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**A REVIEW OF THE RAY HOOKER REPORT
AND
AN OUTLINE FOR DETERMINING PROCUREMENT
PRICE OF FOODGRAINS IN BANGLADESH**

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A. RAY HOOKER REPORT: COMMENTS

According to the PL-480 Title-III Agreement: (1) a procurement program is to be maintained for establishing effective floor prices at a level that would provide farmers incentives to grow food, particularly high yielding varieties of food grains and (2) Public Foodgrain Distribution (PFD) should be reoriented through open market sales program to moderate foodgrain price instability. The Open Market Sale (OMS) program should act as a release mechanism for the food reserve, ensure that reasonably priced foodgrains are available throughout Bangladesh and help to moderate consumer price increases. The Agreement stipulates that the ceiling or trigger price which initiates OMS sales is to be set at approximately 15 percent above the procurement price in non-statutory rationing areas and 20 percent in statutory rationing (SR) areas (primarily urban). If despite OMS releases the market prices continue to rise, and that rise is 10 percent (or 20 percent) above the trigger price, the OMS price increases by 5 percent (or 10 percent) or one half the percentage change in the market price increase. As the price comes down, similar adjustments in the OMS price are to be made in a downward direction until the market price falls below the trigger initial OMS price at which point OMS sales are stopped.

The Report of Ray Hooker has reviewed the foodgrain prices in Bangladesh for 1987 in light of the aforesaid requirements on Title-III Agreement. In April 1987 the BDG raised the procurement prices for rice and wheat by a large percentage, i.e., 16.2 percent and 11.1 percent, respectively, and the initial OMS prices for rice and wheat by only 1.6 percent and 2.8/2.9 percent respectively. The BDG's

rationale was that (1) the large increase in procurement prices represented an extra-ordinary measure meant to procure some badly needed supplies of boro rice and wheat, in a time of unusually high domestic grain prices and low stocks, (2) equally large increases in OMS and ration prices would destabilize prices, (3) some of the PFDS price ratios specified in the 1987 agreement were no longer appropriate, and (4) due to very low import prices, the total foodgrain subsidy of PFDS would not increase if the initial OMS prices were decreased relative to procurement prices. The BDG officials had suggested that the ratio between initial OMS prices and procurement prices be reduced from 115 percent to 110 percent in non-SR areas and from 120 percent to 115 percent in SR areas, with corresponding reductions in the ration prices. In this connection it has been argued that the ration dealer margin is higher than 4.35 percent of the initial OMS price implied in the 1987 agreement. Consequently, the level at which retail prices can be stabilized is higher than was intended. By reducing the initial OMS price from the required 115 percent of the procurement price (120 percent in SR areas), the stabilization range as intended could be achieved. This is justified, the BDG has mentioned, by the fact the PFDS unit distribution costs have been falling.

The report of Ray Hooker considered four alternative solutions in the context of 1987, namely, (1) no change from the provisions of the agreement; (ii) narrowing the band as proposed by BDG; (iii) linking initial OMS price with shadow procurement price for CY1987 only; and

(iv) combining (i) and (iii). The report recommended implementation of alternative (iii) for CY1987 and reversion to agreement provisions from CY1988 onward.

The report also went into available estimates of cost of production for rice and wheat and raised the question whether the procurement for wheat could be increased to about 85 percent of that of rice as against the 60 percent set by the 1987 agreement.

Post-Hooker Report Changes

Before commenting on the issues raised in the Hooker Report, it is considered necessary to reflect on the public pricing behavior in the PFDS after the Hooker report. This is portrayed in the price changes presented in Table 1 (for rice) and Table 2 (for wheat). A number of conclusions can easily be gleaned from these two tables.

First, the 15 percent to 20 percent difference between the procurement and OMS price that the PL-480 agreement stipulated was abandoned in favor of a lower band fluctuating between no change in April-July 1987 and only 0.65 percent in August-December 1987 to 10.2 percent in July-October 1989 for rice. The difference between procurement and initial OMS price of wheat varied from 3.5 percent in April-July 1987 to 10 percent in July-November 1989. BDG's position appears to have won the debate both in rice and wheat.

Second, ration price appears to have followed to OMS price reasonably well. In fact, ration price as a proportion of OMS price has slightly moved up from 95 to 98 percent in rice and 90 to 97

Table 1. Procurement Price, Initial OMS Price and Ration Price for Coarse Rice (1987-1989)

Period	Procurement Price TK/Md	Initial OMS Price TK/Md	Spread Between OMS and Procurement Price in Percent	Ration Price TK/Md	Ration Price as Percent of OMS Price
Pre-Apr 87	265	305	15.09	289	95
Apr 87-Jul 87	308	305	-1	289	95
Aug 87-Dec 87	308	310	0.65	295	95
Jan 88-May 88	308	334	8.44	319	96
Jun 88-Oct 88	308	334	8.44	325	97
Nov 88-Jun 89	323	334	3.41	325	97
Jul 89-Oct 89	323	356	10.22	350	98
Nov	338	356	5.33	350	98

Source: USAID

Table 2. Procurement Price, Initial OMS Price and Ration Price of Wheat (1987-1989)

Period	Procurement Price TK/Md	Initial OMS Price TK/Md	Spread Between OMS and Procurement Price in Percent	Ration Price TK/Md	Ration Price as Percent of OMS Price
Pre-Apr 87	190	207	8.95	186	89.9
Apr 87-Jul 87	200	207	3.5	186	89.9
Aug 87-Dec 87	200	213	6.5	198	93.0
Jan 88-May 88	200	219	9.5	204	93.2
Jun 88-Feb 89	200	219	9.5	211	96.3
Mar 89-Jun 89	210	220	4.8	211	95.9
Jul 89-Nov 89	210	231	10.0	211	91.3

Source: USAID

percent in the case of wheat.

Third, procurement price generally did not change regularly; it remained at a static level between April 1987 through February 1989. Because all other prices moved upward, this must imply a decline in the real procurement price. With these three observations on the practice of public foodgrain pricing, the Hooker Report and the issues it raised can now be reviewed in proper perspective.

Some Critical Observations on Issues in Hooker Report

Hooker Report examined primarily the mechanism without underscoring the objectives of that mechanism in pricing of public foodgrains (i.e., the procurement price, OMS price and ration price). The relevant PL-480 Agreement stipulated the specific mechanism to ensure a number of objectives:

- (1) to stabilize prices within a price band (i.e., 15 percent for non-SR area and 20 percent in SR area) that provides security to consumers and incentives to producers;
- (2) to reduce subsidy on food account; and
- (3) to ensure that public distribution does not reduce private trade.

Any change in mechanism without looking at the effects of such changes on the objectives is a reflection of equivocation on the objectives. When the Food Ministry came up with the demand for reducing the price-band, the consequence of such a move on the objectives were not taken into account; at least, no written report was available to us to indicate otherwise. In order to understand the likely impact of the reduction of price band on the objectives, one

has to understand the logic of the price stabilization mechanism. Two important aspects of the mechanism, namely, (a) the basis and implication of change of the price band, and (b) the basis of determining procurement price, are particularly critical in this regard. Because OMS and ration prices are derived from the procurement price, the determination of procurement price plays a central role in the mechanism. We shall examine the first aspect in this section and take up the procurement price determination in a separate section.

Basis and Implication of Price Band

Why a 15 percent band (i.e., OMS price 15 percent above procurement price) in non-SR area and a 20 percent band in SR area? Why not 10 percent or 25 percent? Why differences between SR and non-SR areas? The answers to these questions have close bearings on the objectives we mentioned earlier.

Suppose we adopt a price-band of 10 percent instead of 15 percent and make it effective, then what will happen to the objective? (By effectiveness, we mean that the necessary quantity of foodgrains will be sold in the market to keep market prices at the upper bound level and necessary quantities of foodgrains will be procured from growers and markets so that market prices do not fall below procurement price.) If this effectiveness is ensured, then the reduction in the band from 15 to 10 percent will (a) reduce the scope of private trade, (b) increase the extent of subsidy and (c) will reduce the food cost

of consumers who buy grains during OMS sale season. Private trade will be reduced because private traders who make a profit by buying in the low-price season (or low price location) and selling foodgrains in the high-price season (or high price location), will find their rate of profit reduced from 15 to 10 percent. Only those traders who are extremely efficient and can still remain in business with 10 percent profit or have no other opportunities (e.g., some farmers) will stay in the business. The reason for the increase in subsidy cost is obvious. Assuming no change in procurement cost (local or foreign), selling at lower prices will clearly increase cost of subsidy. And foodgrain subsidy is not small in Bangladesh. Except 1985/87, when pricing and import practices were improved considerably deficit on food account ranged from TK 3.3 to 6.7 billion per year during 1981-88 (See World Bank Report on public expenditure, 1989). The total subsidy under monetized channels is estimated to be TK 4.8 billion in 1989/90 (See Appendix Table 1). This huge subsidy is one of the major causes of shortfall in resources for financing development projects of the government. Of course, consumers theoretically benefit from the lower price but the cost is also high. A decision on the price band therefore must consider this cost and benefit. Because of this cost, the stabilization mechanism adjudged that consumers are protected only against abnormal price rises, i.e., the price band should be set at a level which allows for normal profit to traders and protects consumers against abnormal price rises.

Coming back to the question of effectiveness of the price-band

policy, let us examine what happens if the band is not effective. In fact, this is the usual case. When the market price remains much higher than the OMS price, the latter is ineffective; then, the gap between the two prices increases the potential of rent seeking activities, particularly if foodgrain stock is low and/or the mechanism of release from public stock is regulated. Similarly, when the market price is lower than procurement price in harvest season and government procurement is constrained by storage capacity, budgetary reasons, or regulated purchase, the potential scope of rent seeking activities expands. Consumers and producers do not get the proclaimed benefits and public subsidy does not decline. A reduction in price band increases the chances of ineffectiveness, unless government is simultaneously willing and able to increase supply (implying larger stock) and subsidy cost in the budget.

In this connection, it is relevant to recall the mechanism of the slab system, i.e. the provision of the OMS pricing rules that, if the market prices continue to rise despite OMS releases and that rise is 10 percent (or 20 percent) above the trigger price, the OMS price is increased by 5 percent (or 10 percent) or one-half the percentage increase in the market price. Why was this provision stipulated instead of increasing the OMS supplies such that the market price was not allowed to rise? This provision was meant as a safeguard against inadequate stock levels and the resulting unnecessary increase in subsidy cost. If stock management is based on proper estimates of price-supply relations and the OMS are conducted in an unrestricted

manner, the need for this slab system may not remain. This is why maintaining an optimal stock is critical for this type of price stabilization. The Food Policy project of IFPRI is about to complete the estimation of optimal stock for Bangladesh.

The basis and implication of changes in price-band and the implication of its ineffectiveness should be clear by now. The reason for the difference in price-band in SR and non-SR areas can now be explained. SR area represents major urban centers. The cost of marketing of foodgrains from farmers in rural areas to these major urban centers is generally higher than those from rural areas to other rural towns and markets (non-SR areas). In order to allow this margin to traders, a 5 percent difference between SR and non-SR area was maintained. Again, the concern for traders margin in the price-band formulation is reflected in this provision.

It ought to be clear from these logics that the price-band was neither based on the criterion of cost per unit of foodgrain distribution through the PFDS nor was it formulated with consideration for dealers' margin in the rationing system, the main basis of the argument forwarded by the Food Ministry for reducing the price band. These costs and dealers' margins have, however, implications for subsidy. Any improvements on these counts will independently reduce subsidy which is a declared objective of the government. Narrowing the price band on the grounds of improvement in efficiency of the PFDS is equivalent to cancelling the impact of such improvement on the overall objectives outlined earlier.

The specific bands of 15 and 20 percent were based on the existing information on traders' normal margin in foodgrain trading in Bangladesh as well as the normal stock levels to support ceiling price and budgetary capacity of the government. A reduction of that band without regard to these factors are likely to make the system ineffective. The IFPRI Project is launching a marketing study which, when completed, will be able to shed further light on the extent of normal marketing margin. But even if that study finds a lower normal marketing margin, it may not be a basis for recommending a reduction of price band if reduction in subsidy were to be held high in government priority. However, such a finding could be a basis for reduction in price band on the grounds that such a change will still allow normal profit to traders.

The above discussion also brings out the importance of OMS and procurement mechanisms in increasing the effectiveness of price stabilization procedures. Currently, OMS operation is conducted through dealers and official allocations to dealers. This is a regulated procedure that increases the scope of potential rent seeking. The feasibility of real open market sale by auction or by open tender may perhaps be explored to correct this regulated procedure. Similarly, large scale purchase from market by tender during good harvest season may be experimented in order to supplement scattered and small scale purchases from farmers.

B. BASIS AND METHOD OF DETERMINING PROCUREMENT PRICE

The literature on public pricing of foodgrains abounds with controversies on the appropriate criteria for fixing prices of grains for public procurement (See Chapter 4 in the book, Agricultural Price Policies for Developing Countries, edited by John Meilor and Raisuddin Ahmed, Johns Hopkins, 1989). In literature, most often the criteria are discussed from an academic angle. Most such criteria may pose serious problems in practical application. However, three criteria (a) cost of production, (b) domestic market price, and (c) international price deserve a particular consideration in practical formulation of policies.

Cost of production is the most popular criterion in public debate. But, in practice, it can hardly be followed consistently in public price determination by any country. There are conceptual and practical difficulties in doing so. In the context of Bangladesh, cost of production data are neither available in time nor are believed to be feasible criteria for the purpose of stabilization. For an operationally feasible price stabilization program that intends to stabilize domestic prices without undue destabilization of the budget, the procurement price will have to be consistent with market price. Therefore, two criteria, (a) domestic market price and (b) international market price, are considered appropriate for the stabilization program and determination of procurement price under that program in Bangladesh. We first show the case of international price.

a. Determination of Procurement Price from World Price

The rationale of using world price as a basis for domestic pricing is well known; it enhances efficiency and avoids unusual distortion in prices. No useful purpose will be served by dealing extensively on these rationales here. However, there are serious problems in using world price as a guide due to (a) excessive fluctuation in world prices, (b) difficulty in finding comparability in quality of grain (particularly in rice) in the domestic and world markets, and (c) problems of which exchange rate to use in valuation. For Bangladesh, the following procedure is suggested to overcome these problems:

- a. A three-year moving average price is suggested as a means to overcome the problem of fluctuation in world prices.
- b. The coarse variety of rice may be used as a grade comparable to the Thai 25 percent broken grade in the Bangkok market.
- c. The official exchange rate may be used for converting dollar price into takas. There is currently very little gap in the official and open market rates.

On the basis of these assumptions, the derivation of procurement price from the world price of rice is shown in Table 3.

The columns in the table are constructed as follows:

1. Column 2 is derived from CIF price shown in the Appendix Table 2, by estimating the three-year moving averages.
2. Column 3 is derived from column 2 by multiplying column 2 with 1.15. It means a margin of 15 percent for the import trade up to wholesale level in the domestic market.
3. The estimated procurement price in column 4 is derived from column 3, by multiply column 3 by a factor of 0.925. It means that procurement price being the harvest season price should be lower than the annual average price and the band of 7.5 percent above (ceiling price) and 7.5 percent below

the annual average price (procurement price) is considered applicable that is equivalent to the 15 percent band we talked about earlier. Column 5 is simply the actual prices taken from public statistics. However, in some years there were more than one price (due to change of price in that year), and we averaged these prices. Column 6 shows how much below (negative sign) or above (positive sign) were the actual procurement prices compared to the estimated procurement prices.

It is clear from Table 3 that in the early eighties actual procurement prices were 25 to 33 percent below the estimated procurement price based on world prices of rice. But in recent years (85/86 through 87/88), actual procurement prices are roughly comparable to estimated prices derived from world prices. Thus, there will be less complexities now in fixation of procurement price of rice on the basis of world price criterion than would have been the case in the past.

b. Determination of Procurement Price on the Basis of Domestic Market Price

The most important positive aspect of using domestic market price as a criterion for fixing procurement price is the operational simplicity it affords to any price stabilization program. If the procurement price is far off from market price, it causes either instability of government budget or ineffectiveness of the procurement program. However, because procurement price has to be fixed in advance of the harvest season, it involves a forecasting of prices in the upcoming year or season. This forecasting requires a formal framework for determination of a likely market price scenario. This

Table 3

Derived Procurement Price from World Price Rice

Year	Moving Average CIF Price TK/ton ^{1/}	Import Parity Price at Wholesale border TK/ton ^{2/}	Estimated Procurement Price ^{3/} TK/ton	Actual Procurement Price TK/ton ^{4/}	Difference between Column 4 and 5 in percent ^{5/}
1	2	3	4	5	6
1980/81	6,584	7,572	7,004	4,724	-32.7
1981/82	6,941	7,982	7,383	5,023	-32.0
1982/83	6,842	7,868	7,278	5,542	-23.9
1983/84	6,205	7,136	6,601	6,006	-9.0
1984/85	6,433	7,398	6,843	6,716	-1.9
1985/86	6,600	7,590	7,021	7,071	0.7
1986/87	7,492	8,616	7,970	7,508	-5.8
1987/88	7,812	8,984	8,310	8,681	4.5

Note:

- ^{1/} The moving average (3-year) CIF Price is calculated from data presented in Appendix Table 2.
- ^{2/} Import parity price at wholesale border is the price that an imported of rice would have to get in order to be able to import and sell at wholesale market. A 15 percent margin on CIF price is considered to be the normal rate for such trade.
- ^{3/} Estimated procurement price is derived by assuming that procurement is the harvest season price which should be 7.5 percent lower than border price at wholesale level (i.e. a price band of 15 percent)
- ^{4/} Actual procurement price is the average in a year of price changes occurred several times in that year.
- ^{5/} The difference is calculated as follows:

$$\frac{\text{Column 5} - \text{Column 4}}{\text{Column 4}} \times 100$$

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is a difficult task. But IFPRI's research program has developed such a framework (Dr. Shahabuddin's consultancy report) for this purpose.

Except the part that involves forecasting of the price, the procedure of deriving procurement price from market price is relatively simple. It involves the following steps:

1. Make an assessment of the likely price level, say, for the year 1990-91, in May-June 1990. The framework is used in this task.
2. Select a target price by comparing the expected price (determined in Step 1) with the normal price, i.e., the trend price. If the expected price is lower than the normal price, then the target price is about 96 percent of the normal price. If the expected price is higher than the normal price, then the target price is equal to normal price multiplied by a factor of 1.04.
3. From the target price derive the procurement price by multiplying it by a factor of 0.925 if a price band of 15 percent (i.e., OMS price is 15 percent higher than procurement price) is used. In case of a different price band, use a relevant factor (i.e., half of the price band).

Both the approaches -- the world price and the domestic price-- offer reasonable and operationally feasible estimates of procurement price. Any one of them could be used as a guide for fixing procurement price. Perhaps both of the approaches can be employed so that there is a flexibility in choosing a figure from the two. Such a

flexibility is occasionally convenient for accommodating any extraneous considerations.

It is planned that the training program which is being firmed up under the Bangladesh Food Policy project will include these procedures of determining procurement and OMS prices. The trainees will include officers of the PFMU so that they can learn these techniques for application when they return to their official positions.

Finally, we would like to discuss the point raised in the Hooker Report about the ratio of procurement price of rice and wheat. At the time when Ray Hooker examined these prices, the ratio between procurement prices of wheat to rice was about 0.75. This was considered high. The appropriate ratio is considered to be about 0.65 as in the world market. (The ratio recommended in the PL-480 Agreement was 0.60.) Recent procurement prices of rice and wheat, however, indicate that the ratio has come down. For example, in 1989, the procurement price of rice was TK323 and of wheat TK210 (see Tables 1 and 2). The ratio of the two prices (wheat to rice) is 0.65.

We would like to end this report with an explicit disclaimer in order to dispel any potential scope of misreading or of a bias in this review. We tried to objectively analyze the policy objectives and the instruments designed to achieve those objectives in the PL-480 Agreement. In this examination, we attempted to bring out the implications of changing the instruments. If, on the other hand, the government has reasons to downgrade one objective in favor of another

deviating from those set in the Agreement, it has the prerogative to do so. And in doing so, it may decide to sell foodgrains even when market prices are lower than normal level. The Government may have political compulsions to increase the food subsidy. These rightful considerations were not within the purview of our analysis.

Appendix Table 1

Rates of Cash Food Subsidy Under Monetized Channels, FY90

Channel ^{a/}	Quantity (1000 tons)	Subsidy Rate		Total Subsidy TK Million	Share of Total subsidy-%
		Rice	Wheat		
SR, OP	559	18.1	26.4	1,188	24.7
RR	395	39.2	45.1	1,704	35.5
RC	152	--	26.3	324	6.7
EP	126	86.3	84.1	1,079	22.4
FM, LE, OMS	<u>270</u>	<u>16.3</u>	<u>23.6</u>	<u>514</u>	<u>10.7</u>
Total	<u>1,502</u>	<u>40.7</u>	<u>30.2</u>	<u>4,809</u>	<u>100.0</u>

Source: World Bank, Managing the Adjustment Process: An Approval,
March 16, 1990.

Note: ^{a/} RR = Rural Rationing
RC = Rural Crushers/Millery
SR = Statutory Rationing
OP = Other Priorities
FM = Flour Mills
LE = Large Industrial Employers
OMS = Open Market Sale