lorries/day 365 days
= 3,000 railway wagons = 200 train sets
= 2 million donkey loads = 3 million head loads.

I think it is fair to say that the present level of smuggling is nowhere near these figures and that before a smuggling operation can threaten the country's supply situation it will be so large and conspicuous that it will be impossible to keep it secret. This fact, however, is different from the fact that individual fortunes can be made from smuggling. An individual who can transfer 2,000 tons of maize with a premium of shs.500/- per ton will make a million. But with regard to the total supply, this amount is insignificant.

b) Effects on incomes

To the farmers who sell their produce, the smuggler is probably not unlike traders who buy on behalf of the MPB. The price paid will be the same and if the smuggler does not operate, the MPB will buy the balance. The demand curve facing the farmer will therefore not change with smugglers in the market. This will be true as long as the farmers do not do the smuggling themselves, as is often the case when they live near the border. In that case, there will be two demand curves, one for each market. The traders or farmers will sell in the smuggling market across the border as long as the price exceeds the costs of purchase, transfer and risk. The risk is expressed as a function of the probability of getting caught and of the various penalties involved in this, monetary and otherwise.

The payments in the market across the border may be made in convertible or non-convertible currency. If the currencies are convertible, the money can be brought back to the seller's country, and it will increase incomes there. Otherwise, the payments will have to be spent in the buyer's country, or else the smuggled produce will simply be bartered across the border. In any case, goods are acquired in the buyer's country, and they will have to be transferred to the seller's. This will most likely involve a second smuggling operation, doubling the risk. This is probably only feasible for the border trade involving small amounts of produce transferred back and forth.

In the East African situation, where the nominal exchange rates for the currencies differ dramatically from the black market rates, some curious phenomena can be

observed. In Tanzania, maize prices have been much higher than in Kenya, and undoubtedly some smuggling takes place from Kenyan surplus areas to Tanzanian deficit areas when they happen to be adjacent. But this is counteracted by the fact that the actual purchase value (taking into account both the higher prices and the short supply of some consumer goods in Tanzania) of Tanzanian shillings makes the trade much less profitable than it looks. In the Kilimanjaro area, the process is actually reversed, and Tanzanian maize and beans are smuggled to Kenya and sold to the MPB agents at Loitokitok. The reasons is reported to be the higher value of the Kenya shilling. The traders and farmers from Tanzania spend their revenues in Kenya and smuggle their purchased goods back to their own country.

Conclusions

Regardless of whether payments are made in convertible currency or not or in kind, the sellers are acquiring export earnings. Only if the smuggling takes on gigantic proportions will the total supply situation in the sellers' country be in danger, or will the producer and consumer prices in either country's main markets be affected. If the smuggling is confined to small-scale border trade, neither the supply situation nor income distribution will be affected appreciably. As long as the Government is committed to preventing large-scale smuggling through effective control of the few large border passages with railways or with good roads, the argument that free interregional trade would increase international smuggling does not hold up.

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