Plain Tales from the Rice Trade: Indications of Vertical Integration in Foodgrain Markets in Bangladesh

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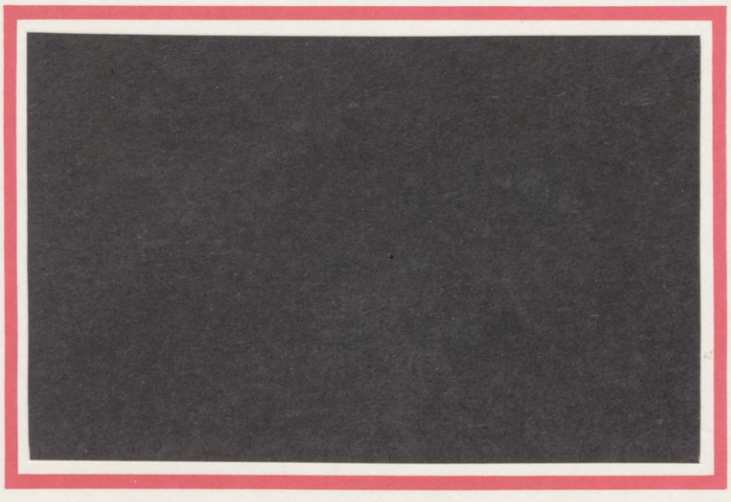

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PLAIN TALES FROM THE RICE TRADE: INDICATIONS OF VERTICAL INTEGRATION IN FOODGRAIN MARKETS IN BANGLADESH

by Ben Crow

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CONTENTS

Units and Terminology

46 Taka	=	£1 (November 1985)
1 Maund	=	82lb = 37kg
1 Boster	=	1½ Maund (local to Satkhira)
Faria	=	Small scale merchant
Bepari	=	Larger scale itinerant merchant
Aratdar	=	Commission agent/banker/wholesaler
Choto Bepsay	=	Small trader
Godown	=	Warehouse

Acknowledgements

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PLAIN TALES FROM THE RICE TRADE

1. PRELIMINARY OBSERVATIONS ON FOODGRAIN MARKETS IN BANGLADESH

This is the report of a preliminary reconnaissance of foodgrain markets in Bangladesh. Through a series of discussions, principally in Dhaka but also in Satkhira (a border region, probably in deficit), in Dinajpur (centre of the main rice surplus region), in Sherpur (surplus), and Noakhali (deficit), access was obtained to published and anecdotal accounts of the operation of foodgrain markets. Some of these latter anecdotal accounts were gleaned from informants to whom introduction had been obtained via friends or relations. By this means a first attempt was made to glimpse beyond the publicly acknowledged principles of operation to the unacknowledged practice. I visited Bangladesh in late November 1985, coinciding with the start of the major (aman) rice crop harvest, which was expected to be a bumper crop; and in May/June 1987 (as a price peak was being mitigated by the harvesting of boro rice).

The report has three sections (after this introduction). The first describes the food distribution system of Bangladesh in general and discusses some of the literature which has argued that the private foodgrain trade is highly competitive. The second section consists of a number of 'tales', anecdotal accounts based on interviews with participants, which suggest that there are linkages between different levels of the market. The final concluding section constructs some hypotheses about foodgrain distribution in Bangladesh.

The overall tenor of this paper is to question the widespread presumption of low margins and competitive efficiency in the private trading system in Bangladesh. Examples are given of vertical integration between different levels in the market. In itself this does not rule out competition. It may, however, provide opportunities for large margins to be established and markets to be segmented. Cases of large margins and apparently segmented markets are noted.

Competition stands as a proxy for a wide range of objectives sought from the market. A competitive market is thought to be one which transmits price incentives (or disincentives) to producers without 'distortion'. It is also one which provides products to the consumer without traders' margins inflating the price 'excessively'. This paper follows the example of much of the existing literature on food markets in Bangladesh by identifying a competitive market (rather narrowly) as one in which traders' margins are not 'excessive' and which transmits price 'signals' from related markets.

These are, nevertheless, static concerns which should not be allowed to dominate considerations of market structure in a country like Bangladesh, where the overriding concern must surely be the growth of production and the expansion of distribution necessary to sustain and encourage that growth. It is necessary to go beyond an assessment of the competitiveness of market structure to consider:

(i) whether existing market configurations foster or retard the growth of the market;

(ii) how returns accumulated at different levels in the market are invested;

(iii) how existing markets will respond to government initiatives such as the attempt to establish greater food security.

These questions mostly lie outside the scope of this preliminary report but they are briefly considered in the final section.

2. THE PUBLIC AND THE PRIVATE

In Bangladesh there are two sets of institutions devoted to the circulation of foodgrains. One distributes primarily rice and paddy, and is privately owned. The other has grown by accretion of legislative innovation since 1943, handles mostly wheat and is, in principle, owned and controlled by different agencies of the Bangladesh government. The amount of grain traded through private institutions is not known (the marketed quantity) but is substantially in excess of the marketed surplus (because of distress sales). The marketed surplus has been estimated at 2.9 - 3.4m tonnes and the marketed quantity has been guesstimated at 4m tonnes. By contrast the public food distribution system distributes between 1.5m tonnes and 3m tonnes.

The public food distribution system (PFDS) has been the object of sustained interest and concerted leverage from the aid donors to Bangladesh. There are therefore a large number of studies evaluating different aspects of the public system (eg World Bank, 1977, 1985a, 1985b; Ministry of Food, 1986). Many of these studies are, nevertheless, the results of brief policy evaluation missions reporting mainly secondary data analysis. Much less interest has been taken in the operation of the private foodgrain trade. Almost certainly this is because those studies which have been made reported that food markets were highly competitive and surprisingly efficient (Farruk, 1972; Islam et al, 1985).

2.1 Recent changes in food circulation

The development of the public food distribution system, and to a lesser extent, the private have been influenced by two events in the political history of Bangladesh: the overthrow of the first government of Bangladesh in 1975 and the increasing influence of aid donating agencies since that time. The first parliamentary regime of Bangladesh was committed to the provision of subsidised food to urban consumers and to forms of foodgrain procurement which essentially continued the principles of intervention begun in 1943; that is (i) restrictions on foodgrain movement and private storage and (ii) the coercive procurement of local production to maintain supplies to the cities. During this period the government effectively declared its antagonism to the private institutions of trade. Although the more overt state interventions of this period have been withdrawn, some of the practices persist in dilute form. The licensing of traders and their regular reports to the food department date from this period. Four years ago, the government issued a directive proscribing 'cordoning' (movement restrictions) even though the practice had been repealed in principle several years before. Many traders believe that restrictions on the length of time grain can be stored still apply.

Since 1975, the government has been increasingly supportive of the institutions of the free market in almost all areas of society but particularly with regard to the circulation of foodgrains. This has resulted in the repeal of the central role of the Approved Grain Dealer and the gradual reduction of the subsidy in public food provision, amongst many other changes.

The extent to which these changes are the result of donor encouragement is impossible to determine, but there has been prolonged and concerted 'leverage' (to use the terminology of a USAID paper) to privatise many elements of the economy. For several years, there has been widespread debate within sections of the government and academia about the consequences of donor encouraged changes in agriculture. The World Bank, IMF, USAID and other aid donors have coerced the withdrawal of agricultural input subsidies (fertiliser, irrigation pumps, etc) and encouraged the maintenance of an incentive procurement price for foodgrains. Several analyses have cast doubt on the macro-economic rationale for these changes both in terms of output and equity (Osmani and Quasem, 1985; Rahman and Reza, 1985; IFPRI/BIDS, 1985). The donor agencies have not published any reply to these criticisms but argue that the input subsidies are a wasteful use of resources which could be more effectively deployed elsewhere.

In the sphere of foodgrain circulation the extent of the volte face which the post 1975 changes represent can be seen in one of the 'covenants' (ie binding agreements) contained in World Bank Import Programme Credit No. 9 1980. Whereas the pre-1975 government attempted to restrict private storage of foodgrains (the 'hoarding' of which it blamed as a cause of famine), one of the World Bank's covenants consisted of the 'proposal' that bank finance be provided to enable private traders to hold larger stocks. (In fairness it should be said that the Bank economist who described this to me commented that the Bank might wish to 'disown' that covenant). I was unable to find out the government's current policy on this issue but as I record in 'The mill owner's tale' some rice traders, do obtain access to such bank finance.

2.2 Research on foodgrain circulation

The main routes by which foodgrains are taken from producer to consumer by the private market are mapped in Figure 1. A few of the practical operations of these routes are described in the tales later in the paper. Figure 2 shows the proportions of foodgrain travelling by these different routes in two surplus producing regions, Haluaghat in Mymensingh and Birganj in Dinajpur, during the Aman season of 1977-1978. This was before the elimination of the Approved Grain Dealer (agreed by the government under the conditions of World Bank IPC 9 1980).

Two major studies have been undertaken of private foodgrain markets in Bangladesh. One (Farruk, 1972) was carried out under the auspices of Cornell University and reflects the concerns of the wave of research sponsored by USAID into the conduct, structure and performance of foodgrain markets in non-industrialised countries. The methodology and practice of this research wave has been subjected to severe criticism by Harriss (Harriss, 1979). In particular, Harriss had reservations about the researchers' failure to examine the nature of their price data and about the over-simple notions of correlation which they used to demonstrate integration between markets. These reservations place a question mark against the overall conclusions of Farruk's study but it remains a rich description and fruitful analysis of Bangladesh foodgrain markets.

More recently a major survey of a large sample of traders and producers has been undertaken jointly by the Bangladesh Rice Research Institute (in collaboration with the IRRI) and the Agricultural Marketing Directorate with funds from USAID (Islam et al, 1985). Although this was an important research initiative

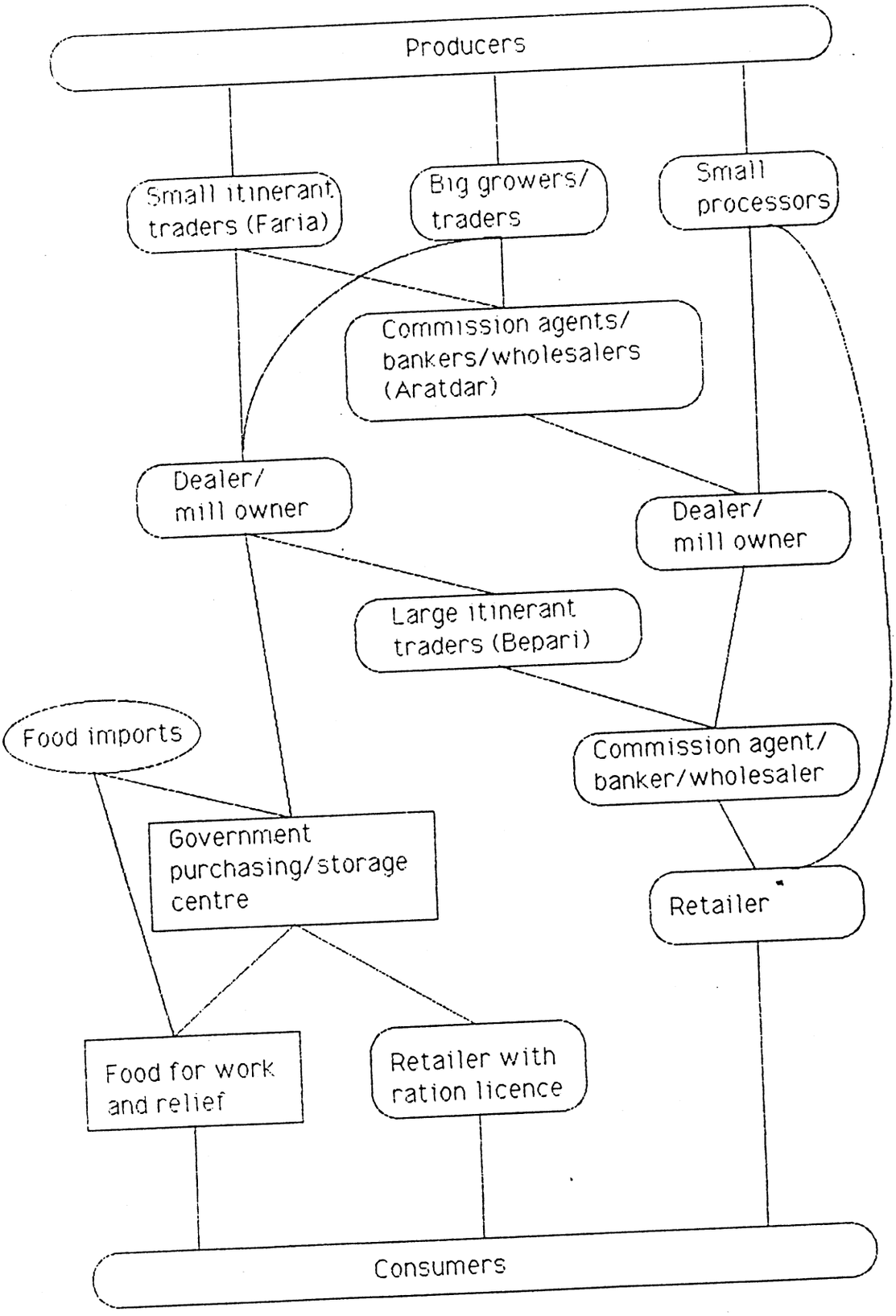
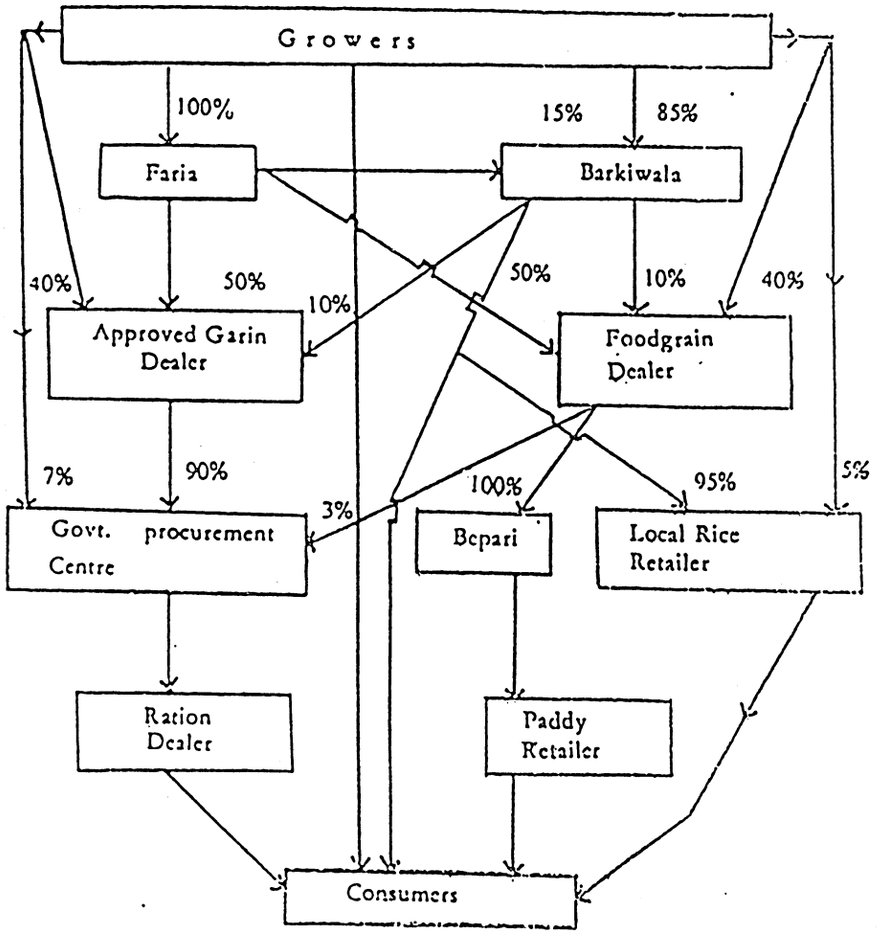


Figure 1 - Main Foodgrain Distribution Channels

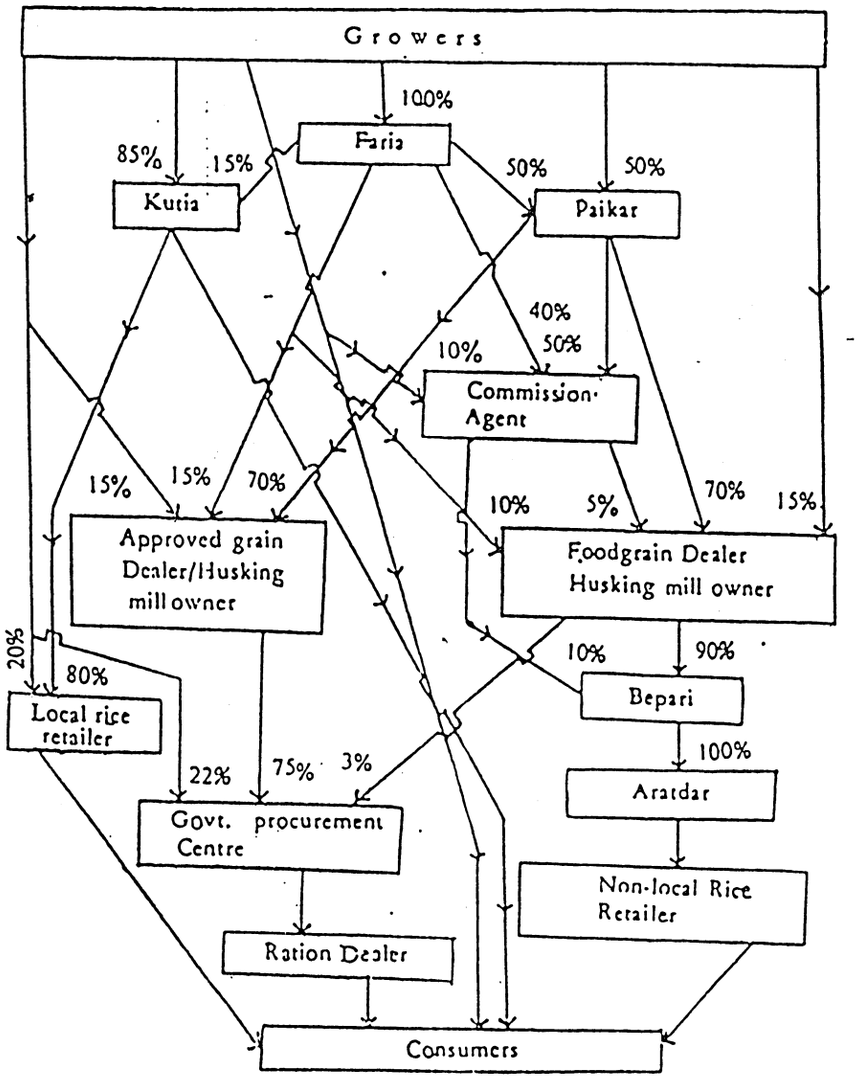


Percentage noted against each middleman shows the proportion one collects from different sources.

Common Marketing Channel of Aman Paddy/Rice at Haluaghat

FIGURE 2

Marketing of Aman Paddy : Quasem



Common Marketing Channel of Aman Paddy/Rice at Birganj

attempting to document growers' participation in markets and to quantify the gains to different groups in the market chain, problems of empirical method and subsequent analysis have cast doubt on the utility of the study. Nevertheless, its overall conclusion of competitive health was cited to me as a reason for doing no further research in the area. In particular, the following claim is made in the study's conclusions:

> 'One of the reasons for this study was the assumption that rice production in Bangladesh was being retarded because the middlemen in the marketing system were making exhorbitant profits. This study has indicated that this is not true'.
>
> (Islam et al, 1985 p.137)

This claim has gained currency. Islam et al find that 'the farmer' receives between 71% and 80% of the retail price of his product. They comment that the difference between the consumer's price and that paid to the farmer 'is among the lowest in major world rice producing and consuming nations' because of 'the intense competition that exists in Bangladesh in all phases of the grain marketing system' (p.140)

It is not possible on the basis of my preliminary reconnaissance to mount a rebuttal of this conclusion. I would wish, nevertheless, to mark the conclusion 'not yet proven' for the following reasons:-

(i) the direct questioning of traders about their overheads, costs and profits, which forms the basis for Islam et al's conclusion, is unlikely to elicit evidence of exhorbitant profit;

(ii) the widespread use, by Islam et al, of average costs, average prices and average margins is likely to obscure the range of costs and returns experienced at all levels from production to consumption; this point can be partially exemplified by the Table B-48 which shows that in some regions, during some months, producers paid 30-60% more as consumers of paddy or rice than they had been paid as producers (and the table appears to underestimate these differences by confining itself to differences within one month);

(iii) as reported in section 3 there is evidence that credit and foodgrain markets are interlocked with the result that some farmers receive less

than the village market price for their product; Islam et al base their conclusion on that price.

A third study of Bangladesh rice markets (Quasem, 1979) is less comprehensive than the other two but casts a useful light on the relation between farm size and the marketable surplus.

A new IFPRI report (Ahmed and Bernard, forthcoming) takes the analysis of the Bangladesh food system to new levels of sophistication. They construct a supply and demand model which forecasts likely prices and provides a basis for strategic management by the government. In the process of constructing the model, these writers investigate the degree of integration between prices in a number of markets and conclude that there is:

> 'a high degree of competitiveness in rice markets in the dry season, but locational and seasonal dysfunctions of trades, particularly in monsoon season, are also observed'.
>
> (Ahmed and Bernard, forthcoming, p.88)

Two cautionary points regarding this conclusion should be noted. Firstly, within their text, Ahmed and Bernard note that 'spatial price margins appear to rise proportionately faster in years of rising prices' suggesting that 'traders reap an above normal profit during such a phase of rising prices' (pp.6.2-6.4). This observation is reinforced by an analysis of correlation coefficients which indicates 'a modestly high degree of disharmony in the movement of prices in these (aman season) markets during periods of excess demand' (p.6.13). These comments tend to corroborate observations made by others, notably Ravallion (1987), and Osmani (forthcoming), that there is evidence of storage behaviour which tends to exacerbate price fluctuations. Secondly, Ahmed and Bernard are strangely incurious about the data upon which their analysis rests. The analysis of market integration examines the Agricultural Marketing Directorate's price data collected in markets in or near to district headquarters towns. These are either urban wholesale markets or rural assembly markets. For that reason they reflect conditions some way 'up' the chain of marketing intermediaries. In practice the Marketing Directorate's officials collect the sale price offered by a sample of wholesalers and commission agents. As many as four transactions separate this price from the price paid to the producer: transactions involving the small trader (faria) who buys from the grower, the itinerant merchant (bepari) who purchases the paddy in the village market, the

paddy commission agent (aratdar) or wholesaler who assembles the paddy, and the mill which processes the paddy into rice (see Figure 1). We shall see in section 3 of this paper that questions remain about the circumstances and margins prevailing in those transactions. It would, therefore, be unwise to conclude, from an analysis of rice aratdari and wholesale prices, that the system as a whole is 'integrated'.

Studies of the public food distribution system include World Bank (1977, 1979) and studies completed for a high level committee on the reform of public food distribution (Ministry of Food, 1986).

3. PLAIN TALES

3.1 The tale of the Faria and his protectors

A 1967-68 survey (Farruk, 1972, p.26) suggested that 25% of paddy and rice sales by producers occurred at the homestead. Islam et al (1985, p.68) found that the rate had fallen by 1983 to 11% in February and to 23% in June, with an average of 15% throughout the year. The numerous traders who make these purchases are generally known as farias, small-volume, non-licensed, 'traditional' traders, according to Islam et al. The same authors made the striking finding that none of the thirty-one farias they interviewed reported any pre-harvest contact with farmers (ibid Table D-6) and none of the farmers they interviewed reported traders or farias as a source of credit (ibid Table A-11). Farruk notes 'there is virtually no integration between the marketing intermediaries and the rice producers, nor is there evidence to support that these two groups are linked by financing and credit arrangements' (Farruk, 1972, p.34).

I was introduced (via a chain of friends and relatives) to a faria in a rural area near Satkhira by his patrons and I interviewed him in their presence. The tale he told was as follows:

Fifteen years ago he had been a small rice retailer in a local hat (market). With the assistance of a TK2,000 loan from a money-lender he had become a faria. For 4 years, one quarter of his profits had been paid to the money-lender (amounting to approximately TK2,000 per year). Then with the sale proceeds of 0.13 acre of land and his accumulated savings, he had repaid the money-lender and set up in business on his own. At that point he had about TK4,000 in capital and he operated with the help of credit from farmers.

After 4 years operating independently, he became trusted by the big traders at Thana (district) level so they began to advance credit to him. In particular, a big commission agent (aratdar), now Union Chairman and a prominent rice mill owner, provided credit as it was needed up to a limit of about TK20,000. When he took that credit, the trader would give him a purchase price and he went round the local area collecting rice. When he was able to buy more cheaply he would make gains. During his 5-6 years with this trader his net returns were TK6-8,000 per year.

Then, some 2-3 years ago, he contacted his current patrons and through them made contact with a large rice mill owner. The mill owner makes advances on a similar basis to the previous arrangement except that a fixed commission of Taka 2-3 per boster (1½ maund) and expenses are allowed. Currently the mill owner pays TK262 per boster and the farmer is allowed TK250. Taka 10 is to cover the faria's transport and Taka 2 is his commission. But if he pays the farmer less than TK250, the difference is also his.

The 'patron' family (by whom I was introduced) provide security for the faria, the protection of their foodgrain trading license and their contact with the mill owner. In return, they receive one third of the faria's net takings. There was (not surprisingly) some hesitancy and confusion about reporting the size of this amount, but I was told that the faria had returns of TK10,000 last year, of which TK3,000 was paid to his patrons.

There was less confusion when it came to his relations with the farmers. I asked how much he was paying today to the farmers: TK246. Did the price vary between small and large farmers? Yes, the large farmers got more (Taka 1-3 per boster) because they provided more quantity. Also some farmers take an advance from him, he said, then the price will be low. Could he give an example? One month ago, a farmer took an advance of TK5,000. The faria will purchase 50 bosters from him. The advance will be repaid at a rate of TK235 per boster. The remaining paddy will be purchased at the prevailing price (TK246?).

Were there other examples where advances had been paid to farmers? Yes, and at this point a written list was produced. It consisted of the names of seventeen farmers with the size of the advance listed against each one. The advances varied from TK245 to TK16,500 with an average of TK2,400. The advances had been made 12 to 22 days previously and repayment prices of TK240 to TK248 had been agreed. Neither of these pieces of information were written down. Reasons for the variation in price were not consistently explained but seemed to include the

date at which the advance was given and the variety and expected quality of the paddy.

This year the faria had made advances to seventeen farmers, a total of TK59,000, on the basis of a credit advance from the mill owner of TK20,000. Last year he had given advances to many more farmers, a total of TK100,000 from the mill owner. (1984 was a near famine year). Why had farmers taken so much less in loans this year? At planting time, many farmers had taken loans from money-lenders for a very low price of TK190-200 per boster.

At the time of the interview (harvest), the local government procurement centre was, in principle, purchasing paddy at TK278 per boster including transport. Would the mill owner object if the faria sold to the government centre? Yes.

3.2 The tale of the itinerant merchants and sedentary middlemen

Last year, when a food crisis was feared, President Ershad made several visits to Badamtoli, the main area of old Dhaka where rice commission agents or aratdars have their shops and godowns. He told them not to hoard rice and not to elevate prices. He quoted Koranic verses to the effect that those who make undue profit will travel direct to purgatory. When rice prices are high, two aratdars told me, Food Department officials come and ask us why. We tell them and they go away. A recent detailed study of aratdars focussed on their ability to predict prices. It found that aratdars tended to over-estimate price rises and under-estimate price falls leading them to store excessively (compared to rational behaviour) when prices are high and to store too little when prices are low (Ravallion, 1985). When I asked two friends to provide a literal translation of the word aratdar they said 'hoarder'.

I talked to the owner of one of the largest rice aratdaris in Badamtoli, to the manager of a paddy aratdari in Madanganj some miles from Dhaka, and to another aratdar in Kaliganj, near Satkhira in the South West. Aratdars are intermediaries between merchants. They provide the negotiators who facilitate price discussions, the weighmen who quantify the exchange, the floor space where itinerant merchants can stay whilst transacting their deals, (sometimes) the credit which merchants or mills need to purchase foodgrain, and some level of certainty and security for (largely) oral contracts between itinerant merchants. For this they get a commission, which will vary by region and year but in 1985 was frequently reported as TK3 per maund from the buyer and the same from the seller.

In their survey, Islam et al found that the provision of finance to buyers and sellers was the second most frequent function (after provision of assistance, business premises and temporary storage) reported by aratdars (Islam et al, 1985, Table D-36). Farruk reported 'practices of financing both customers and suppliers are widespread phenomena in the business of aratdari...it is difficult to learn the rate of interest they realise from their clientele because most of them do not agree that they are money-lenders. They insist that this is part of the competition among themselves' (p.31). Farruk also noted levels of concentration - '75-80% of supplies controlled by small groups of aratdars' which could 'undercut the elements of competition' but 'no solid evidence of collusive behaviour' (p.33). Aratdars are widely perceived as the villains of high food prices. In this preliminary investigation I was not able to make any assessment of the extent to which this perception may be correct.

Of the three aratdari owners and one manager to whom I talked all except the largest provided short term credit to the itinerant traders who brought rice to them. Some also provided short term credit to mill owners. All said they mostly used the same beparis each year. The beparis owned or hired the necessary transport (lorry or boat) to bring the paddy from country to town, the smallest aratdar (with a throughput between 12,000 and 40,000 maunds per year) gave advances of TK12,000 to 40,000 to each of the thirteen or so traders working with him about a month before the harvest. Occasionally a big farmer came to him with needs for more than TK100,000. Much of this aratdar's credit, particularly in such large instances, came from the mill owners to whom he sold paddy. This aratdar noted that 1974 (the famine year) had been a particularly good year for his trade and 1981 (a bumper crop and exceptional government procurement) a bad one.

A larger aratdar in Madanganj (with a daily throughput of 50,000 maunds, in the high season, and 20,000 maunds in July-September) sent out his buyers with advances of TK50,000 but said this gave them the ability to purchase TK200,000 of paddy because they could get 75% from aratdars in the supplying market.

The largest rice aratdar to whom I talked, reputedly the largest in Badamtali market proudly told me that he gave no credit to traders but paid 90% cash on receipt of the rice in his godown. Why do others provide advances? A small aratdar with no goodwill needs to give credit but in his case the rice comes pouring in. And it certainly was the case that his aratdari was lent the appearance of a sandbagged, gun emplacement by the extensive stacks of bagged

rice extending out into the street. Others seemed able to manage with their internal godown space.

3.3 The tale of the bonded suppliers

As noted earlier, scholarly studies exhibit a striking commitment to the view that Bangladesh foodgrain markets are the epitome of competitive efficiency, in fact, the best of all possible worlds. For example, Islam et al, contains contains the following passage:

> 'This private marketing system has been developed over generations of experience, over hundreds of years. It has been a trial and error development process with the inefficient, uneconomic or unneeded phases and persons disappearing into obscurity. It is a survival process with the practices that have worked best being passed on from generation to generation with each group refining older methods and introducing new ones to meet changing conditions. Like most farmers, most individuals in the marketing chain may not know why they are following a given practice but there is always a sound reason behind each effort...their actions, although seemingly inefficient are, in the long run, the correct ones'.
>
> (Islam et al, 1985, p.67)

What then are we to make of the dadon system? It is not one of the practices described in Islam et al, though it is almost certainly of some antiquity, and is known in West Bengal as well as in parts of Bangladesh. I came across Dadoni in the char area of Noakhali. There it provides a degree of integration between two levels of the marketing systems, that of the aratdars-cum-wholesalers who assemble the paddy production and that of the small businessmen who do the leg work for them.

Dadon provides 'bonded' suppliers for the wholesalers: in return for an advance of working capital at the beginning of the harvest season a small businessman promises to supply all the paddy he can procure to the wholesaler. The terms under which the small businessman works vary from own-account transactions (with the aratdar-wholesaler taking a fixed commission) to a commission basis (with the wholesaler taking the risk and making the profit). These terms are negotiated at the beginning of the season and appear to be a function of the relative power of the two traders. The central feature of the system is that it

provides the wholesaler with a captive purchaser who can ensure a share of the market. In the words of one aratdar-wholesaler, the credit advance 'books' the small trader 'for the whole season'.

This system provides a degree of vertical integration which is not documented in existing studies of the foodgrain market. It may or may not provide opportunities for large margins to be established. Indications to this effect are recorded below. The system seems to be associated with production areas where the market is relatively undeveloped and where the small businessman collecting paddy has little capital. There is some suggestion in the case of Noakhali, that dadon acts to segment the market.

On the edge of the char area (where new land has been formed by river sedimentation in recent decades) I found two markets ten miles apart with reverse seasonality. One, which acted as the assembly market for the char area, has a peak season encompassing the major aman rice harvest from November to March. The second market had its peak season from May to October encompassing the lean months and the smaller rice harvests of aus and boro. In part this seasonality reflects the fact that only a single (aman) rice crop can be grown on the char lands. Nevertheless, when a trader in the second market was asked to explain the reverse seasonality of the two markets, he immediately said it was because the first market operated the dadon system, whereas traders in his market did not. The implication of this comment is that traders extending dadon had succeeded in capturing the char area harvest to the exclusion of traders who did not use the system. This is the view of an aratdar outside the system.

The opinion of small businessmen using dadon was also not entirely positive. Two gave me examples which suggested that when foodgrain prices were rising the aratdar-wholesaler would take some or all of the profit and when prices fell unexpectedly the small businessman would be expected to take the loss, while the aratdar-wholesaler kept his standard commission. Why don't they operate on their own account? They need the dadon advance to operate at all. Why don't they bypass the aratdar? He has the license to sell foodgrain.

This brief sketch of the dadon system has concentrated on the linkage it establishes between aratdar-wholesaler and choto-bepsay, where the scale of loans seems to fall in the range TK2,000-14,000. Dadon also operates between large traders and large farmers, with a scale of TK70,000-100,000, and between small businessmen and small farmers.

3.4 The mill owner's tale

In 1980 the Ministry of Food estimated that there were 7,317 husking mills, 189 major mills and 11 large automatic rice mills in Bangladesh (Islam et al, 1985 p.113). These mills obtain paddy and carry out parboiling, drying and husking of the paddy to obtain rice. In addition, the automatic and major rice mills may clean and dry the paddy and polish the rice, allowing separation of the bran for sale. Islam et al report severe under-utilisation of capacity in all types of mill. Husking mills were operating at 40% of capacity in their peak months and 20% in low-volume months. Large mills were operating at 65% of capacity in peak months and 30% in low-volume months (Islam et al, 1985, p.116). Most of the mills operated as traders, purchasing paddy, processing it and selling rice (ibid Table F-12). Mills also operate on a custom basis, milling paddy for a fixed fee at the request of private operators or the government. Mill owners reported their major problems, in order of priority, as disturbances in electricity supply, shortage of paddy and shortage of operating capital. While giving a clean bill of competitive health to rice markets generally, Farruk comments upon 'stagnation and technological backwardness in the large milling sectors' (Farruk, 1972, p.53).

I was the guest, for 24 hours, of the owner of a large rice mill in Dinajpur and was shown round parts of his industrial and trading concerns.

His grandfather had been a large landowner. His father had diversified into jute trading, palm oil mills and the rice business. The family still owned 'over a hundred' acres of land. In 1961, his father had rented a rice mill from the government. In 1975 that mill had been returned to the government and a large mill had been purchased. No sales of land or businesses had been required for the purchase, nor had credit been obtained. On two occasions he denied that 1974 (a famine year) had been a particularly good year for his business. On another, more informal occasion, he said that 1974 had been an exceptionally profitable year. Between 1978 and 1980, the large, modern semi-automatic mill had been purchased (from India) and constructed at a cost of TK750,000 with a bank loan at 14% interest, some 50% of which had not been paid back.

In 1984 he had started business as a rice commission agent (aratdar) in Dhaka and had obtained options on the purchase for import of 50,000 tons of rice from Thailand. (The option was not taken up when government purchases, at a higher price, were made.) He also had a number of other businesses which he ranked in order of profitability as follows:

1. Import-export (textile dyes, chemicals, edible and soap oils);

2. Construction, including a brick making business;

3. Rice milling;

4. Palm oil milling (which made a loss in 1984).

The rice milling and trading business operated in a number of different ways. He had agents and small buying centres (one of which I visited) in most of the local markets in the villages surrounding Dinajpur. Each day, each agent gives a report, either coming in person or sending someone with the report. It includes the quantity being sold in the market, the current price and a price forecast. On the basis of these reports some paddy is obtained through his buying centres. Most of his paddy, however, is brought to the mill gate by traders (farias). At the time of the interview when the aman harvest was, according to the miller, just beginning (but was to all appearances well under way), he was paying a price in the village markets of TK130-140 per maund and expecting to purchase paddy at the mill for TK140 per maund. The mill can also be asked (and, in the last resort, ordered) to mill rice at standard rates for the government.

The working capital for his rice trading comes from a bank loan, currently sanctioned to TK5 million, and from his other concerns. It is expected to peak in January at about TK10 million. He pays 16% interest on the bank loan plus 2% 'other charges' (the description of which proved elusive: insurance, godown keepers, etc). This capital is in part advanced to farias in quantities of up to TK100,000. Normally he works with the same farias.

The working capital is not repaid at any particular time but will have been repaid by the time of the next harvest. His peak sales of rice occur just prior to the next harvest.

At the time that the mill owner's purchasing centre was buying paddy at TK130 per maund, a government purchasing centre (LSD) within 50 yards was offering the procurement price of TK170 per maund. Strangely, sales were occuring at the private centre but none at the government's.

We went to find the officer in charge. He unlocked his 1,000 ton warehouse to show that it was stacked from floor to ceiling with bags of paddy. There was space but not much. That day 300 maunds of paddy had been purchased from

sixteen 'farmers' in quantities of between 17 and 20 maunds. An order from the District Procurement Committee (for the first time) limited each seller to a maximum of 20 maunds paddy and 12 maunds of rice per week, in an attempt to promote direct sales from the producer to the government. At the office of the Divisional Controller of Food we learnt that the godowns were full with 26,000 tonnes of last year's rice, paddy and wheat; only 800 tons of paddy had been procured this harvest. Movement orders were in hand but they might take a few more days. At best, this seemed to represent unfortunate planning.

Islam et al found that less than one per cent of the 2,000 producers they interviewed sold to government procurement centres (p.123). Nine of the twelve centres they studied purchased overwhelmingly from traders. Some of the reasons which limit producers' access to the higher prices offered by the government are well known; others less so.

Amongst the former are the quality standards set by the government (not more than 14% moisture content or more than 3% foreign matter), the distance most producers have to travel to get to the approximately 700 government centres, and the time spent getting payment (Weight Quality Storage Certificates issued at the centre can only be cashed at a bank). Particularly for the small producers these difficulties may be insuperable.

If traders can overcome these obstacles efficiently by dealing in larger quantities and at competitive rates, so much for the good. But according to the miller's tale this was not what was occurring. In his experience procurement was dominated by traders because they had preferential arrangements with government officials and could dominate queues should procurement take place in earnest. He observed that the TK30-40 gap between the market price and the procurement price was much larger than the TK8-10 deduction allowable for the weight of 5% excess moisture contained in the new paddy then arriving at the market.

Islam et al report that in 1983 (when the harvest was smaller than was anticipated in 1985) producers received average prices lower than the procurement prices for one month in the coastal region, for six months in the Hoar region and for three months in the North West. They conclude that the procurement centres 'are not acting as a support price program for the farmers. They serve mostly to supply support prices to the dealers who have bought supplies from the growers at distress prices' (p.152-3). Similar doubts are expressed in Quasem, 1979; Farruk, 1972, and World Bank 1979.

At the time of my visit the government was not buying rice direct from the mills. The mill owner had no doubt that the government would soon announce its intention to do so (as had happened in some previous years).

He took me to visit the District Controller of Food (a new man who greeted us warmly and mistook me for the mill owner's advisor). There the officials were concerned with two matters. A government circular had been received directing that purchases be made only from the producers of paddy or rice. But who were the producers of rice? The mill owners? And, secondly why were the mills both large and small currently working so far below their capacity? (In my visits to the mill only remnants of paddy were being processed for animal feed and the paddy godown was bare, bar one truck load delivered during my visit.) The miller's explanation was that purchasing and milling would get under way once the government announced, as they surely would, purchasing of rice at support prices direct from the mills.

Before I left, 1985 prices in Dinajpur were reported to have fallen to TK110 per maund (compared with TK278 in December 1984). No announcement of direct procurement from the mills had been made. When I returned in 1987 the mill owner assured me that direct procurement had started soon after my 1985 visit, and that it was also occuring in 1987.

Despite short term, and overall, under-utilisation of capacity, in all sizes of rice mill, the capacity is due to rise. In 1981 there were fifteen fully automatic and five semi-automatic mills in the country but loans amounting to TK10,000 million had been approved for a further fifty-seven automatic mills. In 1984, the World Bank insisted that no further loans should be made for the construction of rice mills.

4. IMPLICATIONS OF THE TALES

This paper reports a preliminary investigation of food markets in Bangladesh. It notes the conclusion of previous empirical work that Bangladesh foodgrain markets operate competitively with low price margins, and reports indications that these conclusions may be premature.

The tale of the faria and his protectors recounts the dealings and history of a small trader collecting paddy from the growers in a backward area in the South West. Transactions between this small trader and small producers are significantly influenced by the trader's ability to extend credit during the lean period when crop investments have to be made and there are pressing consumption needs. By this extension of credit up to one month before harvest the faria obtained some of his paddy at TK235-248 when the official procurement price was TK278 per boster.

The faria is able to operate on his current (small) scale because he has an advance of working funds from a mill owner and protection from a large farm family with a foodgrain license. In return for making his advance, the mill owner has ensured some element of his paddy supply at a good price (TK250 per boster compared to the official TK278). In return for the patronage extended by the large farm family the faria pays them one third of his takings.

This market structure appears to reduce the price received by the small farmer some 10-15% below the price offered by the government, with the margin being shared by the faria, the mill owner, and with the large farm extending the cover of its foodgrain trading licence (and its local influence).

The tale of itinerant merchants and sedentary middlemen provides no such quantitative conclusions. It indicates that aratdars are a frequently reported source of working funds for the itinerant beparis who bring paddy from rural assembly markets to the wholesale markets serving Dhaka. We do not know whether this constitutes a connection which significantly influences margins. We do know however that aratdars occupy a pivotal position in many markets (rural and urban, paddy and rice) and that popular wisdom, high level government actions and recent academic research all suggest that their influence on price formation may be excessive and not entirely to the good of the consumer.

The tale of the bonded suppliers examines the dadon system of advances, as studied in Noakhali, in the South East of the country. It sheds some more light

on the operations of aratdars and of small traders (fulfilling a similar function to the farias of Satkhira). It shows how a system of working fund advances, from aratdars to small traders, appears to have secured the char area aman harvest for one set of aratdars to the exclusion of another set not using the system. Questions remain about the detailed workings and maintenance of the system but it appears to have constituted a segmented market in which prices may be influenced by the aratdars who have secured the market.

This tale also highlights the slippery role which aratdars may play. Their role in principle is to provide their good offices for negotiations between two itinerant traders. The aratdars' fixed premises, and long and honest reputation are supposed to make up for the insecurity of a transaction between two traders who are always on the move and do not have the occasion to build up a relationship of trust. This role of intermediation is made plausible by the aratdars' returns being independent of the price negotiated - a commission related only to the volume of the transaction. So long as the aratdars' returns do not depend on the manipulation of prices, the traders can rely on their good offices and may leave some deals in their hands. In Noakhali (and elsewhere) both traders and (to a lesser extent) aratdars agree that aratdars do not always operate only on a commission. They frequently buy and sell on their own account, acting as wholesalers.

In Noakhali, the flexibility of the dadon arrangements and the aratdars' switching between commission and own-account transactions appears to place the small traders in a parlous position: when the price differential is large, the returns tend to go to the aratdar-wholesaler, when the differential is small or there is a loss, the aratdar reverts to the role of commission agent, and the loss is taken by the small trader. Should such role-switching become the rule, all the small traders would fail and the arrangements would fall into disrepute. While it remains only a tendency, a suspicion which the small traders harbour about a proportion of their deals, it provides the arrangements through which aratdars can realize the benefits of a segmented market.

The miller's tale, while not the most murky, is nevertheless not entirely plain. There are at least two particularly interesting questions arising from the tale: why were farias and growers selling to his procurement centre at a price 24% below that available (in principle) from a nearby government procurement centre? Why has milling capacity been expanding rapidly despite massive under-utilisation of existing capacity?

Part of the answer to the first question, which can be rephrased - why was the government purchasing centre not operating - must arise in the difficult dilemmas faced by the managers of the public food distribution system. The vagaries of climate and the erratic development of production and distribution have frequently led to years of anticipated food shortage (and rising prices) culminating in bumper harvests and large-scale foodgrain imports. At such times government storage facilities may be overflowing with imported wheat and the government's coffers denuded by the cost of that wheat. At this point high prices may plummet, but the government will be reluctant to undertake large scale purchases to support the growers' price. Such were the circumstances at the end of 1985.

These conditions provide a part of the explanation for lethargic official procurement in Dinajpur during the early part of the 1985 harvest. But the miller's tale indicated that his procurement too was lethargic. We must infer that the 24% price differential he could command did not offer ideal circumstances for his enterprise. Before energetically gathering stocks himself, he was waiting for the rock-bottom security of government purchasing direct from the mill. At the time of my visit, government directives, intended to ensure that support prices reached the producer, restrained the implementation of purchasing from the mill. Within limits set by storage and finance, the Food Department may have been attempting to ensure it purchased only from the producers of paddy, the farmers. As time passed, and prices fell further, government directives were interpreted more leniently to include the 'producers of rice', the mills. These were the circumstances the miller awaited. This is one interpretation of one tale from one place but it highlights a fruitful area for study: the interaction between traders and the implementation of policy.

The second question indicates a further intriguing area for study. If it is true that milling capacity is expanding at a time of under-utilisation then either the returns to milling must be high or the costs of expansion low, or both. Perhaps credit is very cheap for those who would invest in rice milling. Perhaps trading and milling margins are not modest after all.

These four plain tales suggest four hypotheses requiring further investigation:

(i) incentive procurement prices don't reach some small producers;

(ii) more generally, the terms and conditions of sale experienced by the producer may be linked to the producer's participation in credit (and other) markets and to the producer's economic and political standing;

(iii) particular market structures prevailing in a region are related to (a) the pattern of production (the cropping pattern) (b) the social relations of production (notably tenurial and labour relations) (c) the history and current stage of development of the market (particularly the source of traders' working funds);

(iv) there is a relationship between the local implementation of public food distribution policy and the practices of large traders, but it may be a relationship in which large traders have a decisive influence.

These hypotheses require further investigation before dynamic questions about market structure can be authoritatively discussed. It is nevertheless clear that the different market structures described have important implications for economic development.

Tales 1 and 3, the tales describing traders assembling paddy, suggest that traders with access to substantial credit and foodgrain licences may be able to accumulate a significant part of the surplus product of agriculture. The extent to which development takes place may, therefore, depend on how they use what they are able to accumulate.

The millers' tale indicates that it is not safe to predict the consequences of government price support until more is known about the ways in which it is implemented and how the marketing system responds.

It is no doubt generally true that the trading 'practices which have worked best [have been] passed on from generation to generation'. But those practices which work best for the traders are not necesarily those most conducive to economic development.

It is, in addition, clear that these tales could have important implications for the efficacy of the food-price policies which have been introduced, with aid-donor encouragement, in recent years.

In place of input subsidies, the major donor agencies have argued for the maintenance of output price support, as noted in Section 2.1 of this paper ('incentive' prices). If, as this paper suggests, the prices received by the

producer are not always directly influenced by the government procurement price, then the benefits of incentive prices may be unevenly distributed. If, as seems plausible, it is primarily the big producers and the traders who are able to obtain government prices, then the introduction of output price support in place of input subsidy may have reduced the returns to small peasant cultivation.

There are also implications for food security policies. Since 1975, the emphasis of planning for food security has been shifted from public food distribution and the regulation of the foodgrain trade to a greater reliance on the operation of private foodgrain markets. Latterly, aid donors have encouraged the government to rely primarily on policies which attempt to stabilize urban retail foodgrain prices. If, as this paper and other writers suggest, urban and rural markets are not always competitive and integrated, but may instead be segmented, then the new policies may not achieve a greater degree of food security.

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