MARKETING BOARD INEFFICIENCY AND FARMERS' INCOMES

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ABSTRACT

Inefficiency and corruption in marketing boards frequently reduces farmers' incomes by as much as three quarters. Preliminary analysis can show which aspects of a marketing board's operations should be investigated first, giving the greatest possible payoff. Probability of achieving the payoff is also relevant. The inefficiencies that prevent the job from being done must be tackled first. Inefficiencies can become cumulative, leading to the collapse of the industry. Low export and home market prices, and product losses due to fraud or mismanagement, have a major impact on farmers's prices. Operating costs twice as high as those achievable with moderate management have been observed. Savings of millions of dollars can usually be achieved and savings of tens of millions of dollars have been achieved when the political will was there.

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INTRODUCTION

Those of us who have the task of identifying and remedying inefficiencies in agricultural marketing boards have the constraint of time — there are so many inefficiencies. The first task in any investigation should be the identification of areas of the board's operations where improvements can have the greatest payoff, and here I measure payoff in terms of improvement in the farmer's income. Next, the chances of finding anything wrong must be assessed and, finally, the chances of getting anything done about what is wrong must be considered. Only then can one allocate one's time rationally.

Is the job worth doing at all? I think so. Generally the marketing boards have turnovers from a few million dollars a year to several hundred dollars a year. In a typical least-developed country, boards market 80% of the exports.

80% of the population are in agriculture and far most of them the marketing boards are the only source of cash income. Any increase in the price paid will have an effect on the living standards and even life expectancy of hundreds of thousands of people, if not millions. The boards are so big that their inefficiencies can have a serious effect on the nation's economy.

What sort of savings are possible? Even in a lightning study, of a month or so, one could expect to identify savings that increase the farm gate price by one-third. If one had, say six months, one might identify savings that would double or treble the farmers' incomes.

The possible savings identified may be valued in tens or even hundreds of millions of dollars Inevitably though, it will take years to make the major changes that these savings require. Implementation is a matter of political will and management technique, and is beyond the scope of this paper.

The problems discussed here are not unique to Africa. I found the operations of one of the largest multi-national companies in a European country to be as inefficient as anything I have seen in Africa. The scandals in relation to EEC intervention involve larger sums of money. However, the managers in Africa have a much harder task than the managers of similar organizations in Europe They are under heavy political pressure. They face awesome responsibilities. They may be operating where the infrastructure is collapsing about them.

In order to shield the guilty, I am not quoting figures on any one board. Instead, I have constructed a composite firm to show the problems that arise. I will say, though, that the model has proved remarkably apt for looking at firms selling different commodities in several countries. The industry is one where a marketing board is the sole buyer of the crop from the farmer. The board transports its purchases to a central depot where it carries out some basic processing. One-third of the product is sold to local manufacturers and the end product is consumed

within the country. Two-thirds of the crop is exported. The farmer is paid the marketing board's receipts less its costs.

Table 1 shows the structure of costs. The board's revenue is from its sales in the export market and the home market. From this the board's costs are subtracted to get the amount paid to farmers. (It is usual to leave payments to farm labour as a residual, rather than making an arbitrary imputation of wage rates and labour costs). In this industry the farmer's cash income amounts to about one-third of the final product.

In the example in Table 1, where two-thirds of the output is exported, a 10% increase in export realisation would lead to an 18% increase in cash and a 10% export tax would lead to a similar decrease. That is to say, a 10% increase in export sales, or $6.67 million, would be added to the net cash income of $36.4 million, an increase of 18%.

Column 2 gives details of the impact of the various cost savings. The impact of a saving of 10% in buying expenses would be relatively small, only 0.6% more net cash income, so it does not seem to be worth investigating when the payoff from increased export earnings is so high.

While this cost structure is similar to several others I have seen, it should not be assumed that it is typical, or that the relationships will be the same in other industries. In particular, it is only because the farmer gets as little as one—third of the export realisation that a 10% sales -tax reduces his income by 27%. If the board were more efficient and the farmer got, say, 50% of the export realisation, the tax would be a smaller proportion of his income, 20%.

In the last decade the collapse of the commodity markets and the increase in oil prices have thrown a great strain on the currencies of Third World countries. They are earning far less than they were. The official exchange rates were set when prices were high and the currency is now overvalued. In many countries it would be true to say that the official rate is twice the real rate. In Tanzania the black market rate is about seven times the official rate; in Ghana it is sixteen times. This in itself shows the effect the changes in export prices have had on the economy.

Table 2 shows the effect of this change on the marketing board, where the real exchange rate was half the official rate. Column 1 is comparable with Column 1 of the previous table. It shows total revenue less total costs, giving the farmer only 20% of export realisation. Some costs, notably transport, had risen because of the oil price. More important, though, was the fact that the board was getting only half their real value. Add to this the fact that many commodities are selling at one-third their 1975 prices, and it becomes clear that the farmer is getting virtually nothing for his crop. The result is that, in country after country, farmers have just stopped producing cash crops and have reverted to subsistence production.

As a micro-economist I cannot recommend devaluation. I can only say it would solve a lot of problems within this industry. Politically there are problems. Some politicians (Mrs. Thatcher?) equate the strength of the currency with their personal

and national prestige. Some resent the fact that the IMF is pressing this solution on them. Some realise that they do not have the administrative resources to devalue successfully. Some realise that devaluation would mean a big switch in income from the urban mob, who surround the President's palace, to the distant farmers. Some realise that it would break the black market, which is the source of their patronage. In most countries "devaluation" is a dirty word and one talks instead of "ERA" or "exchange rate adjustment". The political situation is so hot and the pressures so strong that it would be unwise and unproductive for a micro-economist to try and push devaluation. He can mention it as a possible solution and then push for alternative and politically acceptable solutions.

One solution is to work out costs using shadow prices. The second column of Table 2 is worked out with foreign exchange valued at twice the official exchange rate. Because of this, export earnings are twice as high. The foreign exchange content of cost elements is costed at twice the official rate. If we used this more realistic costing, the farmer would get twice as high an income. (This figure is very sensitive to the cost structure of the firm: I have come across several instances where the farmer would have got four times as much). This solution implies a government subsidy to the marketing board to make up the difference.

Because of the shadow pricing, there is a very high payoff to any improvement in foreign exchange earnings: a 10% increase in exports means a one-third higher cash income for farmers. Increases in home sales or reductions in imported inputs lead to smaller, but substantial, increases in cash income, of the order of a 10% increase in cash income for a 10% decrease in costs. With many other savings, the payoff is relatively small, though this does not mean that they should be ignored, as they may be easier to achieve.

OPERATIONAL INEFFICIENCY

In tackling inefficiency, first priority must be given to those inefficiencies which make it difficult or impossible to do the job and which, therefore, threaten the existence of the industry. Inefficiencies that reduce marketed output are serious: a 10% reduction in marketed output means a 16% reduction in exports (assuming that the needs of the home market are met first) or a 50% fall in net cash revenue to farmers.

Often the most important reasons for inability to perform are not under the control of the board or its parent ministry; for example, poor road maintenance, bad distribution of fuel throughout the country or failure to allocate the foreign exchange to buy spares. The working economist, particularly the expatriate, may feel justified in ignoring these, on the grounds that there is little chance of building up the political will for an inter- ministry battle. Often, indeed, these constraints are accepted fatalistically, as an Act of God.

Within the marketing board, the inability to market the crop is likely to arise from failure to maintain the processing and storage facilities and the transport fleet. This may be due to bad management, poor maintenance, and lack of foreign exchange for spares and replacements. The use of straight-line depreciation on historical cost

means, in an era of rapid inflation, that the board cannot replace equipment at the end of its working life. (Though one cynic has pointed out instances where this depreciation gives a correct indication of expenditure: plant is run down completely and is then replaced with the aid of a grant from a donor country). Instances have been noted where infrastructure is not maintained, on the grounds that the Imperialists left no infrastructure to maintain.

I have found it generally true that a sudden demand for more storage shows a collapse of the production or marketing systems. If there is insufficient production capacity, there may be a build-up of processed or unprocessed stocks. The quality of some crops falls if processing is delayed and, for some, the quality of the processed product can fall in store. In one or two cases I was asked to approve a board's application for more storage when the problem was the collapse of processing plant. Here the cost of the storage sheds they wanted was greater than the cost of repairing the machines. Similarly, in one industry the loss of interest on foreign exchange earnings, in a single year, was greater than the cost of repairing the machines. Even after the problem was identified and the costs set out, the board spent nine months negotiating foreign aid which, again, was less than the interest foregone. (This situation commonly arises in the EEC, where governments will wait two years for a small EEC grant rather than take urgently needed action).

There is a progressive worsening of the situation as physical capacity declines. Stocks build up, choking the distribution system and causing congestion in factories. The processing season lengthens: instead of the crop being processed in four months, it takes ten months. There is then very little time for the annual overhaul of machinery, so breakdowns are more frequent the following year. Eventually one year's crop is not finished at the beginning of the next processing season. The industry is about to collapse. Surprisingly often, management does not see what is happening, because it is so busy trying to solve the frequent urgent problems. I have gone into a firm which had reached this level of collapse, and was bankrupt besides, and have found that management were quite happy with their performance and the board's.

Buyers in Europe told me that in one African country there had been a steady decline in the quality of processing over ten' years, with the result that the country had lost the 10% price premium it had -previously had over its competitors. This implies that the farmers were getting one-third less cash than they should have been (Table 2). When the board's marketing and processing facilities eventually collapsed, there was a further sharp drop in quality, which meant that the price fell even more and there were serious fears that the country would permanently lose some of its established customers. As a result, the board could no longer afford to pay the farmers anything at all. Massive subsidies were needed to keep the industry alive.

One of the commoner failures is for the board not to pay the farmer in a reasonable time or not to pay him at all. This makes him unwilling or unable to produce in future years. This may be because of administrative failures or failures in the banking system. Often, though, the board does not have the money, perhaps because it has too much money tied up in stocks, perhaps because the government has set a high producer price without realising that this implies a subsidy to the

board. Quite often the farmer does not get the officially announced price, because local marketing officials or government officials keep a proportion for themselves, because buying agents charge a higher margin than they should, or because there is an unofficial tax by the local government or the Party.

Failure to provide inputs at the right time, and failure to provide credit also inevitably reduce output. This can arise from transport failure, financial problems or just bad planning. In one case a board was allocated half the foreign exchange it needed to buy seeds, with the result that its production was halved. This saved the country $1 million in foreign exchange and lost it $20 million in export earnings.

Those inefficiencies which restrict production are the ones that must be tackled first. Pinning them down is a big problem, getting something done is another. 'It is easy for a manager to become fatalistic after his factory has closed down for the fourth time in a week because of power failures, or because of lack of transport to bring in raw materials.

He knows that he personally can do nothing about it and that his political masters do not seem to be taking things seriously. He becomes equally fatalistic about his own job, accepting his own failures and those of his subordinates. It is very easy for an economist to catch the fatalistic attitude — ah well! they are doing as well as they can under the circumstances. It is possible to change things. A well-documented report, excited or even alarmist, can jolt the system into action, drastic action.

SELLING PRICES

It is difficult to set the correct selling price in any market, and often an economist would be pleased to think that he is within 5% or 10% of the correct figure. All too often, a board does no market research and buys none, because nobody sees the need for it, or because the money or foreign exchange is not made available. The marketing manager then is totally dependent on buyers' gossip for information. This leaves him in a very weak bargaining position, especially when he has only a handful of customers. Buyers may bribe management to accept low prices and it is very difficult for an economist to get evidence for this because of the lack of independent price information and the complexity of the market. However there are enough scandals, with management accepting as little as 60% of the going price, to show that this is commonplace. Buyers from multi-nationals have admitted to me that they have funds available for bribes, funds which they assured me they did not use. ("Don't have to. We just buy them dinner and pay their hotel bills when they visit Europe").

The payoff from better pricing is substantial, 33% more net cash income for the farmer from a 10% higher export price. Something can be done by the international organizations like FAO, which will provide an experienced. economist and give him the necessary price data to exercise control. By and large these international civil servants are honest, if for no other reason than that they stand to lose too much money if they are caught accepting bribes.

Home market prices of export crops are often kept below export parity with the result that home consumption is encouraged, rather than export, and the subsistence farmers subsidize the urban consumers. However, since the home retail price is determined by supply and demand at retail, rather than by factory cost plus a fair margin, the subsidy normally ends up in the hands of retailers, not consumers. It should be possible in most cases to get a board to charge at least export parity at official exchange rates: in one case I was able to get an extra 20% on farmers' net cash income by this. P case can be made for basing home prices on export prices at shadow exchange rates, or even for charging a price high enough to remove any black market profit. There are political pitfalls in this and it would certainly take several years to move towards this. The effect would be dramatic, nearly doubling farmers' cash income in Table 2.

The board may keep the home market under-supplied as part of a national policy of maximizing export earnings. If home prices are kept low at the same time, a black market arises and managers can earn tribes for preferential allocation of a scarce commodity, even if they are not themselves involved in the black market.

Buying from some countries is expensive. Buyers complain that they themselves must carry out operations formerly carried out by the board, such as quality control, fumigation and loading. The price is adjusted to allow far the extra costs incurred by the buyers, and it seems that a further sum is subtracted in revenge for the bloody-mindedness, carelessness and corruption that make this necessary.

Pricing is an area where an economist can have a big effect and where there is a fairly good chance that his recommendations will have a big impact.

PRODUCT LOSSES

In one board I found that the quantity purchased should have produced a total revenue 18% higher than that actually achieved. The calculation is simple but time-consuming, but the accountants had not made it. (In some other industries where the losses are worse, they are hidden by poor accounting). Several reasons were identified. Some of the purchases had never existed except as book entries. Some were stolen and resold. Classifiers were bribed or intimidated to put too high a grade or too big a weight. These abuses proved fairly easy to check: they were in any case local currency losses and could be regarded as an unwanted re-distribution of income, rather than as a loss of resources.

There were resource losses and foreign exchange losses that had a sharper impact on the national economy. Some of the crop lost quality or was destroyed by poor storage and handling, particularly by failure to process it immediately it was bought. (The 18% was seasonal loss: there were substantially larger losses from grossly mismanaged and unnecessary long-term storage).

In addition, processing losses were rather higher than the industry norms, which was enough to reduce cash income by 7% to 10%. Obviously technical and management improvements were needed, but it proved possible to reduce storage and handling losses, particularly those of long-term storage, by a change in pricing policy. Substantial incentives were given to produce the grades that sell easily. Selling price and allocation policy were changed to encourage the customers who take a wide range of grades, leaving little to go in store.

OPERATING COSTS

Transport costs are high in most developing countries because of theft, mismanagement, poor maintenance of vehicles, long distances, lack of spares, and poor road maintenance. (In some countries roads, fall into disrepair not because of lack of money but because of negligence —permitting cultivation up to the edge of the road and failing to keep drains clear). It is extremely difficult to quantify or identify the excess costs where there is no cost accounting, where logbooks are not kept or analysed, and where 90% of the odometers are out of order. Even so, it is possible to do something: for example, I was able to show that the cost per ton-mile of one agricultural parastatal was six times the charge by a commercial transport firm. Assuming that costs are only twice what they ought to be, more efficient transport would increase farmers' cash incomes by one third.

The lack of data is a constraint on analysis, but one should not make too much of this: in countries with excellent data and accounts the situation can be as bad. The data and accounts are there, but nobody bothers to analyse them.

Parkinson's Law applies in developing countries no less than developed. It is often a simple matter to show that cuts are possible: perhaps staff has grown by one-third over a period when output has been falling, or the ratio of staff to throughput is 36 times as high in one region as in another, as was observed in one board. Political and trade union considerations made it difficult to do anything about this in developed countries, but once decision-makers in the Third World are persuaded that the problem is serious they can take decisive action: in two organizations I dealt with, the response was to cut staff by one-third within nine months. The direct effect of this on farmers' income was not enormous, but the indirect effect on the use of transport, stationery, office space and housing, and more particularly its effect on the attitude to work, should be allowed for. With hindsight, I feel that the staff cuts should have been postponed a few years. The payoff was relatively small and a lot of goodwill, mine and management's, was used up. Management would have been better employed in dealing with more serious problems.

PROCESSING

Reducing processing costs by half is not an unrealistic aim. The various processing plants within a board have all the problems of the board itself — external problems like power cuts; board problems, like non-arrival of inputs; and factory problems

like poor maintenance. Lack of cost accounting means that there are insufficient data for analysis or control. More important, management does not analyse the data that does exist even if there are cost accounts.

It is often politically unacceptable to close down even a grossly uneconomic factory in a region with few factories. I found this when closing down a factory would have increased farmers' income by 30% and in another case, where the processing cost per kilo was ten times as much in one factory as in another. Regional chauvinism overrules the strongest central directives. The threat of an urban mob thrown out of work is more potent than the threat of discontented but fatalistic farmers.

Large sums of money are wasted on enterprises which have nothing to do with a firm's objectives and, more important, a large amount of management effort is wasted. These enterprises include running a football team (with 2% of the farmers' cash income), running a carpentry shop to provide employment for factory maintenance men at slack periods, running commercial transport and tractor-hire schemes, operating farms to produce more raw material, operating grocery stores and providing dispensaries for workers and anyone else living in the neighbourhood. These enterprises could not be justified even if they made a profit.

Often marketing boards go into production in "order to increase throughput and reduce unit costs". I have very seldom seen a marketing board operating an efficient production unit. Usually what happens is that the investment is financed by reducing the farmers' price, and that losses in future years also cause a reduction in farmers' prices. If by chance there is a profit in an exceptional year, it is spent on a new farm, and the farmer has to finance development, maintenance costs and losses in future years.

CONCLUSION

There are enormous savings to be made by reducing the inefficiency of agricultural marketing boards. Because the farmer is at the bottom of the marketing chain, the savings have a disproportionately large effect on his income.

Sometimes the inefficiency is so bad that the economist's first and only task must be to get the board sufficiently organized and equipped to physically handle the crop. With the normally inefficient board, the economist can expect to have a bigger effect on farm incomes by tackling inefficiency than by developing optimal marketing strategies, agricultural price policies or production programmes. There are boards which show great efficiency in doing the wrong thing and there, perhaps, the textbook economics comes into play. I have yet to come across the efficient organization doing the right things.

If marketing boards are to work their way to efficiency and to stay there, they need constant prodding. At the least, I think an economist should make a three or four-month study of each board every three years and a one-month study in other years.

This is expensive and time-consuming, but the payoff should be far, far, higher than the cost.

Table 1

Parastatal costs in relation to farmers' net cash income (no shadow price for foreign exchange)

	As a % of total value of sales	Effect of a 10% saving on net cash income.
REVENUE		
Home sales	33.3	9.1
Export sales	66.7	18.3
COSTS		
Transport	9.6	2.7
Buying expenses	1.6	0.5
Salaries and wages—field staff	5.7	1.6
Field expenses	2.1	0.6
Processing	11.4	3.1
Administrative staff	1.2	o.3
Other overheads	8.6	2.4
Depreciation etc	1.2	0.3
PAYMENT TO FARMER	57.9	15.6
Input costs	23.3	6.4
NET CASH INCOME	36.4	

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Table 2

parastatal costs in relation to farmers' income.

(Shadow exchange rate is twice official rate)

	of sales at official exchange rate.	Cost as a % of sales at official prices 4 shadow prices %	value of sales at shadow prices Effect of 10% saving in money terms on	when farm price is based on shadow price. % /0
	3S .7	3S .7	21.8	9.1
	64.2	128.4	78.3	32.9
	14.3	25.8	15.7	6.5
	2.1	2.1	1.3	0.5
	6.1	6.1	3.7	1.6
	2.3	2.3	1.4	0.6
	14.3	21.5	13.1	5.4
	2.0	1.9	1.2	0.5
	9.2	11.8	7.2	3.0
	0.9	1.8	1.1	0.4
	48. 1	90.9	55.4	23.1
	28.6	51.5	31.3	13.1
		Cost as a % of	farmers' net cash income,	

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REVENUE
Home sales
Export sales

COSTS
Transport
Buying expenses
Salaries and wages, field staff
Field expenses
Processing
Administrative staff
Other overheads
Depreciation etc.

PAYMENT TO FARMER
Farm inputs bought

NET CASH INCOME OF FARMER 39.4 23.920.0 10.0