

**Bangladesh Economists' Forum**

**Food Policy, Rice Exports and  
Full Information**

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## **Food Policy, Rice Exports and Full Information<sup>1</sup>**

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**Abstract:** This paper argues Bangladesh can become a food exporter in the future. Past policy advice by donors had Bangladesh focus on 'food security' rather than 'food self-sufficiency' ignoring Bangladesh's production potential. A substantial increase in rice output and export surplus can be achieved through filling 'yield gap' (between actual and potential), removing government intervention, expanding HYV varieties, providing support for hybrid rice, extending credit and providing education and training to farmers and strengthening extension services. Concurrent measures will have to be taken to sustain economic growth and arrest the current loss of agricultural land and population programs will have to be continued.

1. The long run economic potential of Bangladesh cannot be realized unless the people feel confident about the first item on most people's budget---food. With a population of about 150 million and a projected population of about 220 million by 2060, there is good reason to be concerned. However, most people also do not seem to realize the incredible strides that Bangladesh has already made in expanding its food supply and how much more can be achieved with systematic effort. This note seeks to lay out briefly the reasons for cautious optimism. It begins by dealing with the production potential of local growth. If this is seen to be adequate, and I will argue that it is, then the rest is up to us to achieve. For the sake of easy readability I will refer to rice as the only 'food' in question---a simplification that does not affect the essence of the question. Next I discuss the high price of rice that alarmed everyone in the spring of 2008 and argue that this was a short run problem, caused by reliance upon imports from India and a sudden change of Indian policy. This enables me to outline what might be done if a future shortage is feared---provide full and credible information. Finally, a few words on food security vs rice security.

2. Policy advice has moved Bangladesh from the mantra of 'food self-sufficiency'---a phrase that has dirigisme overtones---into the market friendly 'food security', which allows income to be the policy variable and assumes that maximizing GDP will provide the requisite income to everyone. [Nick Cullather has pointed out that the google Ngrams of the two mantra phrases are very revealing]. It will be clear that I oppose this trend, not because I oppose the market, but because such donor based mantras ignore local realities; in this case, these realities are the production potential of Bangladesh and its comparative advantage]. I have deliberately chosen large and simple numbers and calculations because in questions of this kind one wants to convince ones readers by making them think things through. So our numbers will be adequate if they indicate orders of magnitude and our reasoning will suffice if the reader can confirm all steps. While the article will talk directly only about food, it is taken for granted that other complementary measures that accompany economic growth, such as infrastructure and education are all taking place concurrently.

3. Bangladesh has gone from 9 million tons in 1971 to over 30 million tons by 2010 and is now practically self-sufficient. It could have tried for full sufficiency but the advising powers felt that it was better to rely on Indian rice for the balance of our needs---on this more later. If the population increases to 220 million, what has to be the rice production to reassure ourselves of adequate staples? Growing populations have a pyramidal age structure since there are always many more children than youth and more youth than adults; we can think of the additional 70 million as consisting of 15 million adults, 20 million youth and 35 million children. If youth

consume 2/3 rds of an adult and children consume 1/3<sup>rd</sup> of an adult, we have to prepare for 40 million more adults by 2060. If we take this to be 25% of the current output, the goal is to produce 37 million tons in about 5 years. How is this to be done?

- I. First, the yield gap between demonstration farms and farmers is 30%. This is primarily due to input supply irregularity and limited agro extension. It can be made up simply by exercising more care and extension. This is a chance to employ those educated youth who are unemployed. If two workers are allotted to each village for extension, we have productive jobs for some 140,000 individuals. Using these domestic resources alone, Bangladesh can ensure a move to 39 million tons by 2015.
  - II. Remove GoB management, especially of inputs, and go to a free market for inputs. Earlier experience has shown that agricultural input markets work better than GoB allocations. While price may exceed that set by the GoB, the supply is regular and reliable. It is this reliability that is vital to ensure output, since the appropriate use of inputs contributes about 75% of the yield of HYV varieties. This will ensure the gains of step 1.
  - III. Expand the HYV varieties with local potential, by encouraging the second generation of HYV varieties developed by BIRRI (such as BR-28, BR-43). This has been done to a fair extent since 2008, but needs continued encouragement.
  - IV. As about 1/3<sup>rd</sup> of Bangladesh area is by the coast, new coastal varieties from BIRRI need rapid expansion in areas such as Shoron Khola. Training, demonstration and local seed production are sufficient for this. When adequately utilized the output gains can be in the order of 20%, or another 7 million tons.
  - V. Agriculture Credit is not being adequately financed. The procedures are complex and discouraging. No private institutions exist for this purpose, which is strange in view of the prevalence of microfinance and support for SME's. By focusing upon the very poor, MFI's have hitherto been missing the small farmer--- who can be especially productive, but who is excluded from the usual MFI loans by having some assets.
  - VI. Hybrid technology needs package support; for reasons that are unclear, the Government has been reluctant to introduce such comprehensive packages. They will provide 20% more output than HYV, let us just say it is 5 million tons. The only new input needed is education and the building of domestic capacity, so no foreign exchange is involved. In the short run import quality has to be assured, since the current imports of poor quality seed are biasing the market against innovation.
4. Aggregating the totals, we find output to be over 35 million tons in a couple of years, depending on the vigor with which the extension program is pursued, and Bangladesh can become a rice exporter by 2015, after meeting all its domestic needs. Bangladesh has met its goal. If all the assumed output gains materialize the potential rice available for export will be about 10 million tons. The foreign exchange it can earn is about 10m x current world price of cheap export rice. When the potential is realized, even if we assume it stops at less than the numbers given, because of declining fertility and waterlogging etc, so that an exportable amount of 20 million tons is all that is achieved, then the export earning can be calculated with an export price of approximately Tk60. The potential loss to Bangladesh is about Tk1,200,000 million per annum.
5. What is lacking? Only the vision of what can be done and the will to execute it! What is most pleasing about this prospect is the realization that the primary 'new' input is agricultural

extension---it is the advice and supervision of trained agronomists, which is a domestic resource that Bangladesh already has plenty of, and can readily generate more.

6. Why is rice export so desirable? Food prices have been increasing recently and world trends suggest further increases because of population growth, coupled with rising energy price. Bangladesh is blessed with fertile land. What economists call comparative advantage, doing that which we are best suited to do, should alone have suggested this option to Bangladesh. Instead of draining foreign exchange, such a policy move will make rice a foreign exchange earner. As the world price increases, Bangladesh farmers will face an unlimited world market to sell their rice to; this may occasion an initial price jolt, so the Gob has to be careful about such teething problems. But thereafter, the high prices will ensure maximum effort and productivity on rice farms. A collateral benefit is the changed income distribution---farmers will earn more and their lands will consequently become more valuable. As farmlands rise in price, people will think twice before converting 'dhani land' to other uses; as rural incomes rise, the need to migrate to cities will diminish and the cities will become more livable. If rice becomes scarce domestically, the domestic price will rise and automatically make export less profitable. The GoB can smooth this process by holding stocks of rice, much as it does now, but with a somewhat different goal in mind. Both food security and foreign exchange are gained through this change of direction.

7. Let us turn to the background of the crisis of January-March of 2008. From 1998 onwards Bangladesh has been practically self- sufficient in food grains. In 1999 Bangladesh attained self- sufficiency in circumstances which need elucidation. The prices of inputs and outputs were similar across neighbors---so smuggling was no attraction. Input management was effective in the forecast of requirements, government monitoring of the private sector was strong and timely. Private import of inputs was liberalized and privately done, but directed by GoB as needed. Free but regulated markets worked. In 2009, TSP and MOP prices rocketed from 13 to 90. GoB needs to mediate such price shocks in the short run. In the medium term, such increases, if they meet world prices, are to be permitted to work their way through the market system.

8. The quantitative importance of the subsidies can be understood if we total the subsidies for fertilizers and for grains over the 2007 and 2008. This total comes to about 2-3% of GDP. If the GoB only accepts the responsibility of mediating price shocks and not bearing the burden of removing all shocks, the people will rapidly get more used to the risks of a market economy, and develop both habits and institutions to meet the new circumstances. It is very important to note that the major fear, the unavailability of food in the aggregate, has been removed in the paras above. When price shocks come, this is now a transfer between the rural and urban populations. Since at least 60% of Bangladesh live dependent on their land, why is it bad that their incomes increase? Since I am suggesting that Bangladesh rice prices become comparable to the world price, this point is important for policy purposes. Suppose a significant increase in rice price occurs. All growers will benefit unless markets get monopolized, so the free market in rice will need to be accompanied by some measures, such as loans at minimal interest to all entrants in the rice wholesale market. If monopoly profits are being earned, this will attract many new entrants, and all the GoB has to do is to ensure that such entry is painless and secure. As more wholesalers, or arothdars, enter, the price earned by the grower must rise.

9. When rice becomes profitable, agricultural land values will rise. This will have two desirable effects. First, those urban households who have treated their village homes with benign neglect will now start looking after their ancestral property more carefully; perhaps they will even visit the village regularly. Secondly, the higher rice price will make people think twice before they start building new homesteads on profitable agricultural land. Soon there will be an automatic pressure to build upwards to save land and to cluster to gain amenities. The landlords

gain through higher land values, the farmers gain from higher prices and the peasants gain from increased wages; overall the impact on the rural areas is positive.

10. In urban areas the impact is more nuanced. As there is a significant, but unknown, number who obtain their rice from the village home we should ignore this group from the analysis. As the data is not available, let us say that it refers to only 10 percent of the urban population. Of the remaining 90 per cent of the urbanites, another 10 per cent are too rich to care. When the price of rice goes up, the wages of workers will soon follow suit. There will be some hardship until wages catch up, and this may take several months. So there is transitional pain for say 50 per cent of city dwellers. More carefully stated, this applies only to those in the cities such as Dhaka and Chittagong, or to the larger mofussil towns. Those in small mofussil towns are still sufficiently close their villages to get rice directly. So those who will have to bear the brunt of higher rice prices are basically the fixed income middle class. A crude estimate of their numbers comes from noting that the urban population of Bangladesh is about 30 per cent of the total and the middle class is no more than 20 per cent of the urban population, making the affected group about 6 per cent of the total population of Bangladesh. However, this group comprises a very vocal and articulate political class. Nonetheless, one has to ask if beneficial economic measures should be held up because of the hardship of 6 per cent.

11. Even as it attained self-sufficiency in rice production in the 1990's, Bangladesh was gradually pushed into a form of marginal dependency. International organizations pressured Bangladesh into accepting the presumed comparative advantage of India and importing a small part of the total yearly supply, primarily from India. Suddenly, India decided in 2008 that it no longer wanted to be part of this system and raised its export price to a prohibitive level. Till this point Bangladesh prices followed world prices, which makes economic sense if Bangladesh wants to participate in world trade. Thailand followed by raising its export price soon after. India's decision was motivated by an increase of less than 10 per cent in its rice price. With India's sudden decision, market integration was disrupted and buyers started acting out of fear. The clear message from the spring of 2008 was that no Government will risk the wrath of domestic consumers and allow the domestic price to rise to politically unpalatable levels. What makes this episode especially significant is that the decision to halt rice export was made on political grounds, so there can be no dependable economic calculation that international buyers of rice can rely on.

12. If the people were given accurate and credible figures, very little 'panic' may have happened. But in the confusion caused by multiple statements of the Care Taker Government (CTG), ordinary people hoarded, say, an extra month's supply. Aggregated over millions of households, this created a burden too great for the market to bear without high prices. The CTG made a partial response through opening stalls known popularly as 'BANGLADESHR markets'. If 20 million families keep an extra 100 lbs. each, or 1/20 ton, then the total withheld comes to 1,000,000 tons---enough to make it look like a real scarcity. The CTG simply kept reiterating that there was no need to worry; what it should have done instead is to provide a synopsis of Bangladesh food policy, an analysis of price movements and a clear accounting of the reasons why supply was sufficient. Equally importantly, it should have provided all this information in publicly verifiable form. In the absence of such publicly verifiable evidence, many households engaged in 'precautionary' behavior. The problem with households acting as holders of buffer stocks is that households act not so much out of greed as out of fear. While a profit maximizing arothdars can be persuaded easily to dispose stocks when faced with accurate figures of supply, a household will continue to hoard out of fear. The role of the policymaker is to build up its credibility in good times so that the people will believe its pronouncements and not let a rumor turn into a panic. The amounts that can be held in homes far exceed what can be stored

by arothdars. Hence, the rice crisis of 2008 was a needless 'crisis', and one that can be avoided.

13. The policies and programs suggested above are not to be seen in isolation. Of course all the other measures considered part of good economic policy will continue in parallel. For example, measures to stop the current loss of agricultural land---considered to be almost 1% per year---will be taken, as will continuing population programs. But it is important to emphasize just how much these measures add to the effectiveness of the production possibilities stated above. Let us suppose that economic growth continues, as does population growth. Some may wonder if richer populations will not demand more rice and this additional demand will require even more production. However, in the case of the qualities of rice being considered, the facts go the other way. It is well known that richer populations diversify their foods and lessen their consumption of cereals. This has been a worldwide pattern and there is no reason to expect it not to hold in Bangladesh.

The most dramatic case is probably that of Japan, whose rice consumption per capita has fallen from 140 kg to 70 kg since World War II. If this is any indicator for the future of Bangladesh, then rather than being food deficit, there is good reason to think of Bangladesh continuing as a food exporter into the future.

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<sup>i</sup> This is an expanded and revised version of a paper originally published in the Financial Express, Dhaka, in 2009. The original newspaper article was written jointly with Prof. Zohrul Karim, ex-Secretary, GoB and Director General, BARC. The thesis of the export potential of rice was expounded in an article in the Daily Star on Dec17, 2013.