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PUBLIC POLICY IN THE RECONSTRUCTION AND DEVELOPMENT OF RURAL BANGLADESH

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PUBLIC POLICY IN THE RECONSTRUCTION AND DEVELOPMENT OF RURAL BANGLADESH*

Contrary to the reports in the news media and the statements of some foreign officials, a good case can be made that the economic prospects of Bangladesh have improved with the achievement of independence. The current problems of obtaining sufficient food and its distribution, post-war reconstruction and the threat of recurring natural disaster persist. However, with independence the total resources for development will increase, and the more important issue now becomes the policies and management which will determine the efficiency with which the resources are utilized.

First, for the first time in recent history, the resources of the area and its foreign exchange earnings will be used in the country for its own development. Estimates of the magnitude of the net transfer of resources from East to West Pakistan vary, but there is evidence that available domestic resources may increase by as much as $125 million annually.[1/] Similarly, it is clear that East Pakistan did not receive all the foreign exchange it earned; Bangladesh will.

Second, it is probable that external assistance will increase. East Pakistan received approximately 25% of the total aid (excluding food aid) to

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1/ Md. Anisur Rahman, "East and West Pakistan: A Problem in the Political Economy of Regional Planning", Occasional Paper #20, CFIA, Harvard University, 1968; Roger Norton, "Some Aspects of Inte...g Resource Transfer in Pakistan", USAID, Dacca, (mimeo), 1968; or Joop Koopman, "An Estimate of the Size of Resource Transfers", Dacca, (mimeo), 1970.

* This paper was written in May 1972 to help bring into focus for the Bengal Studies Conference economic and public policy issues confronting Bangladesh. Inevitably changes and initiatives in Bangladesh will quickly make some of the material dated. The underlying issues will remain crucial for some time to come. I am grateful to Robert Havener and members of the Bengal Studies Conference for their comments and suggestions.

Pakistan in the 1960's, roughly $65 million annually.[2] External aid to Bangladesh for fiscal year 1972-1973 will be in the range of $400 to $500 million. Much of this will go to reconstruction of war damage, but it is probable that development aid will continue in subsequent years at levels between 2 and 4 times as high as the area received when it was East Pakistan.[3]

This important increase in resources for development combined with the opportunity to establish new economic policies and directions provide Bangladesh an opportunity for economic change and improvement that has not existed in the recent past. Whether the new nation's economy develops or stagnates will depend on the policies adopted and the capability with which the economy is managed.

It is the purpose of this paper to examine several critical areas where the Government of Bangladesh will have to establish policies and to analyze the effects these may have on the nation's future. Because the economy and population of Bangladesh are overwhelmingly rural, the issues selected focus on agriculture and rural development.[4]

Jute Policy - The export of raw and processed jute provided 85% of the total foreign exchange earnings of East Pakistan in 1969-1970.[5] The nation's economy obviously has a heavy dependence on jute. Although it is grown on only 5% of the total cropped acreage, 43% of the nation's farmers produce some quantity

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2/ Md. Anisur Rahman, op. cit.

3/ From, "Ambassador Erna Sailer's Report of a Mission of High Level Consultants to Bangladesh", Vol. I, Appendix 3, and from discussion with officials of the US AID and the World Bank.

4/ In 1970, 90% of the population lived in the rural areas, 57% of GDP was produced in agriculture, 75% of the labor force was in agriculture, and 9% of exports originated in the agricultural sector. See John W. Thomas, "Agricultural Production Equity and Rural Organization in East Pakistan", (mimeo), July 1971, p. 8.

5/ Economic Survey of East Pakistan, 1969-1970, Appendix 1, Table 1., Dacca, 1970.

of jute, and for many of them it is their only cash crop. The process of harvesting and retting jute is highly labor intensive as are the stages of marketing, baling and transporting jute to mills or ports of exit and these procedures provide hundreds of thousands of jobs annually. Jute manufacturing is overwhelmingly the single largest industry in the area. Yet, this whole structure is in serious jeopardy at this time because of the possible loss of international demand for jute.

During the 1960's the major international chemical companies, Du Pont, Shell, ICI and Phillips, developed polypropylene, a synthetic substitute for ju By the mid-1960's this became commercially available. However, in most imports uses, bagging and carpet backing, jute remained slightly preferable as a materi Therefore, the determining factor for users of these products became the compar tive prices, and the assurance of an adequate supply of one product or the othe

In the 1950's and 1960's when there were fewer effective competitors with jute, the Government of Pakistan placed an export tax on the commodity, an this tax, collected by the Central Government, became an important revenue sourc This, plus the impact of an overvalued currency placed a heavy implicit tax on jute estimated at 52% in 1968-1969.[7/] Despite vigorous efforts to have this re moved in the late 1960's when the polypropylene substitute became a serious competitor for jute markets, no action was taken, and the price of jute remaine artificially high.

6/ Census of Agriculture, Summary of East Pakistan Sector, Karachi, 1960, p. 27.

7/ Robert C. Repetto, "Optimal Export Taxes in the Short and Long Run: Pakistan's Policies Toward Raw Jute Exports", Economic Development Report 196, Harvard University, 1961, p. 12

In addition, the demand for jute was weakened by large price fluctuations, which resulted from annual variations in the supply of raw jute. Product decisions of large firms depend on predictable estimates of costs, and the prospect of potential major fluctuations in the cost of a primary ingredient is quite undesirable. Because of the recent high cost of jute, and uncertainty about future costs, synthetics are making serious inroads in jute's international markets and could destroy them entirely.

The loss of production due to the War of Independence was large. Table 1 indicates that in 1971-72 jute production dropped by 33%. This forced the export price to an all-time high. The end of the war and a decrease of smuggling to India will increase exports, but major efforts will still be needed to increase jute production.

Decisions affecting the international demand for jute are continuously being made by the firms which prepare the final goods made of jute or its substitutes. Once markets are lost, manufacturing processes are changed and it is difficult to recapture them. Therefore, if the crucial international demand for jute is to be saved, the Government of Bangladesh must take action immediately. The short run benefits of revenue from the jute export tax must be abandoned. Some compensation must be made for the still overvalued currency. Major efforts must be made to increase jute production and reduce the price. Once reduced, the price of exports must be stabilized at the lower level. This may require guaranteed export prices, or some form of control of exports. These are difficult techniques to manipulate and the economic mechanism for

TABLE 1

GROWTH OF AGRICULTURE PRODUCTION
AND POPULATION IN BANGLADESH

	RICE (cleaned, tons 000)[1]	JUTE (Bales 000)[1]	POPULATION (million)[2]
1960-61	9,519	5,625	55.3
1961-62	9,465	6,968	57.2
1962-63	8,730	6,300	59.2
1963-64	10,456	5,875	61.3
1964-65	10,337	5,328	63.4
Five-year annual growth rate	1.6	-1.0	3.4
1965-66	10,334	6,693	65.6
1966-67	9,424	6,400	67.7
1967-68	10,995	6,670	69.9
1968-69	11,165	5,754	72.0
1969-70	11,710	7,021	74.1
Five-year annual growth rate	2.5	0.9	3.2
1970-71[3]	11,000	6,800	---
1971-72	8,500	4,300	---
TARGETS			
1972-73	11,400	6,000	---
1973-74	12,600	7,500	---

Sources: [1] Agricultural Production Levels in East Pakistan, Bureau of Agricultural Statistics, Dacca.

[2] Statistical Fact Book, USAID to Pakistan, Rawalpindi, Table 1.1.

[3] U.N. Report on Bangladesh, Vol. II, p. 6, p. 11.

accomplishing the objective/subject to some debate, but the goal is clear. If Bangladesh loses its markets for jute, the economic consequences will be very severe.

Water Management - Water is a critical factor in the economy of Bangladesh. Of the total surface area of the country, 6 percent is river. An annual average of 1.2 billion acre feet of water flows through Bangladesh into the Bay of Bengal, an amount equal to the annual discharge of the Amazon River.[8/]

The rural inhabitants who comprise over 90 percent of the area's population are subject to both flood and drought. The adverse effects of these natural calamities are so widespread that 70.7 percent of the villagers responding to the Government's Sample Survey in 1961 reported that they had sustained loss due to natural disaster in the preceding year.[9/] The annual monsoon brings an average 80 inches of rainfall concentrated in the months of June, July and August and produces an annual flood that covers nearly one third of the land area of the country. But from November to May there is almost no rainfall, and agriculture is possible only if water for irrigation can be obtained from the rivers that traverse the area or from the reservoir of underground water. With dry season irrigation between 10 and 15 million acres,

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8/ Haroun el Rashid, East Pakistan: A Systematic Regional Geography and Its Development Planning Aspects, Lahore, 1965, p. 113.

9/ Government of Pakistan, Central Statistical Office, National Sample Survey (Third Round), (Karachi, 1963), p. 27.

half to two-thirds of the total cultivable area, could be planted in a third crop annually. The dominant role of water in the economy and the potential benefits of irrigation are clear. Both for the control of natural disaster and increases in production and income, water management is critical.

There are a wide variety of alternatives available for water management. In the past, 20% of East Pakistan's development budget went to the Water and Power Development Authority (WAPDA) primarily for the large, technically sophisticated multi-purpose projects which were designed to provide flood control and irrigation benefits. These projects used sophisticated technology, the best foreign and Pakistani engineers and consumed the largest single share of development resources. The projects had strong support in political, bureaucratic and foreign aid donor circles. They had the appearance of putting massive resources and talent into the solution of high priority problems. The results, however, were disappointing. All WAPDA projects together irrigated only 174,222 acres, an increase in total cropped acreage of .007 percent. Flood protection benefits were provided for approximately 1 million acres or 5% of the total land area of Bangladesh.[10/]

A repeated problem of WAPDA projects has resulted from the attempt of the engineers to make major changes with little specific knowledge in th agricultural environment of project areas. The result has been that

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10/ For further elaboration of these issues and documentation of the points discussed, see John Woodward Thomas, "Development Institutions, Projects and Aid in the Water Development Program of East Pakistan", (mimeo), 1972.

farmers' benefits and production have been decreased in at least two of the six major project areas and farmers have in at least two cases cut project embankments to allow waters to return to their pre-project courses. The record of these large projects supports the conclusion that the rural people are not their primary beneficiaries.

Despite the fact that costs have exceeded benefits, the desire for WAPDA-type large projects remains. Government agencies want to sponsor, and aid donors support them. Large projects have become the modus operandi of development, and there is considerable momentum behind them. However, the Government of Bangladesh has another alternative that can provide very different results. The Thana Irrigation Program, begun in 1967, provided low lift pumps and a few low cost tubewells to supply surface or underground water for farmers in scattered locations throughout the nation. The requirement was that farmers organize cooperative irrigation groups before applying for a pump. The divisibility of investment in pumps and tubewells has a variety of advantages. Large capital investments are not tied up for long periods before yielding returns. The scattered location and divisibility of the approach means that a program can be expanded or contracted on the basis of experience and changing requirements. Scattered locations diversify risk of natural disaster, and irrigation can be located in such a way as to utilize the soils and conditions best suited for irrigated farming. Flexibility of location can also be used to distribute benefits widely throughout the country.[11/] This system that insured farmers' demands

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[11/] These and other issues related to irrigation technology are discussed in John W. Thomas, "The Development of Tubewell Irrigation in Bangladesh: An Analysis of Alternatives", (mimeo), February 1972.

for irrigation water and a reliable supply through a technically simple pumping system delivered irrigation to over 700,000 acres in 1969-70, with a very favorable ratio of benefits to costs.[12/] While undramatic and receiving relatively little foreign aid, this program did provide large benefits to small farmers in all parts of Bangladesh and its successful performance is in sharp contrast with WAPDA's.

The choice for Bangladesh is not as easy as these comments suggest; there are strong traditions and powerful forces behind this large project approach. The decision will have major implications for who benefits from the expenditures on development. Will the interests of government agencies, the preference of many aid donors, the technicians and the appearance of modernity predominate? Perhaps the small farmers are now represented in the political process, as they were not before the creation of Bangladesh and their preferences will play a role. Will small scale irrigation that increases production, or large projects that symbolize development or some combination be chosen by the Bangladesh Government? The choice will have important implications for who gains the benefits of development expenditure and will suggest how development is perceived by national leaders, and how it is interpreted by the rural populace.

Agricultural Development - Agriculture is the foundation of the Bangladesh economy. Rice is the principal food crop and its production

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12/ Academy for rural Development, Comilla, "Evaluation of the Thana Irrigation Program, 1969-70", Comilla, (mimeo), 1971.

alone represents 30% of total GDP.[13/] During the 1960's, East Pakistan had to import an average of 2 million tons of food grains annually to feed its population. Yet the most important resources that Bangladesh has are fertile agricultural land and plentiful labor. As Table 1 indicates the past performance of agriculture has been poor and the growth of production has not kept pace with the growth of population. If Bangladesh could raise rice yields per acre to half that of Japan, it could produce a surplus of 4 million tons annually and there is no technical reason why this couldn't be accomplished.

Major increases in agricultural production have taken place in other Asian nations and the basis for such a breakthrough exists in Bangladesh. It is based on a major transformation of the technology of agriculture. This transformation takes place with the coordinated application of a package of modern agricultural inputs. These inputs are fertilizer, pesticides, and new dwarf varieties of high-yielding seeds highly responsive to fertilizer. Fertilizer and pesticides are either produced domestically or imported. New seed varieties have been imported and tested and several which are suitable for local conditions selected and multiplied for widespread use. Where stocks were destroyed during the war, seeds are being imported.

In other countries the view that traditional farmers act in an economically rational manner to maximize the return on their agricultural activities within their risk structure has been a fundamental tenet of

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13/ Economic Survey, op. cit., 1969-70, p. 102, Table 1.

agricultural development. This view provides the basis for utilizing the market system to disseminate the new technology, for the farmers will invest in the inputs as soon as their merits are demonstrated. Experience has generally confirmed this view.

Given the farmers' desire to increase production, most countries have proceeded to develop agricultural extension and demonstration systems that will show the farmers the benefits of employing the new technology and provide them with the technical assistance needed to utilize it correctly.

Having developed the technology, or at least imported it, and arranged to make the inputs widely available in the rural areas, nations have depended upon the farmers to invest in the new agricultural supplies. These have on occasion been subsidized to make the investment even more attractive. Almost universally, however, governments have depended upon the farmer to make the investment decision and to use his available surplus to obtain the needed agricultural inputs. Many countries have also supported this with agricultural credit programs, designed to provide the farmer with credit to purchase the new agricultural inputs.

To dramatically increase agricultural production, Bangladesh must employ this new technology as widely as possible. However, the Government must confront the issue of whether the standard paradigm for the dissemination of agricultural technology is applicable. Rural conditions in Bangladesh differ in an important way from other developing countries. Sixty percent of all the cultivated land is in farms of

7.5 acres of less.[14] By any standard these are small farms and their owners have little economic surplus to invest in purchasing the new technology. Credit programs, designed to finance farmers on holdings this small, in East Pakistan and elsewhere, have generally not been successful. Therefore, there are two serious problems with the market system as a distributor of the new technology. First, since the small and medium farmers cannot afford to purchase the new technology even at subsidized rates, the increases in production will be confined to the 40% of the total cultivated land owned by large farmers. The increased production on this amount of land still may not produce complete self-sufficiency. Second, if the benefits of large increases in production which the new technology can provide are limited to the large farmers who have an investable surplus, but who represent only 10% of the rural population, the social problems of inequity of income will be greatly aggravated. The greatly increased economic surplus of the large farmers may well go to purchasing land, increasing both the concentration of landholdings and the number of landless laboreres.

The problem of increasing agricultural production with a concentration of power in the hands of the surplus farmers is still more complicated than suggested so far. Even if effective credit programs for the small farmer can be established or the new technology given away, the asymetrical nature of the division of economic power in the rural areas will still allow the large farmer to skim off much of the

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[14] Calculated from Pakistan Census of Agriculture, op. cit., pp. 10-15.

benefit of increased production. The surplus farmers can capture these profits because they frequently control one or several of the basic processes related to agriculture; credit, marketing, storage, processing and the transportation of goods to distant markets. Even if the small farmer can produce more as a result of applying the new technology, his incentive to produce more is reduced since the benefits can accrue disproportionately to the surplus farmer. For example, prices may fluctuate as much as 30% over the course of the year, reaching a low point during the harvest season, and a high point just before the next harvest. In an average year, 1969-70, rice was Rs. 51,60 per maund (82.5 pounds) in October and November, before the aman harvest, and Rs. 38.40 in December and January, the two months following the harvest.[15/] Thus the small farmer who is either in debt or operating at the economic margin must sell at harvest time when he would receive Rs. 13 less than the large farmer or wholesaler who could hold stocks until the price is favorable. Thus, the surplus farmer who can buy 100 maunds of rice at harvest season for Rs. 3,800, and store it for nine months, can resell for Rs. 5,100, a return of Rs. 1,300 or 38% on the investment (less any storage costs).

Many small farmers are at a further disadvantage in that they sell their products to travelling traders who visit the farm site. Such traders usually moneylenders too, are buying in non-competitive markets where they have great control over prices. In this way the market system is frequentl manipulated to the disadvantage of small farmers.

15/Economic Survey, op. cit., 1969-1970, p. 117, Table 5.

If, in addition to control of access to credit and markets the farmer can charge for processing, in the case of rice, usually milling and sometimes par boiling, it becomes clear who will achieve the greatest gain from increasing agricultural production.

Bangladesh and its foreign aid donors are in agreement that a high priority must be given to providing the new agricultural technology. Seeds, fertilizer and pesticides have a top priority claim on resources. What is less sure is whether the Government can and will act effectively to prevent the concentration of rural wealth that will accompany increases in agricultural production if action is not taken to prevent its occurrence.

One very promising solution is available. The model of rural development based on the experience of the Thana Irrigation Program and the experimental work done at the Comilla Academy for Rural Development, suggests that the small farmer can be organized so that through cooperative action he can retain the benefits of the new agricultural technology. This model emphasizes the organization of farmers into village cooperatives supported and serviced by a central cooperative federation at the Thana level. Village cooperatives can become efficient size groups to utilize water. Cooperatives take a corporate responsibility and can provide a conduit for credit to small farmers. Thana federations can undertake storage, marketing or processing functions for the members of constituent village cooperatives and in this manner provide the small farmer with a very different level of benefits from increasing agricultural production.

This simple explanation of the role cooperatives can play is not meant to underestimate the difficulties of bringing effective cooperatives into being. The local surplus farmer has many ways to emasculate such cooperatives.[16] The farmers themselves need much guidance and discipline to be successful. Yet, the cooperatives offer one alternative which could change an otherwise inequitable distribution of the benefits of the new agricultural technology.

The Government has expressed its intention to undertake such a program of cooperatives. Yet it is not known whether any action has yet been taken to implement this expressed interest. To know how serious the present Government is, one must ask who are the leaders and supporters of the Awami League in the rural areas and into which category of farmers do they fall. If they are large farmers, they will favor only increased production without rural institutions to affect the distribution of benefits. If, however, the small farmers' interests are articulated in the decision-making process, there will be very real attempts to affect the way in which the distribution of benefits of increasing agricultural production takes place.

Employment - In 1969 the labor force of Bangladesh was 23.0 million. 75% of this was in the agricultural sector and overall unemployment was estimated at about 30% of the total available man-years.[17]

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[16] See, for instance, Ahktar Hameed Khan, "Tour of Twenty Thanas: Impressions of Drainage, Roads, Irrigation and Cooperative Programs", (mimeo), Comilla, February 1971, pp. 9-22.

[17] Economic Survey, op. cit., 1969-70, p. 19.

As Table 2 indicates, by the year 2000 the labor force will have reached the range of 64 to 70 million. Even a very effective population control program can do little to affect this growth. The problem of how to provide employment for this growing labor force is probably the most serious Bangladesh faces. Increasing agricultural production is one means of creating more employment. With winter irrigation on all land remotely suitable, a maximum of 15 million acres could be brought under boro cultivation.[18/] With maximum labor input and expansion of irrigated boro agriculture, another 5.2 million man-years of employment could be created annually.[19/] In addition, increases in agricultural production will create new jobs in the rural areas in agriculture-related small business ranging from construction and repair of pumps, installation of tubewells to construction and repair of bicycles and bullock carts. Other means of creating new employment can be conceived by shifting production to new, more labor intensive agricultural activities, or enlarging other non-land using occupations such as fishing. These can be supplemented by labor intensive public works programs such as the Government of Bangladesh has already taken up. Together these activities could create anywhere from 10 to 25 million more annual man-years of employment. But, even this could leave from 14 to 34 million unemployed annually.

[18/] Estimates made by the Harvard Center for Population Studies group on Land and Water Development in Bangladesh.

[19/] This assumes 90 man-days of labor per acre per crop, the highest labor utilization reported in Bengal.

No combination of expansion of agriculture and related activities can provide the number of jobs needed to employ the rapidly expanding labor force of Bangladesh. The conclusion is therefore clear that employment is one of the most important issues facing Bangladesh, and there is no single solution to it. Rather, every decision the Government makes, in the choice of technology and the type of investment to be sanctioned will have to be preceded by the question of whether there is another, more labor intensive means of accomplishing this same objective. Proposals for mechanization in agriculture or for labor displacing equipment in industry, services or any sector of the economy may have to be dismissed even at the cost of efficiency. This will run counter to many private interests but is a critical requirement if the public good is to be served.

Finally, however, low cost labor must be viewed as a resource. Historically, sustained employment of the levels required in Bangladesh have only been obtained in industry. Only if major new opportunities for employment are created in industry in addition to maximum labor utilization in agriculture is it conceivable that unemployment can be held to socially acceptable levels.

The decisions outlined here confront the Government of Bangladesh in a very urgent manner. However, they are not new issues. To a great extent the Government of East Pakistan had taken a stand on each of them, either through direct decisions, incremental decisions or the absence of a policy. One great advantage of independence is that the new Government has the opportunity to review and set its own policies

TABLE 2

SIZE OF LABOR FORCE IN BANGLADESH
1969 - 2003

(in millions)

YEAR	NUMBER
1969	23.0
1973	26.3
1978	30.6
1983	35.8
1988	42.0
1993	49.5
1998	57.9
2003	67.3

Source: R. Dorfman, R. Tabors, M. Alangi
"Framework for Economic Planning
For East Bengal."

(Based on mid-low population growth assumptions).

on these and other critical issues. This chance for reexamination of development policies is a unique opportunity to redirect the nation's development program on the basis of past experience. The new directions of national policies that may result, along with the increased resources available for development, provide a basis for more optimism than in the past, about the economic prospects of Bangladesh.