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THE BANGLADESH ECONOMIC ASSOCIATION

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EDITORS' NOTE

The Third Annual Conference of the Bangladesh Economic Association was held at Rajshahi in June 1977. This issue of the Political Economy is based on the papers presented at the Conference. In accordance with a decision of the Executive Committee of the BEA, the Editorial Board of the Political Economy selected twenty nine out of sixty seven papers presented at the Conference for publication in this issue of The Political Economy. The authors of the remaining articles were requested to send abstracts of their papers for publication. Abstracts thus received have also been included in this issue.

The Editors regret that due to unavoidable circumstances the publication of this issue is delayed,

IN MEMORIAM
MALIK KHUSRO CHOWDHURY

Malik Khusro Chowdhury, Professor of Economics at the University of Dacca, died in Bangkok, Thailand, on October 1, 1978, in his forty-seventh year. He received B. A. (Hons) degree in Economics from the University of Dacca in 1950, B. Sc. in Economics from the London University, U. K., in 1953 and Ph. D. from the Manchester University, U. K., in 1967.

Professor Chowdhury joined the Department of Economics, Karachi University, Pakistan, in 1953 as a lecturer. In 1969 he came to the University of Dacca as a Reader in Economics and Director, Bureau of Economic Research, Dacca University. Professor Chowdhury later joined the Jahangirnagar University, Savar, as a Professor and Chairman of the Department of Economics. He came back to the University of Dacca as a Professor in the Department of Economics in November 1976 where he served till his death. Professor Chowdhury was also a lecturer in Economics at the Durham University U. K., and a visiting fellow at the Yale University, U. S. A.

Professor M. K. Chowdhury was always held in high esteem by his colleagues and students. To his credit, he published a number of books and numerous articles in national and international journals. Professor Chowdhury was always an active member of the Bangladesh Economic Association and served the organisation in various capacities.

In his death the profession lost a scholar and his friends and admirers an amiable human being.

ACKNOWLEDGEMENT

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**Bangladesh Economic Association
Third Annual Conference
Rajshahi, June, 1977**

PRESIDENTIAL ADDRESS

By

DR. M. N. HUDA

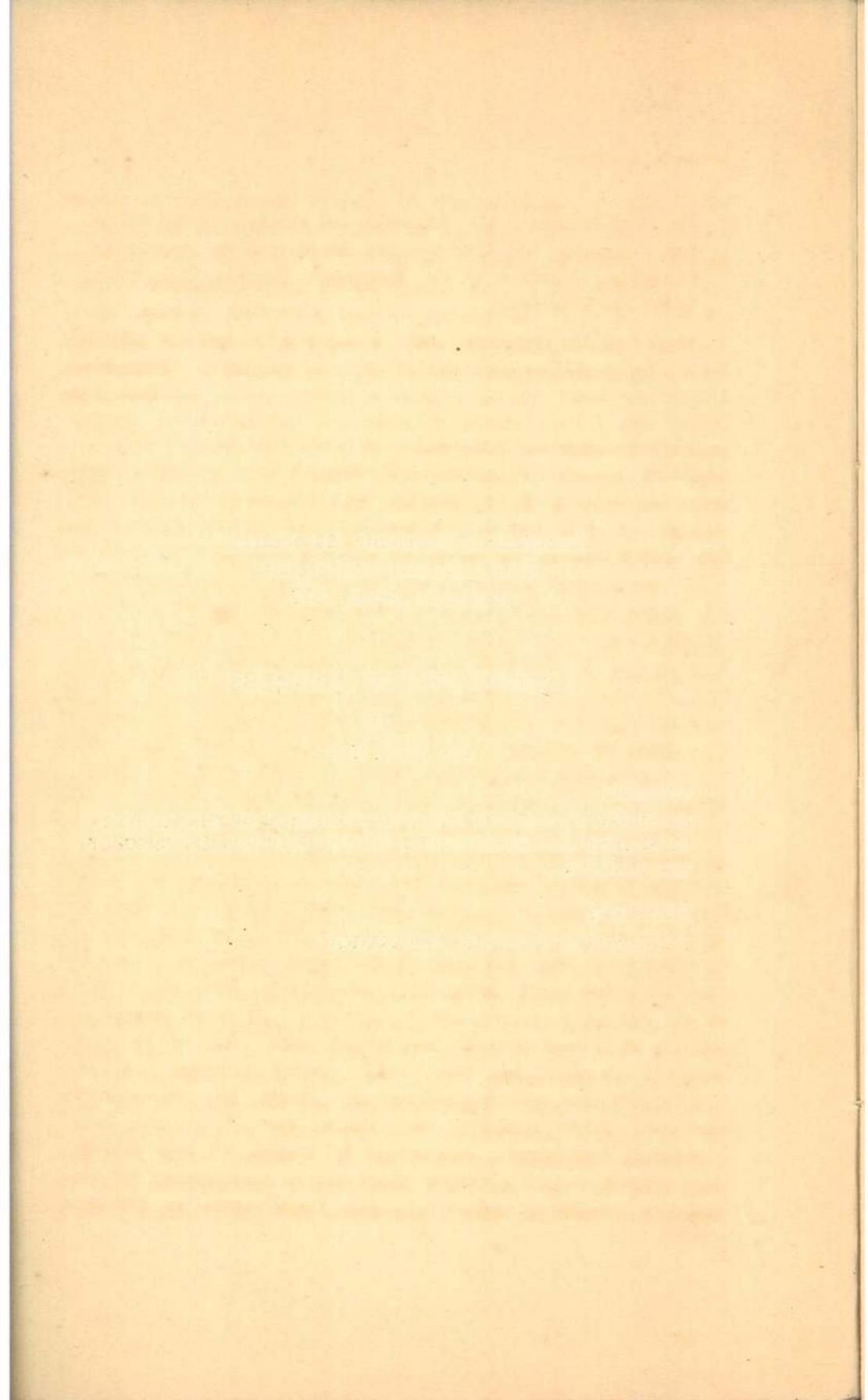
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BANGLADESH**

&

PRESIDENT

BANGLADESH ECONOMIC ASSOCIATION



Mr. Vice-President, Mr. Chairman and Members of the Reception Committee, Mr. Chairman and Members of the Preparatory Committee, Members of the Bangladesh Economic Association, Ladies and Gentlemen,

May I at the very outset offer you my very profound apologies for not being able to give you the text of my address. Believe me, I have not been able to prepare a written speech, and that is the reason why I have chosen to make my submissions in English, contrary to what we have done so far in this session. There is a kind of logistic reason for this. What I will say will be taken down verbatim as far as possible, and I hope to present before you a text of my speech before the Conference is over. I hope you will kindly excuse me for speaking in English.

2. On behalf of the Bangladesh Economic Association and on my own behalf, may I offer you, Mr. Vice-President, our very deep gratitude for your kindly coming in our midst inspite of heavy engagements in Dacca, and for the excellent address that you have given us indicating certain highlights of current Government economic policies and also certain directions to which Government is looking, in respect of planned economic development of the country. You have, Mr. Vice-President, given us quite a few important guidelines relating to the deliberations we will have in this Conference. We thank you very sincerely for this. We are also deeply grateful to the Vice-Chancellor, Rajshahi University and Chairman of the Reception Committee for this Conference, and the very large number of teachers and students whose combined efforts have made this Conference possible. The Association has very much been wanting to hold this Conference at Rajshahi. The reasons are obvious. I believe this is an indication of the present Government's attitude towards under-developed areas of the country, and particularly towards North Bengal. You Mr. Vice-Chancellor, have pointed out some pressing problems of this region. There are many other problems that you have not mentioned. These problems are very much in the minds of the present Government. You are seeing on the ground some indications of this; we hope that the problems which have been neglected in the past will now receive due attention from the appropriate quarters. May I assure you that the problems of North

Bengal are, and should be seen as, the problems of the whole nation; and therefore, they have to be approached as national problems, they have to be tackled as national problems through realistic national policies having flexible criteria for different areas in the country. Otherwise, national policies will not be realistic and effective and we will not be able to solve these problems satisfactorily. I believe, that the present Government is quite conscious of this.

3. Ladies and Gentlemen, we had our last Conference, the Second Annual Conference of Bangladesh Economic Association, in March 1976. You are aware that the economy of Bangladesh had then just begun to move; the situation was so bad that the primary objective of economic policies, and economic actions was to pull the economy out of the rot into which it had been thrown. You must have noticed, however, that the steps which were taken and policy decisions which were being made were proceeding in a manner which is rather halting and hesitant and doubtful. It looked as if we did not know enough about the ground on which we were standing, nor could we visualise adequately the results which such action might lead to. I believe, such was the situation itself. The economy had gone down so much, deterioration had gone so low that it needed a very big pull indeed to bring back the economy from its rot to its gear and restore it on its own rails. This was a very serious problem. Attempts were made to identify the difficulties, defects and loopholes. Attempts were also made to plug the loopholes and steps were being planned and taken. You must have noticed that this work of identifying the difficulties and plugging the loopholes went on almost from day to day, and little time could be given to any study of what the implications of such policy decisions and actions might be. I believe, it was warranted by the circumstances of the time. There was no time to give thought to anything other than immediate action. Thank Allah and thanks also to human determination and efforts, the economy moved and moved to a better position. Certain results were obtained which sometimes surprised even the framers of the policies. Agriculture recorded a very big improvement as you know, primarily due to Allah's kindness, but to some extent due also to human efforts. Fertilizer

distribution improved, extension service improved, a beginning was made in some form of cooperative action in the villages, some incentive was given through some sort of a price policy.

4. I believe, this improvement was more remarkable in certain other sectors. The administration improved a good deal, administrators who appeared to have lost all confidence in themselves got back their self-confidence, and became more conscious of their responsibilities; this was no mean achievement. Administrative procedures were streamlined, authority to take decisions and actions was decentralised, and a chain of command was restored—the system has started working on the ground. There was substantial improvement in the performance and the efficiency of the public sector. We have, as you know, a big public sector in Bangladesh. I believe we will continue to have a big public sector because of the nature of our economy. In this, a beginning has been made; you look at the work and performance of the Jute Industry, Cotton Textile Industry, etc. and you will find facts justifying the statement that a beginning in efficient operation has been made. There is still a very long way to go, but I think a beginning is important. Export performance has improved substantially and today we are not passing sleepless nights as we did six or eight months back because of lack of foreign exchange reserves of the Bangladesh Bank. The situation in the past required us to provide a third party guarantee for our L.Cs. We are grateful to Allah, and to exporters who have made it possible for us to have some breathing time and space. The private sector which had almost become non-existent is now gradually coming up into trade and industry. Again, there is a long way to go. But the private sector's resourcefulness in terms of personnel should be allowed to play its due and defined role. Let there be no misunderstanding on this point. Bangladesh will always have a big public sector. But there are certain areas in the economy earmarked for the private sector, in the Constitution and the laws of the land. The private sector will take a very long time to be able to fulfill these assigned responsibilities, and there is no question of its usurping or replacing the public sector.

5. Based on some of these results, the Budget and the Annual Development Programme of 1976/77 were formulated. There has been substantial streamlining and improvement of the procedure for

mobilising domestic savings in the form of Government revenues, taxes, outstanding loans, etc. The Vice-President has been pleased to mention about the administration and more particularly improvement of Revenue Administration. This is being intensified even further. You must have also noticed that in the country's development programming and activities today, the priorities have been sharpened, are better understood and resources are being allocated with a better understanding of the implications of these priorities compared to the past.

6. Rural Development is a total problem having many facets, Government is now trying to find solutions in an integrated manner. Rural problems are, such that there has to be multi-disciplinary approach and multi-ministerial action programmes to tackle them properly. This is being sought to be done, and I, therefore, believe the chances of success are now better than before. In this rural development strategy that Government is now trying to follow, production oriented economic activities, employment oriented economic activities, welfare oriented social activities and social infrastructural activities are to be combined and integrated into one programme; this is being done and topmost priority is being attached to it.

7. In the field of industries, we are trying to consolidate our position. Our industries are mostly agro-based and agro-oriented. In the Jute Industry, so far as the traditional products are concerned, the objective is to consolidate what we have done so far. We are trying to expand as far the production of non-traditional items such as carpets, carpet backing, furnishing materials, etc. as possible; I personally feel that the future of jute is bleak with traditional products, but bright with non-traditional ones. Import substituting industries such as cotton textiles are also being expanded, and serious determined efforts are being made to reorganise rural industries. The rural electrification programme is being pursued vigorously. For underdeveloped areas, special incentives are being offered through Regional Boards and flexible economic policies relating to allocation of foreign exchange, terms of credit, etc. On the Infrastructure side, certain roads are being built by the national Government supplemented by the District, Thana and Union Councils. The one project that enjoys a very high priority is the East-West Interconnector to bring

surplus electricity generated in the Eastern Wing to the Western Wing. Some considerable progress has been made in this. Further work is being done, quite a few friendly countries are coming up to assist us in this project, and *Insha-Allah*, some fruitful results will come out very soon on the ground. This is how the economy moved in 1976/77; but as you know agricultural production has gone down; we are not yet certain about the figure, but the shortfall is between 7 lac and 1 million tons. The other sectors of the economy have showed progress, modest progress in some and substantial progress in others, resulting in a growth of the economy by about 3 per cent in 1976/77. This 3 per cent increase represents a much larger increase in the non-farm Sector. This failure of agriculture in 1976/77 re-emphasises the supreme need for better attention to be paid to agriculture and rural development. Agriculture cannot be allowed to remain in the precarious situation in which it finds itself today. We have to make much more determined efforts than before under auspices of the Union Councils. This effort is very much on, and I am quite confident that we shall get some good results out of this effort next year.

8. Other components of the total Rural Development Programme are also being given due consideration. Such components include rural industries, rural employment, rural transport, rural education, health, population and family planning. They are all being regarded as integral parts of a whole complex of Rural Development. We are trying to be self-reliant, and less reliant on others. We are trying to develop a social infrastructure which will make it possible. Please subject all these national efforts to your examination, analysis and constructive criticism, in a free, frank and un-inhibited manner, which has been the tradition of the Association.

9. Ladies and Gentlemen, this Conference is being held at a very critical time. Rural Development has been given the topmost priority, and we are meeting on the threshold of the Second Plan. Let us, therefore, make our views known on both of them—on Rural Development, its nature, coverage an infrastructure, and major issues relating to the Second Plan.

May I remind you, in this connection of the past traditions of the Economic Association. The whole country is looking to us, the

nation is looking to us and may I assure you the Government is also looking to us for our comments, views and suggestions. Let us formulate them as well as we can, and make them known as well as we can.

10. To the participants in this Conference, I have a request to make. You will surely find in present economic policies and activities many areas of darkness, weakness, uncertainty, drift and mere pragmatism. My appeal to you is this: where you discover darkness, please throw some light; where you identify weakness, please show your strength; where you find uncertainty, show your firmness; where you find drift, indicate your sense of direction and your sense of purpose; and where you find mere pragmatism, show us your faith and your conviction in the future of the country, the future of its economy, the future of yourselves, and the future of the Economic Association. If you succeed in doing this, I shall most heartily congratulate you on an excellent job that you will have done in this Conference. I thank you and wish you all success.

KHODA HAFEZ
BANGLADESH ZINDABAD

Rural Development : What, For Whom and How ?

by

M. A. HAMID

RURAL DEVELOPMENT : WHAT ?

It has been said too many times and also included in the 19-point programme of Major General Ziaur Rahman that the national economic development of Bangladesh is basically a function of rural development ; but the concept 'rural development' is perhaps not understood very clearly. Very popularly, the term 'rural development' is used synonymously with agricultural development which, in turn, is expected to be accomplished by increasing crop production, which, again, in turn, is expected to be achieved by adopting IRRI paddy production, implying, thus that rural development is attainable through the adoption of HYV technology. This is perhaps the most crucial mistake that of we are committing in the whole story of rural development in Bangladesh.

In effect the domain of rural development is very wide and it must be treated as such. It covers not only the various types of crops but also a host of other elements including fisheries, livestock, agricultural processing, small and medium scale rural industries, family planning, rural electrification, education, transport and communication, energy and entertainments. Unless all the ingredients of rural development are given the importance they deserve in the agricultural strategy basket, the results of development efforts are bound to be frustrating in nature. In what follows in the subsequent sections we aim at discussing the other two issues, viz., rural development for whom and how ?

RURAL DEVELOPMENT : FOR WHOM ?

In the history of economic development of Bangladesh, the question, 'rural development for whom' ? has never been given due consideration. The burning question is : do we want to have a pattern of rural development that allows the feudal land owners to transfer their wealths into urban properties, makes the rich farmers feudal farmers, changes the status of small and marginal farmer into landless and the landless farmers into beggars ? In a welfare country like ours, no policy maker would answer the question in affirmative at least in writing. The following paragraphs will try to demonstrate the nature of the rural development efforts that we are having in Bangladesh and their distributive effects.

One such effort which comes immediately into our mind is the Integrated Rural Development Programme (IRDP). The Programme is engaged in replicating the Comilla approach of modernisation of traditional agriculture and has now covered 200 Thanas of the country. Among other important objectives, the IRDP aims at helping the small and medium farmers in their efforts to improve their standard of living. The activities of the programme have been evaluated by more than one body. The results are, however, similar. For example, the study by Hamid, demonstrates that in Natore and Gaibandha about 30% cooperative farmers fall under the category of big farmers (having more than 5 acres of cultivable land of their own), almost all the executive committee members are surplus farmers, the average per capita loan taken by a Managing Committee member (of TCCA) on the average is much higher (Tk. 1048) than that of an ordinary cooperative farmer (Tk. 248), and so on. Therefore, the benefits of the IRDP cooperatives, if there be any, have largely gone into the pockets of the big farmers. For this some critics (e.g., Abdullah *et al.* [2]) have gone even to the extent of calling the IRDP a "closed club of Kulaks". The biggest tragedy of the IRDP is that with the banner of 'integrated' approach it has been following a purely 'non-integrated' approach to rural development.

The IRDP does have, however, some specific societies for the landless peasants. One very popular society is the *Allar Darga Krishan-Krishani Bahumukhi Samabaya Samity* of Daulatpur P.S., Kushtia district. The society (having no *Krishani* member in the

society is a misnomer) cultivated 12½ bighas of *khas* land (provided by IRDP) and incurred a loss of Tk. 1,600 in the first year (1976). It, however, made a profit of Tk. 3,400 from business, giving a gross profit of Tk. 1,800. But if one considers the salary drawn by the personnel engaged in the business and the establishment costs, the picture becomes very gloomy indeed. (Incidentally the society was being financed out of grants and loans provided by the Bangladesh Jatiya Palli Unnayan Federation and the IRDP). Although some rules have been framed about the distribution of profits among the member-participants, nothing has been implemented as yet. The members were not very happy about the progress of the society as they did not get anything out of it except wages of their labour. The management committee opined that profit could not be distributed because they need to build up their own capital. However, both the managing committee members and the participating members were of the opinion the society would not last longer unless they get some substantial assistances in terms of money from external sources for running their business.

Similar observations can be made with respect to the performance of the Thana Irrigation Programme (TIP) of the Government of Bangladesh. The Programme was designed to utilise the river, channels,

TABLE I
INDICES OF PER ACRE NET INCOME AND PER HOUSEHOLD
NET AGRICULTURAL INCOME WITHIN AND OUTSIDE
IRRIGATED AREAS

		Small Farm	Medium Farm	Large Farm	Total Yearly Net Income (Taka)
Per Acre Net Income (SF=1.00)	Within	1.00	1.21	1.02	1,592
	Outside	1.00	1.18	1.22	849
Per Household Net Agricultural Income (SF=1.00)	Within	1.00	2.00	4.48	4,899
	Outside	1.00	1.65	2.70	2,899

N. B. : SF = Upto 3 acres, MF = 3 to 5 acres and

LF = 5 acres and above. For details see another paper,

Hamid, *et al.* presented in this conference.

hill streams and ground water for irrigation purposes and mobilise the farmers into irrigation groups. In Bangladesh, during the last 10 years, deep tubewells, shallow tubewells and power pumps have been used for cultivating HYV crops. The evaluation results of this sort of programme are again not very encouraging. For illustration we cite the preliminary findings of the Impact of Irrigation Projects on Agricultural Productivity and Income Distribution in Bangladesh undertaken by the Department of Economics in Table-I [4].

This shows that with respect to the per acre net income, irrigation had the impact of reducing the gap between the small farmers and the large farmers from 22% to 2%. If we, however, consider the per household net agricultural income, we observe that the gap between these two groups of farmer has widened from 170% to 348%. The former result may be explained by stating that the small and medium farmers are perhaps more efficient in respect of using irrigation water and other inputs than the large farmers; whilst the later is explained by the area of the cultivable land they own.

The Rural Works Programme (RWP), another rural development effort, was started in 1962 and included the construction of roads, bridges, culverts, drains and embankments in the rural areas with the objective of providing employment opportunities to the landless peasants specially during the slack season. The programme attained some success until 1965, but because of misappropriation of funds and inefficient management by the political elements, it could not make much headway during the later period. However, it gave the experience that the RWP was an integral and a vital part of the success of any rural development programme in Bangladesh.

The Food for Works Programme (FWP) has now been started in full swing in Bangladesh. It is doing tremendous service to the marginal farmer and day labourers by providing them with food for their work. The FWP concentrates in such activities as construction or repair of roads, construction of embankments, excavation and re-excavation of canals and drains, and the like. Relief goods are a major source of finance for the programme.

FWP can play an important role but we must assure that no elements of corruption is involved. Can it be deleted?

The **Swanirvar Bangladesh Movement** the latest and perhaps the most popular rural development effort in the series was officially started in 1975 with the objective of attaining self-reliance at all levels. An evaluation result show that the Movement is essentially a 'Sarkari' movement, its performance in the agricultural sector in the first year of its operation was not unsatisfactory specially in the district and divisional level *swanirvar* villages, and it has not been able to do anything substantial for the benefit of the landless peasants except providing them with the opportunity of working almost round the year (by introducing HYV crops).

In summary, it may be stated that the rural development efforts so far carried out did not produce any perceptible results with respect to reducing the gap between the haves and have nots. Moreover, the approach to rural development has essentially been a non-integrated one.

RURAL DEVELOPMENT : HOW ?

The 'how' part of the story of rural development is the most fundamental and, at the same time, the most crucial one. Unfortunately there is no magic solution to the rural development problems. Nonetheless, the picture becomes clearer if one recognises the real constraints in attaining 'socialism in the sense of economic justice' pattern of economic development in Bangladesh.

Firstly, there is the land constraint. As time is passing on, the picture is becoming more and more gloomy. Another gloomy aspect of land problem is the alarming rate of growth of the number of landless peasants. Whereas in 1960, 17.2% the rural households were landless, the percentage increased to 20 in 1968 and 37.6 in 1973/74. With respect to the tenurial status, it is seen that in the 1960 Agricultural Survey 61% per cent of the farmers were owner-operators, 37% part-tenants and only 2% tenants. The 1968 Master Survey reported that 66% farmers were owner-operators, 30% part-tenants and 4% tenants. In recent years the percentage of tenants seems to have increased further (6% according to a BIDS survey, 1974). Average size of cultivable land is also on the decline. The average size of operational holding has come down from 3.5 acres in 1960 to 3.2 acres in 1968 and to 2.8 acres in 1973/74 (Source : BIDS).

All these (including fragmentation of holdings) are acting as hindrances to the diffusion of HYV technology and hence rural development in the country.

Consequently, unless some drastic changes are effected, that too rather quickly, in the existing land management system, is possible that all our rural development efforts for a socialistic transformation in the sense of economic justice may end up in frustration. It is suggested that (a) re-distribution of agricultural land belonging to the state, (b) acquisition of abandoned or uncultivated land, (c) reduction in the ceiling from 100 bighas to at least 50 bighas, (d) redemption of lands sold by small farmers, (e) security of tenure to the share tenants and (f) introduction of producers cooperatives be immediately taken up.

Secondly, emergence of too many rural institutions is also constraining agricultural development. It has been observed, in course of our field investigations, that inter-departmental jealousy and rivalry, superiority complex or inferiority complex is very common among the Thana level 'top' officers of different rural institutions. Inter-departmental 'competition' is good but it presupposes sincerity on the part of the officers. Since this is very much lacking in our country the inter-departmental competition aimed at more production has turned into inter-departmental rivalry causing adverse effect on production. It is, therefore, recommended that there should be a single ministry for rural development having different sections for different activities.

Thirdly, there are contradictions between rural development and urban development and between agricultural development and industrial development. The suggestion for reducing the ceiling from 100 bighas to 50 bighas is not in line with the policy of enhancing private investment from Tk. 3 crore to Tk. 15 crore. These contradictions will have to be resolved and more equitable distribution of public funds will have to be effected in the form of education, health and social welfare.

Fourthly, another constraint to rural development is high rate of population growth. This is causing severe pressure on land in the countryside. The problem can not simply be solved through the

family planning method alone. Note that in the rural areas, especially among poorer section of the people, children are considered as assets rather than liabilities. Therefore, a well designed population planning, not merely population control, will have to be undertaken. The success of the population problem will largely depend upon the extent to which the rural people are secured against risk and uncertainty regarding their level of living. The recently approved ZPG (Zero Population Growth) Project may go a long way in solving the population problem in Bangladesh.

Fifthly, there is lack of non-farm job opportunities in rural Bangladesh. The present Government has rightly given immense importance to the small and medium scale rural industries. Prospects do exist in Bangladesh for establishing various rural industries.

Sixthly, too much attention to rice production is not advisable. Along with rice, production of other crops including wheat, vegetables, fruits, food canning, soyabean, etc. should also be encouraged.

Seventhly, floods, cyclones and draughts are regular phenomena in Bangladesh and cause severe damage to our crops, human lives and properties. Precautionary measures in terms of diversification of crops, irrigation works and other measures will have to be intensified.

Eighthly, the wrong choice between the input subsidy scheme and price support scheme may also jeopardize the success of the rural development programme. In effect the actual choice between the input subsidy scheme and the price support scheme should depend upon a number of factors such as : (a) the net benefit to the society, (b) the burden on the government budget (or tax payers), (c) the sectors of the society getting the benefit and (d) saving of foreign exchange.

(i) On the ground of benefit to the society, it can be argued that both the schemes would be beneficial to the society in the sense that they would have favourable impact on agricultural production. However, since there exists a large gap between actual and recommended levels in the modern inputs, it is expected that input subsidy, which stimulates increase in its application, may result in a greater net welfare to the society than the support on produce prices, as the latter is likely to induce the use of traditional

inputs (such as land and labour) above optimum involving more social cost than benefit.

(ii) Provided that government is able to distribute foodgrains at a price which covers purchase price plus incidental costs, the product price support scheme may not produce any extra burden on the government budget. However, so long a rationing system continues, the government will have to bear some burden, the magnitude of which will depend upon the buying cost and selling revenue. Since Bangladesh is not expected to be self-sufficient in the production of fertilizer and other basic inputs within a short period, it is expected that the government, of necessity will have to bear a heavy burden on input subsidy scheme.

(iii) Benefits of input subsidy scheme and product price support scheme would go to those persons who actually buy the subsidized inputs and can sell their surplus foodgrains. In Bangladesh, only about 10% to 15% of the total produce is marketed and that not more than 15% of the farmers could participate in this operation. Consequently, the benefit of the producer price support may go in the hands of the surplus farmers. On the other hand, if sufficient attention is given, the benefit of input subsidy scheme may be distributed among the small and big farmers. It will be useful, if input distribution programme and credit programme go together.

One final word is that in Bangladesh the only plentiful resource is the 'people'. Therefore the success of any rural development effort will depend upon the people and only the people (or human resource) can change the tradition bound stagnant economy into a viable and prosperous economy. Would the *Swanirvar* Bangladesh Movement be really able to take up this responsibility in its true spirit ?

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Impact of Irrigation Projects on Agricultural Productivity and Income Distribution in Bangladesh: Some Preliminary Findings

by

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I. INTRODUCTION

1.01. The purpose of this study is to examine the impact of different types of irrigation on production and distribution in some selected areas located in the northern and western regions of Bangladesh. Contrary to popular belief that land and village patterns are homogeneous in Bangladesh, it is observed that they are characterised by different qualitative factors to distinguish one from the other. It is not a very rare phenomenon that land on one side of a river is blooming with crops and vegetations, while on the other side it is relatively barren with less opportunities for production. The slopes and textures of land make for significant differences in outputs. The defussion areas are usually found to be totally unsuitable for monsoon and autumn crops. The high plain old alluvium *varind* tract and the new alluvium in the west-centre and the south are altogether different categories. Villages are also marked by differences in landownership patterns, production practices and the use of production technologies. These differences are of course, within the overall setting of the dialectics in production.

In Bangladesh, there are, broadly speaking, four groups of people living on land : feudal landowners, rich peasants, small farmers and landless agricultural labourers. Their incidence, is not uniform in different areas of rural Bangladesh. In northern region, particularly in the district of Dinajpur, very big feudal land owners are still in existence and are of importance. Down into the central and southern parts, outside the *varind* tract, land-ownership distribution is less skewed. Feudal landowners are there on the wayout, while enterprising rich peasants having not too big holdings are emerging. Small farmers each with holding of not more than five acres in size are more in number having in aggregate more than fifty per cent of cultivable land to their names. Population growth is one of the important factors responsible for the break up of holdings into smaller compartments and also for the rapid increase in the size of landless agricultural labourers in the whole of Bangladesh. The rich enterprising peasants, on the other hand, taking advantage of the supply of modern high yielding agricultural inputs have started making capitalistic use of land and a part of their accumulation is being fed back in increasing the size of their holdings and expanding the scale of their operations.

1.02. Given the scenario as it is, it is our endeavour to see how far an exogenous factor in the form of irrigation technology is responsible for bringing about quantitative as well as qualitative changes, if any, in the working of productive forces and production relations in our rural economy. Irrigation technology, again, is not a homogeneous unit. In recent past a number of variants of this technology have been brought in and introduced in our agriculture. These are : deep tubewell, power pump, shallow tubewell and canal irrigation. In addition, traditional practices, like drywell irrigation are still in vogue in many areas of Bangladesh. We tried to include in our survey different situations varying in irrigation technologies and also in socio-economic conditions.

1.03. Five villages within a radius of about thirty five miles from Rajshahi University were selected for an in-depth study. They are Bhusangacha, Chandpur, Ekdala, Matiapara and Chowgacha. The sampling was purposive. Bhusangacha is located on the periphery

of a depression belt. The cultivable area is low and remains under water from monsoon till the end of autumn. The area is constrained by topographical conditions to produce only one full crop between November and April, the period when rainfall is minimal and the supply of water is naturally scarce. Irrigation, therefore becomes a necessity, Bhusangacha tries to face the problem by way of availing of surface water irrigation by power pumps which are used for withdrawing water from the river Kaliganga on the opposite side of the depression. The water is then channelised into the cultivable lands. This new irrigation facility has provided the villagers with an opportunity for going in for high yielding variety crops which for their heavy demand for water would have remained an impracticable proposition under natural conditions. Deep tubewells are used for irrigation in Ekdala, Matiapara and Chandpur. The villages traditionally produce autumn crops. Irrigation has increased the potentiality for multiple cropping. Land in all the villages is a bit sandy. Its thirst for water is, therefore, relatively high. Feudal landowners are not observable in any of these three villages. Rich, enterprising peasants are, however, emerging on the scene. Bhusangacha has only a few households of landless agricultural labourers. But their percentage is fairly high in Chandpur and Ekdala. Chowgacha is a village which does not use any artificial method for irrigation. This was included in our survey for seeing the contrast in land use and distribution. We have also used the data on dug-well irrigation in another village complex from a different study under preparation. This has given us an opportunity of comparing the relative merits of new technologies against the traditional ones.

1.04. On a different plane we made a running survey of the ground water deep tubewell project area of Thakurgaon in the north and the canal water irrigation scheme under the Ganga-Kapotaksha project in the south west. Thakurgaon is still characterised by the presence of big feudal landowners. Land distribution is more skewed than what is observable in other areas. Thakurgaon and G. K. are looked into for some other reasons as well. In Thakurgaon deep tubewell irrigation has been in practice over a large area for

about a decade. We tried to assess, as far as possible, the effects of this venture on socio-economic life of the people in the locality. The findings of this enquiry could then be compared with those of newer ventures under different socio-economic conditions with big feudal landowners virtually non-existent and the socio institutional frame qualitatively different. The irrigation technology in the area under the G. K. project is fundamentally different from others. This is one illustration of big irrigation technology as contrasted with the intermediate and smaller ones applied in other areas. A comparative study becomes pertinent and important.

1.05. Excepting for Thakurgaon and G. K. area, a questionnaire-interview method has been adopted for our study. The investigators were placed in respective villages to collect data round the crop cycle over a whole calendar year. In Bhusangacha, where only one crop is produced, all the 103 households were interviewed over one full crop season from the time of sowing till harvesting. A random sampling of about 25 per cent of households was made in each of the other four villages. Data were collected for all the production activities over the year. The same questionnaire was used for the collection of data in all the five villages.

As has been said earlier a running on the spot survey was made in Thakurgaon and the G. K. area. The research team went and stayed for about a week in each of those places. In the course of intensive tours they met the project supervisors, randomly chosen elites, members of the cooperatives, technicians and peasants and talked to them for getting an insight into the situation. They have also had recourse to secondary data, both published and unpublished, for this purpose and have made use of them in their analysis.

II. SOCIO ECONOMIC CHARACTERISTICS

2.01. **Rajshahi Area** : Economic life of the vast majority of people of all the five villages rests upon land. Out of 219 households that we have interviewed agriculture is the only occupation of 160 households ; 33 households are engaged in agricultural and other

activities and only 26 families are engaged in non-agricultural activities. The position is more or less the same for every village except Chowgacha where out of 34 families that we interviewed 16 families completely depend on non-agricultural activities. Out of these 16 families, as a matter of fact 12 here are landless families. In Bhushangacha where total households is 103, only 13 households are landless but they are engaged in some caste-occupations. There is no manufacturing activity in any one of these villages nor is there any cottage industry worth mentioning. Economic activities related to agriculture such as cattle raising, dairy-farming, pisciculture, horticulture, poultry farming do not exist in these villages. This, however, does not prove that people have any natural aversion to such works, nor does it prove that people are in general non-enterprising.

Agriculture of these villages is based on the knowledge and methods which are not very upto date. Most agricultural operations in connection with sowing, transplantation, harvesting and marketing are performed by manual labour. Animal power is still the only draft power. Age-old-implements such as wooden ploughs, harrows, scythes, hoe-spades, bullocks, carts still constitute the equipment of even the large farmers. Only two families in Bhushangacha and one in Ekdala possess low-capacity power tillar, shallow tubewells and spray machines. These power-pump irrigation sets and three deep-tubewells are owned by the KSS of the respective villages. That agriculture is not highly modernised and that use of capital and power is very low is clear from the capital asset position of farmers given below.

In Bhushangacha the value of capital-goods possessed by the households on an average is Tk. 3331; for Ekdala it is Tk. 4312; for Chandpur it is Tk. 4429; for Matiapara it is Tk. 3705 and for Chowgacha where there is no irrigation work at all it is Tk. 2197 only. (Capital goods include: (i) Bullock (ii) Oxen (iii) Cow (iv) Buffalloy (v) Plough (vi) Pump and other machines (vii) Others.

One important feature of agriculture of these villages is the predominance of small and below subsistence level farms. Small farm families having land upto 2.99 acres and landless peasants constitute

about 54% of total households but they own only 19% of total land in Bhushangacha. For other villages the corresponding figures are 73.6% and 37% (Ekdala); 33.3% and 14.6% (Chandpur); 50% and 15.3% (Matiapara). For the scheme area as a whole 56.1% small farms own 20.8% of total land. For Chowgacha the figures are 85.2% and 39.6%. On the other hand large-farms defined as having land above 6.00 acres constitute 20.7% of total families but they own 54.3% of total land. For Chowgacha the figures are 8.8% and 39.8%. For the five villages as a whole the average size of family is 7.92 persons but average size of farm is only 3.88 acres. These are sufficient indices of the fact that distribution of land is highly skewed and land man ratio is far from being optimum. Another disquieting feature of agriculture of these villages, particularly in Bhushangacha is that land is cultivated both within and outside scheme by owners themselves. The owners are suddenly becoming more interested in cultivation, perhaps because of high prices of agricultural products and as a result it is becoming increasingly difficult on the part of very small and landless peasants to participate in the development of agriculture.

Most people of the villages under observation can realize that agriculture is the stable and only source of their material prosperity and they are prepared to improve the condition of agriculture by machines, systematic exploitation of the seed-irrigation technology. KSS have been formed in each of these villages and through KSS they sincerely try to procure the critical inputs of agriculture or ingredients of development. Power-pump project in Bhushangacha, T. W. projects in Ekdala, Chandpur and Matiapara owe their existence to the pioneering efforts of the villagers. Most cultivators have been trying very hard to place more and more land under HYV. IRRI cultivation means a lot of irrigation work and a lot of irritation for traditional farmers; but the farmers of these villages are taking keen interest in IRRI and other HYV rice cultivation and they are doing it cheerfully. We have noticed they have high achievement motivation and the making of real entrepreneurs.

2.02. G. K. Project : Land distribution and land use pattern are more or less similar to those in Rajshahi. The project activities, however,

have created greater employment opportunities for small peasants and landless labourers. The types of employment created are those connected directly with irrigation work, its operation and administration (e. g., the works by *beldars*, *mats*, *gazetters*, etc., and necessary earth work to be done every year). It has also created greater demand for education in the locality. The percentage of literacy is found here to be relatively high.

2.03. **Thakurgaon**: As has already been noted feudal relations in land are still very strong in this area. Land distribution has been observed here to be extremely skewed. It has been reported that between 40 and 50 per cent of the rural people in Thakurgaon are landless or near landless. They are poor, unenterprising, backward and submissive—a product of feudal relations existing for ages in agriculture. Rural cooperative institutions are very much influenced by this pattern of land relations and are biased in favour of big landlords.

III. SOME PRELIMINARY FINDINGS

This section seeks to explain the impact of various irrigation types on agricultural productivity and income distribution in Rajshahi area, Thakurgaon project and G. K. project. For this purpose, as far as possible, reference will be made to cropping pattern, intensity of cropping, yield of crops, and income distribution. Three types of farms are distinguished viz., small farm, having cultivable land upto 3.0 acres, medium farm, having land between 3.0 acres and 6.0 acres and large farm, having land 6.0 acres and above. It will also be seen if any type of irrigation method is more efficient than the other (s).

3.01. **Rajshahi Area**: As stated elsewhere in the paper that an in-depth study was made of 3 deep tubewells, 4 power pumps and a large number of dugwells of some selected areas of Rajshahi. For comparison, a village having no irrigation facilities, was also selected for the study. The collected data are produced in Table I through IV.

We begin with the impact of irrigation on the cropping pattern. Cropping pattern is the distribution of cultivable land under various crops in different seasons of the year. Of all the factors, such as topography, rainfall, soil type and farmers' financial position, having influence over the cropping pattern, irrigation water is perhaps the most important one. Our study shows that prior to the inception of the irrigation schemes (or in the existing outside irrigation areas) the main crops were Aus, Aman, Jute and some *Rabi* crops (e. g., pulses, oil-seeds, potato, etc.). Irrigation seems to have brought about a significant change in the production plan of the farmers. It facilitated growing of HYV paddy (IR-8, IR-20, IR-176, etc.) and other crops. It was seen that in the non-irrigated areas 48.2% of the land was under *Kharif* crops (Aus, Aman, and jute), 36.7% under *Rabi* crops (major crops were Wheat, Boro, Aman, Pulses, Oil Seeds, Chili and Pumpkin) and 15.1% was under perennial crops (Sugarcane), whilst in the irrigated areas, the percentages were, respectively, 36.2, 58.8 and 5.0. It should be pointed out that during the *Rabi* season in the irrigated area, 22.3% land was under HYV crops. Thus irrigation had significant impact on the cropping pattern. The cropping patterns were, however, found to be similar among various irrigation schemes,

It is thought that irrigation makes it possible to irrigate land more intensively than otherwise. The study reveals that the intensity of cropping in irrigated farm was 157% and that of non-irrigated farm (NIF) was 117% which confirms the stated hypothesis,

Per acre yield of the major crops within and outside irrigated areas are produced in Table I. This shows that there are wide variations in yield per acre between irrigated and non-irrigated areas. Whereas the weighted average of all HYV paddy crops was 50.6 mds. per acre in the irrigated area, the same was only 37.7 mds. in the non-irrigated area. Although, strictly speaking, it is not possible to compare the yield per acre between the two areas for any crop, the contents of the table does give one the impression that irrigation had some definite positive impact on increasing agricultural productivity in the study area. Another finding is that the per acre yield of major crops was very high in the LLP scheme area followed by

indigenous dugwell and deep tubewell scheme areas. This was due mainly to the managerial efficiency in using water and ability to procure 'package' inputs.

TABLE I
PER ACRE YIELD OF MAJOR CROPS

(in mds.)

Name of Crop	Within Irrigation				Outside Irrigation	
	LLP	DTW	IDW	Total	NIA	ANIA
IR-8	59.8	45.5	—	52.2	—	—
IR-176	51.3	41.0	—	46.6	—	—
Chandina	56.7	38.5	58.7	55.9	—	41.5
Saita	31.7	20.8	34.7	32.2	—	31.5
Taipic	57.2	57.2	—	57.2	—	52.0
IR-20	—	—	38.6	38.6	—	—
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All HYV (Weighted Average)	53.2	36.7	56.5	50.6	—	37.7
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Aus	—	—	14.2	14.2	10.4	11.4
Aman	—	15.2	—	15.2	14.3	13.7
Boro	28.0	21.6	28.3	27.6	—	20.7
<hr/>						
All Local (Weighted Average)	28.0	15.5	27.1	19.3	12.2	14.8
<hr/>						
All Paddy (Weighted Average)	50.9	29.6	41.2	42.8	12.2	15.9
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Wheat	—	9.9	20.5	13.6	5.8	9.4
Jute	—	—	—	—	7.5	8.8
Sugarcane	—	—	—	—	309	306
Pulses	—	—	12.0	12.0	6.6	5.9
Oilseeds	—	—	—	—	—	5.3

Note : ANIA = All non-irrigated areas = NIA + outside areas under LLP and DTW.

For the purpose of explaining the impact of irrigation on net return, it (net return) is defined as the difference between total

costs and total revenue. In calculating the total costs the following items were included: labour (hired labour only, but where family labour forms the dominant part of the total labour force, for instance in the indigenous dugwell project, hired as well family labour was included), water charges, equipment and tools (including plough), seeds and seedlings, insecticides, interest on capital and other incidental charges. For the sake of the present analysis capital costs were not included. All costs were valued at their market-prices. For calculating gross return, the market prices (in the respective study areas) of paddy, by-products and others were considered. The difference between the total cost and total gross revenue, expressed in terms of acre is given in Table II. This exhibits that per acre net income for all irrigated areas is just double (Tk. 1,592) than that of all non-irrigated areas (Tk. 849). As stated above, the highest net return was obtained for LLP scheme followed by DTW and IDW schemes.

To examine the impact of irrigation on distribution, per acre net income and per household net agricultural income have been calculated for small farms, medium farms and large farms and are produced in Table II (in absolute number) and Table III (in terms of indices). Table III shows that in the non-irrigated area (ANIA) per acre net income varies directly with the size of farm, the difference between the small and large farm being to the extent of 22%. This gap seems to have been reduced in the irrigated areas. One explanation of this state of affairs may be that the small and medium farmers are relatively more efficient than large farmers.

The lower part of Table III gives the per household net agricultural income for different types of farms. It can be seen from this section of the table that irrigation has simply widened the gap from 170% to 348%, between the irrigated and non-irrigated farms. Table III (upper part) also demonstrates that whereas in DTW areas the gap with respect to per acre net income between the small and large farms was to the tune of 19%, the same was 11% but in the opposite direction for indigenous dugwell area,

implying that the indigenous method of irrigation is better than in modern method of irrigation from new point of distribution.

TABLE II
NET RETURN PER ACRE WITHIN AND OUTSIDE IRRIGATED
SCHEMES BY TYPE OF FARM

(In Taka)

Size of Farm	Within				Outside	
	LIP	DTW	IDW	Total	NIA	ANIA
SF	1,849	1,155	1,601	1,535	711	697
MF	2,198	1,241	1,528	1,856	813	825
LF	2,207	1,074	1,419	1,567	608	839
Average-	2,110	1,149	1,516	1,592	668	849

TABLE III
INDICES OF PER ACRE NET INCOME AND PER HOUSEHOLD
AGRICULTURAL INCOME WITHIN AND OUTSIDE IRRIGATION
SCHEMES BY TYPE OF FARM

	Size of Farm	Within				Outside	
		LLP	DTW	IDW	Total	NIA	ANIA
Per Acre Net Income (SF=1.00)	SF	1.00	1.00	1.00	1.00	1.00	1.00
	MF	1.19	1.07	0.95	1.21	1.14	1.18
	LF	1.19	0.99	0.89	1.02	0.86	1.22
	Total Net Income Per Acre (Tk.)	2,110	1,149	1,516	1,592	668	849
Per Household Agricultural Income (SF=1.00)	SF	1.00	1.00	NA	1.00	1.00	1.00
	MF	2.30	1.58	NA	2.00	1.65	
	LF	4.81	4.27	NA	4.48	2.70	
	Total Per Household Income (Tk.)	5,139	4,597	NA	4,899	2,899	

Note: 1. NA = Not available.

TABLE IV
RESPONDENTS ACCORDING TO TYPE OF FARM
(Rajshahi Area)

Size of Farm	LLP		DTW		IDW		NIA		Grand Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Landless	13	12.6	5	6.1	8	13.8	12	35.3	38	13.7
Small Farm	41	39.8	41	50.0	45	77.6	17	50.0	144	52.0
Medium Farm	27	26.2	19	23.2	4	6.9	2	5.9	52	18.8
Large Farm	22	21.4	17	20.7	1	1.7	3	8.8	43	15.5
Total	203	100	82	100	58	100	34	100	277	100

Notes: 1. Definition of size of Farm:

- (i) Landless = Farmers having no cultivable land of their own but depend upon land for their livelihood.
(ii) Small Farm = Farmers having land between 0.00 and 2.99 acres.
(iii) Medium Farm = " " " " 3.00 and 5.99 "
(iv) Large Farm = " " " " 6.00 and above.

2. Abbreviations:

- (i) LLP = Low lift pump. (ii) DTW = Deep tubewell,
(iii) IDW = Indigenous dugwell and (iv) NIA = Non-irrigated area.

3.02. Thakurgaon Project : The introduction of deep tubewell projects at Thakurgaon has some notable impacts on the economy of the area. The new irrigation practices have led to the production of a number of food crops which could not be grown before. Aus and Boro of local and high yielding varieties, and wheat of the Mexico type are the crops to be mentioned in this regard. Water and other new inputs have successfully brought about a change in cropping pattern and also an increase in cropping intensity on a number of plots in this region. It has become a frequent practice to have a combination of Boro and Aman, Aus and Aman or Aman and jute on the same plot of land. Triple cropping, that is, the production of Aus, Aman and Boro on the same plot is not entirely absent, but is very rare.

The incidence of the production of local crop varieties is still greater than that of high yielding varieties. IRRI-Aus, IR-20, IRRI-Boro, Chinese Boro and Mexi-wheat are HYV foodcrops that have so far been practised in the project area of Thakurgaon. The area under HYV crops as percentage of the area under all food crops is found to be only 4.8 in 1967/68. In the subsequent years upto 1973/74 this figure took the values 10.6, 14.4, 34.4, 15.5, 19.1 and 23.5 in the chronological order. It reached the highest that is, 34.4, in 1970/71, slumped down to 15.5 the following year and then showed a slow upward trend. 1970/71 was the last year before independence. It showed the maximum that could be attained till then by way of following the so-called Green Revolution policy. The fall in the value of the percentage figure in 1971/72 can be well explained by the dislocations caused by the war of liberation. It started rising again ; but still it is much below the previous best which itself was only about one-third of the total size.

The productivity of new crops could not keep up to the promise it showed in the initial years of their introduction. In 1967/68, yield of IRRI-Aus per acre was 80 mds. ; that of IRRI-Boro 75 mds. ; IR-20 was obtained at 35 mds. per acre when it was first produced in 1970/71. Mexi-wheat reached the peak productivity of 35 mds. per acre in 1968/69 and Chinese Boro also showed the same productivity which has more or less been maintained since 1969/70. In addition, other local crops, viz., local Aus, special Aus, special transplanted Aman and local Boro which were not produced earlier in this region showed their maximum yields per acre during the initial years of their introduction. By 1973/74 per acre yield of IRRI-Aus came down to 35 mds. ; of IRRI-Boro to 84 mds. ; of IR-20 to 32 mds. ; of Mexi-wheat to 20 mds. Yield per acre of local Aus, special transplanted Aman and local Boro in 1973/74 were estimated in maunds at 17, 19, 25 and 18 respectively. The records of their previous best returns were obtained at 25, 30, 60 and 35 mds. respectively. Even the productivity of the traditional crop of local transplanted Aman has been reduced from 30 mds. per acre in 1966/67 to 21 mds. per acre in 1973/74. Broadcasting Aman, another traditional crop gave the yield of 15.5 mds. per acre

in 1973/74. Its previous best performance was found to be 25 mds. per acre in 1967/68.

Two technological propositions follow from the above information : (1) Irrigation has brought about, although partially, rotation of crops in the project area of Thakurgaon ; and (2) irrigation alone is not responsible for fundamental changes in production practices and productivities in agriculture. In addition to water it is necessary to have fertilizer, better seeds, insecticides and appropriate technical know-how in adequate quantities to increase productivity. In the sixties, since the approach was to make successful localised green revolution through big enlightened farmers, there was every effort to make new inputs available to such localities on a priority basis. Thakurgaon was, therefore, a favoured spot for the supply of modern inputs upto 1970/71. The impact is observable in the increase in acreage and also in a satisfactory level of productivity. Even though productivity with respect to some of the crops could not be maintained at the level of the attained maximum, yet on the whole it was not too bad. The first one or two rounds of the use of fertilizer immediately shoot up production. Then the law of diminishing returns usually sets in. It continues for a few years before stabilising productivity at the expected level while other necessary inputs are available in required quantities. By 1970/71, productivity in Thakurgaon with respect to a number of crops reached such a situation. But after that the supply of essential inputs to this region became irregular. On the one hand, liberation war and its aftermath caused dislocation in their production and procurement in Bangladesh, on the other hand, and it is equally important, cultivators in most parts of the country had by that time learnt to use fertilizer and other inputs for production and had started expressing their demands for them within a highly subsidised market situation. Post liberation Bangladesh could not make a special treatment to a particular locality, however, much there might have been economic justification for it. The net result was the shortage in the supply of all the essential inputs all over Bangladesh. Thakurgaon, with its big farm complex, could not claim to be an exception to that. This shortage in the availability of other inputs, particularly fertilizer, has resulted in an apprecia-

ble fall in the productivity of most of the crops in that region. Production practices also tended to show a swing in favour of local crops which are less demanding with respect to modern inputs like fertilizer, insecticide and water. Total area under local transplanted Aman went down to 26490 acres in 1970/71 from the corresponding previous year figure of 58216 acres. But over the same period there was a transfer of 22464 acres to the HYV crop of IR-20. In 1973/74, area under local transplanted Aman increased to 42992 acres, that under IR-20 could reach a total of 10048 acres. It may be mentioned here that Aman crops are normally rainfed. Additional irrigation measures are helpful specially in years of irregular and insufficient rains.

The impact of irrigation project on the attitude of the farmers deserves careful analysis. It has already been stated that irrigation opened up the possibility of multiple cropping in this region. As a matter of fact crops of all the different seasons have made their entry into the annual production chart of Thakurgaon. It reflects a change of attitude, though not complete, on the part of the agriculturists. New production possibilities have been able to infuse a spirit of commercialism among the farmers. Bigger landowners could see that in the circumstances favouring them with adequate supply of modern inputs, commercial farming supplemented to their traditional practices was expected to bring them greater net return. Modern inputs could be obtained almost free of cost and new crops showed an extraordinarily high rate of productivity. Many of the big farmers within the scheme areas availed of this opportunity and subjected their lands to multiple cropping. But there was very little changes in production relations and feudal hold of the big farmers paradoxically enough was tightened. Employment requirements increased no doubt; but they were selective in nature. Refugees from other places were settled in scheme areas. This increased the size of agrarian labour force and prevented a rise in employment ratio or wages. Moreover big farms are mostly owner operated. They find it to their advantage to depend mostly on household labour who are maintained generally at the minimum subsistence level. Increase in work on land, therefore, did not lead to an

increase in demand in the labour market to that extent. On the other hand, since land began to give more in return, commercial interests prompted particularly the medium farms to increase the size of land holding. This they could do usually by way of dispossessing small peasants. They did not have the ability or opportunity to procure modern inputs and were consequently, at a disadvantage against their kulak brethren. Productivity on lands owned by many of them did not increase. This implied that their relative costs for retaining their holdings began to go up and a large number of them being trapped in poverty and indebtedness were forced to sell their lands. The feudal hold of the rural rich therefore, was not loosened. Crop lending at high rates of interest continued as before. Those who failed to pay off their loans with interest charges were compelled to give up all or part of their holdings, if they had any, or were obliged to give their labour, almost free, to the farms of their lenders. A transformation was taking place in means of production ; but production relations remained virtually of the past vintage. This became apparent the moment modern inputs became dearer to the rich farmers of the region. Many of them immediately shrank back to the production of crops of local varieties. The net returns after payment of additional input costs and the application of new management skill did not seem to them sufficiently attractive. This seems to add strength to the proposition that commercial motive of big and rich land owners can be sustained only if they are given a very high dose of incentive in the form of liberal supply of inputs so much so that they are to bear little risk in the earning of an expected surplus. But this can be done by giving them all the facilities to keep their feudal hold over the rural society. This is distinctly against the interest of the rural poor who are likely to become even worse off in the process. During the period after liberation big farmers of this region did not make sufficient use of water for irrigation, even though it was supplied absolutely free. Most of the small farmers were either unable or disinterested in improving productivity and increasing output. They were mostly poor and could not afford to invest the required sum of money for seeds, fertilizers, insecticides, etc. As a result they

too were unable to make proper use of irrigation water. It is, therefore, not surprising that while the previous best performance was the distribution of water for irrigation to about 65% of the total command area, after liberation it went down to nearly 9% and, by 1975, could improve only to reach up to a level of around 18% of the actual capacity. Mechanical troubles and power failures are, no doubt, factors responsible for under-capacity utilisation of tubewells for irrigation; but definite constraints on the ability and willingness of farmers to make use of irrigation water appears to be more important a factor than others. It would be very difficult in such circumstances to attain and sustain capacity utilisation of irrigation in agriculture.

The productivity of HYV crops is expected to tend to an average of 35 mds. per acre. Given the market price of paddy in the local market at Tk. 50 per md. the total return is likely to be around Tk. 1750 from an acre of HYV cultivation. The market price of paddy, however, is not an independent variable. It is, as everybody knows, a function of demand and supply. The local demand remaining more or less static, or varying only slowly with the growth of population over time, the price of crops would be overwhelmingly influenced by the supply in the market. This implies that price in the short run may move up as a result of crop failure or restriction in production. When we are trying to analyse the producer's decision in agriculture, we assume that while increasing production and productivity he will take into consideration its impact on the market price which is expected to move downwards due to the cumulative effect of the efforts by farmers in general to increase production. Tk. 50 per md. has been observed to be the average market price for HYV paddy in 1975/76, a year of good harvest. We have therefore, taken it here to measure the value of the return while the producer decides to increase production by way of adding his marginal acre to the area under HYVs. The costs for the modern inputs are determined by forces in the international market which is little expected to react to a fall in prices of the produced output in the domestic market.

A farmer, in practice, however, does not bear all the costs. It has already been noted that he does not pay the full cost

of irrigation and could obtain fertilizers at about half the cost of its procurement and production. After making necessary deductions on these counts the estimated total costs (without subsidy) to be borne by a farmer comes to about Tk. 937 per acre. Consequently his net return per acre is expected to approximate a figure roughly around Tk. 813.

The cost of production of local T. Aman crops should be much less than that of any of the HYVs. In all, therefore, total cost borne by a farmer producing local T. Aman is expected to centre round a figure roughly around Tk. 442 per acre. The market price for Aman crops is higher than that of a crop of high yielding variety. It has been observed to be about Tk. 65 per md. If, on the basis of past experience, we take 21 mds. as average productivity per acre of local T. Aman crops, then the money value of the total gross return from an acre of that crop is likely to be somewhere around the calculated figure of Tk. 1365. The net return to the farmer, on balance, is worked out to be approximately around Tk. 923.

From the very rough ideas of costs and benefits it can be safely deduced that if all the disguised costs like those on labour, plough bullocks, etc. that are domestically supplied, are calculated then the net gains from an employment of resources on local crops are expected to be higher than those from a similar employment of resources on HYVs. A farmer whose resources are small and limited would, therefore, be rational enough to show his choice in favour of the production of crops of local varieties. It is only if he is endowed with additional resources that he may go in for a second choice in the form of the production of HYVs fed on irrigation water specially in the Boro or Aus season.

A few important consequence, which have also been observed and already referred to, follow from the above : (1) New production programmes have a definite rich farmer bias. Small farmers can rarely afford to spend in the vicinity of Tk. 937 on an acre for producing a second crop. (2) Big farmers will not be interested to produce a second crop if they are to bear the full cost of production. They will find it more profitable to continue with their feudal practices of lending out money and crops to the rural poor

in times of distress and extracting as much surplus as possible in return. It has been observed that an increase in input prices may result in a fall in the cropped area in this region. (3) Medium farmers are more enterprising in adopting new technology. They do not usually have the tradition of desiring feudal surplus. Moreover, in computing costs, they generally ignore disguised costs on labour, plough, bullocks etc. which are elements of the very household set up. But it is doubtful if their attitude remains unchanged once they become more affluent. A change is not expected to be fundamental or permanent if there occurs no significant transformation in the mode of production involving productive forces and production relations.

3.03. Ganga-Kapotaksha Project : The Ganga-Kapotaksha is a multi-purpose project, comprehending irrigation, flood control and drainage measures to a vast area in the districts of Kushtia and Jessore, the main objective being to develop surface water canal irrigation system. The command area of the project is 3.5 lakh acres. The project is divided into two units namely, Kushtia Unit and Jessore Unit. The first phase of the Kushtia Unit, having a command area of 1,20,000 acres, has been completed in 1970 and the second phase is only half way through.

The project applies gravity flow method of irrigation : water from the Ganga is lifted mechanically and then run through a net work of canals. In phase I, besides the 6700 ft. intake channel, there are 45.6 miles of primary canals, 133.0 miles of secondary canals and 317.5 miles of tertiary canals. In addition, there are 1800 field channels. The project has 3 pumps of 1300 cusec capacity each and 12 subsidiary pumps with 125 cusec capacity each.

The extension section of the G. K. project organises the farmers into groups and societies through which critical inputs and agronomic advice are given to the farmers. As part of the extension work, 38 "Chashi Clubs" have been organised. Each chashi club covering an area of approximately 3000 acres has one sectional officer (S. O.) and a large number of *Beldars*, *Mats* and *Gazetters*. These people (except S. O.) are appointed from the locality.

The project has the impact of changing cropping pattern. Formerly, the local agriculturists used to produce Aus, Aman, Jute and some Rabi crops. Now, after the introduction of irrigation technique, new crops, such as IR-8, IR-20, *Nigershail*, BR-3, etc. have been added to the list. This obviously reflects the change in attitude on the part of local farmers. The G. K. project has also brought about multiple cropping system. Before the introduction of the irrigation method, the intensity of cropping in the area was 125%, this rose to, after the introduction of the irrigation project, a peak of 196% in 1967/68 and later it came down to roughly 157% in recent years. The main factors that affected the performance of the irrigation method were the shortage and untimely supply of inputs, especially fertiliser. It has also favourable impact on agricultural productivity. Whereas the yield per acre for the traditional crop is around 10 mds. the average yield per acre for HYV crops is seen to be around 30 mds. This has given much incentive to the farmers to use irrigation water. At the time of our visit, when there was 100% subsidy in the irrigation water, there was a very high demand for water. It, however, remains to be seen, if the same tempo is sustained after the imposition of water tax in the area.

Some comments are in order. Firstly, the chashi clubs, the centre of extension work, are not working well. There are too many *Beldars* working in the club jurisdiction than are actually needed. They are local people mostly engaged in doing their own house work and pay very little attention to the farm problems. The Sectional Officers (S. O.) under whose guidance the *Beldars* are to work, cannot take any action against the *Beldars*, as he does not belong to that locality. It has been reported that some Sectional Officers use the *Beldars* for their personal work. It has also been gathered that many S. O.s cultivate land on *barga* system and make use of the irrigation water (and sometimes other inputs) free of cost.

Secondly, the starting of the second phase of the Kushtia Unit has not at all been wise. While visiting the G. K. project in 1976, we heard thousands of complaints about the inability of the project authority to supply adequate water to them. It is not understood on what basis the second phase has been started. But it seems that

the G. K. project authority is more eager to 'show up' their command area than they are actually covering. Thirdly, there exists golden opportunity of planting trees along the bank of the primary canal. But simply because of the fear of leakage by insects, the G. K. authority has abandoned this idea. It is suggested that at least plantation can be made in some area on experimental basis. Fourthly, the project has already produced some adverse effects on the society. It has closed down at least 3 rivers, namely, Kaliganga, Dacoa and Hanu, causing severe impact on fishing and navigation. As the project has become able to cover only 10% of the total cultivable area, the remaining 90% area has been deprived of having neither the advantage of irrigation water nor the natural fertility benefit of flood water.

Finally, the greatest danger lies with the irrigation machines. Out of 3 big pumps, 2 are working and out of the 12 subsidiary pumps only 4 are working. Others, it is reported could not be repaired because of the non-availability of spare parts. Incidentally, the pumps of the G. K. type are now out of production—the authority has been informed. Consequently, when these machines will be out of order, there will be no other alternative but to replace them altogether. Can the country afford to pay a few crores of taka for such a huge un-economic project for the second time? Or should the country at all venture to take that sort of big risk?

IV. CONCLUDING REMARKS

This paper has made an attempt to evaluate the impact of various irrigation methods on agricultural productivity and income distribution in some selected areas of Rajshahi, Dinajpur (Thakurgaon Deep Tubewell Project) and Kushtia (G. K. project). Some preliminary results, both qualitative and quantitative, have been analysed. From the discussions so far attempted, the following points emerge :

(i) Contrary to popular belief land use and village patterns are characterised by different qualitative factors to distinguish one from the other, implying that planning from below, rather

than from top, will be the most acceptable proposition for rural Bangladesh.

(ii) There was very little change in the production relation. Feudal hold of the big farmers, paradoxically enough, was tightened in most of the areas of our study.

(iii) Irrigation has brought about, although partially, rotation of crops in all the areas under review. It reflects the change in attitude, though not complete, on the part of the agriculturists. New crops like, IR-8, IR-20, Chandina, BR-3, Saita Boro, etc. have been found to be very common among the farmers using irrigation water.

(iv) Irrigation has opened up the possibility of multiple cropping. In all areas, it has been observed that the intensity of cropping is much higher in the irrigated farms than that of the non-irrigated farms.

(v) Yield per acre of HYV crops was observed to be around 30 mds. and this was seen to be much higher than that of traditional crops, e.g. 10 mds. for Aus and Aman.

(vi) Irrigation has also increased the employment opportunities for the landless labourers, as HYV technology itself is very much labour-intensive.

(vii) Irrigation alone is not responsible for fundamental changes in production practices and productivities in agriculture. Fertiliser, better seeds, insecticides and appropriate technical know-how have had a tremendous influence on the success of the irrigation projects.

(viii) A declining trend in the productivity has been noticed in most of the irrigated farms. Mechanical troubles, power failures (where tubewells are run by electricity), mismanagement, shortage of inputs have been found to be the major factors causing fall in the productivity of crops in the study areas.

(ix) Modern irrigation methods have definite rich farmer bias. The rich peasants are taking advantages of the supply of modern high yielding agricultural inputs and seen to have started making capitalistic use of land. The medium farmers are enterprising in adopting new technology.

(x) The study shows that irrigation has helped widen the gap between the small and large farmers when viewed in terms of total net per household agricultural income ; but it has reduced the gap between these two groups of farmer when viewed in terms of net per acre income. The later finding implies that the small and medium farmers are more efficient than large farmers in respect of using irrigation water and other inputs.

(xi) Indigenous dugwell scheme has favourable impact on the society from the view points of distributive justice but this is not necessarily so for modern irrigation methods.

(xii) A change is not expected to be fundamental or permanent if there occurs no significant transformation in the mode of production involving productive forces and production relations.

Land Reform in Bangladesh : Some Observations

by

MD. ABUL QUASEM*

It is not known what the policy makers and the executives really mean by land reform. Apparently it is understood as redistribution of excess land to be recovered from big farmers. Redistribution is supposed to serve varied economic and social objectives of which the important ones are the following :

(i) Distribution of land will be equitable and it will help increase in employment and productivity ;

(ii) Present power structure based on landownership will not exist and it will help implementation of social welfare oriented policies ;

(iii) It will help implement specific agricultural programmes say jute and cotton cultivation depending on the national interest irrespective of varying individual's interest etc. But the policy of redistribution of land raises many queries which are as follows :

(i) Who are the surplus farmers ?

(ii) If the measure is size of farm, say 5.0 acres as often suggested, then is the same size applicable throughout Bangladesh or should there be regional difference in size depending on the level of normal flooding, irrigation facility, cropping pattern ; etc ?

(iii) If the size in alluvial tract is 5.0 acres and 7.5 acres in other areas (assumed), how much area can be recovered from the big land owners ?

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(iv) To whom and in what form that recovered land will be distributed? If the recipients are landless and small farmers, do they have the knowledge, capital and farm tools for cultivation?

(v) If the small farmers are able to farm, will they have surplus for further investment leaving aside for consumption?

(vi) Are the big farmers really rich and live like urban elites and industrialists when they have more than 7.5 acres of land?

(vii) If excess land of above 5.0 and 7.5 acres is taken away from the big ones what will be their economic condition? Will they be able to manage their living above subsistence or are they simply being dragged down to below subsistence?

(viii) Will the big farmers be compensated? If it is, what should be the price of those land? How will they be paid and who will pay for it? If the payment is done in installment over a period of say three years will the surplus farmers be benefitted?

(ix) If the payment is made by the government and land is distributed to the cooperative, will it be able to organize and manage the farm (keeping in view the present state of cooperative)?

(x) Is the existing administrative set-up able to collect and distribute land to the **genuine tillers** (taking into account the present level of corruption)? and

(xi) Who will be the real beneficiaries of that land redistribution policy?

This paper, however, side-tracts many of the above issues and investigates the possible effect on income of both small and big size farm after redistribution of land. It is concluded that the sectoral land reform may not help economic development rather a complete redistribution of assets in both urban and rural area is required.

Redistribution of Land and Income of a Farm

As the actual area under different soil tracts is not known let us consider the maximum farm size as 7.5 acres. For the sake

of convenience the effect of irrigation is ignored. The farm area above 7.5 acres is 6.67 million acres occupied by about 5.4 lakh farms i.e., 7.84 per cent of total farms. From this area excess land of 2.63 million acres (above 7.5 acres) will be available for redistribution. If this area is divided among the farmers having 2.5 acres and below, but **not to landless ones**, then total area in that group will rise to about 6.0 million acres resulting in an average size of 1.52 acres as compared to previous average of 1.18 acres and the present national average farm size of 3.1 acres. It may be noted that this size (1.52 acres) will further decrease if the case of landless peasant is taken into account.

It may further be mentioned that this whole area of recovered land is not suitable for cultivation and will be of uneven topography, low fertility, jungle, old ponds etc. The area will be scattered as well. To bring this land under cultivation consolidation is therefore, a prerequisite. Who will do this job? And how much time it will require is difficult to imagine.

Next, most of the small farmers do not own bullock power. They will also need working capital for seeds, fertilizers etc. So, in the first year of plantation large amount of capital is necessary and that has to be provided from institutional sources. Will the existing institutions be able to handle such a large amount of fund effectively?

If these small farmers are capable of cultivation, how much additional income they may earn is a question to be examined. If 1.40 acre out of 1.52 is put under cultivation and the cropping intensity is considered at 150% against the national average of 147% in 1973/74, total cropped area stands at 2.10 acres. At a rate of net output value of Tk. 800.00 per cropped acre annual income accounts to Tk. 1,680.00 for a family of 5 members (assumed). This income may be higher than previously earned amount but it is apprehended that this increased amount will be consumed by them because unlike the past they may not remain half-fed. This will however, enable them to farm intensively and if the government provides financial support for quite some time, their position will improve. Here it may be worth-while to mention

that the land reform in Japan stimulated a marked rise in propensity to consume and its effect on productivity via an increase in agricultural investment was rather weak.¹ Further, Hossain² found that in Bangladesh productivity of land and labour is the highest in the 2.5 to 5.0 acre size group. So, from the productivity point of view, redistribution would be favourable to the medium size farms.

State of Big Farmers

Let us see how a big farmer will be affected when his farm area is being reduced to 7.5 acres from where he will have lesser income compared to the income of the past. His estimated income will be about Tk.8,400.00 from 10.5 cropped acres. Per month income is Tk.700.00. In both these estimates it has been assumed that crop will not fail which is far from actual situation. Almost every year crop of one season or another is damaged (partly or fully). Now with this sum of Tk. 700.00 is it feasible to maintain his family of seven members (considered higher because generally big farmer has larger size of family) particularly when one or two of his children is/are students in a college/university? Here it may be added that per annum food cost alone per head (adult) has been Tk. 735.00 in 1973/74 i.e., Tk. 2.00 per day as estimated by Salimullah and Islam.³ They also show that 75 per cent of owner farmers are living below poverty level. The remaining 25 per cent who are living above poverty level have per capita income of Tk. 1,389.00 and their value of assets is Tk. 3,638.00. Alamgir⁴ has however, estimated the value of assets at

¹Shigeto Kawano, "Effects of the Land Return on Consumption and Investment of Farmers" in *Agriculture and Economic Growth: Japan's Experience*, edited by Kazushi Ohkawa *et al.* Princeton University Press, 1970, p. 397.

²Mahabub Hossain, "Farm Size and Productivity in Bangladesh Agriculture: A Case Study of Phulpur Farms", *The Bangladesh Economic Review*, Vol. II, No. 1, January 1974, p. 493.

³Salimullah and A. B. M. Shamsul Islam, "A Note on the Condition of Rural Poor in Bangladesh", *The Bangladesh Development Studies*, Vol. IV, No. 2, April 1976, p. 268.

⁴Mohiuddin Alamgir, *Bangladesh: A Case of Below Poverty Level Equilibrium Trap* (mimeo.), December 1976.

Tk. 13,252.00 per family (all rural families combined), but that in the large size farm (7.5 acres and above) it is 71,963 of which 93 per cent is value of land at 1973/74 prices. Actually land as a single source cannot help improve the economic condition appreciably as return of land is low and also uncertain.

Farm Management studies undertaken by the Ministry of Agriculture⁵ show that net income (per acre) is lower than the amount mentioned above. These studies also indicate that variation in per capita net income depending on the size of farm is not very high.

Another survey undertaken by the Bangladesh Institute of Development Studies⁶ in the year 1974 show that the economic status of the farmer is not satisfactory even in the large size farm, where per capita income is Tk. 876.00 about double than the small farm and the outstanding loan amounted to Tk. 1,286.00 in the large farm.

It is therefore, not understood how the redistribution of land can help economic development in Bangladesh where income and the size of farm is already low and most of the farmers are living below subsistence.

Land Based Power Structure

Land reform is often pleaded to weaken the land based power in the rural area with the idea that it will enable rural people's participation in the development programmes. Now it is argued that whatever little facilities and opportunities made available in the village are manipulated by the rich in their favour instead of common people. Such a contention seems to be incorrect except in stray

⁵Ministry of Agriculture, *Farm Management Research in Retrospect*, F. M. series No, 1, December 1973.

⁶Mohiuddin Alamgir, *Bangladesh: A Case of Below Poverty Level Equilibrium Trap*, December 1976, pp. 29-31.

cases. Actually most of the rich people behave in a traditional way and never realize it as exploitation. Further, because the poor people are shy, dis-organized and have little access to the government officials, cannot enjoy the advantages. This is to some extent the defect of the existing system and the government bureaucratic approach which actually helps the rural rich to exploit. Any way if redistribution of land is implemented, it is apprehended that almost all rural families will be placed at the state of below poverty level. Such a state will create a chaotic society in the village because every one will at that stage struggle for one's own subsistence and there will be none to take the lead in the social interest. Production cooperative⁷ as often suggested for agricultural development will be a failure unless there is a strong hand from the state.

Why Sectoral Reform ?

It may be a pertinent question to an objective of the paper to ask why we advocate for this sectoral land reform when we see the strong-hold of the economic power in the towns, where the capitalists/industrialists are functioning, resulting in more concentration of capital assets. Actually, these capital owners along with the urban elites and bureaucrats are enjoying surplus values and lead a decent life. Their standard of living seems far high than that of rural rich. So, before undertaking any such policy of land reform costs of minimum level of living needs to be ascertained and accordingly 'Reform of Assets' should be done in both urban and rural area simultaneously. If it is to be sectoral it may be initiated from the urban rich and that will be less costly from the administrative point of view. Number of people affected will also be few in this sector. Moreover, the urban assets being concentrated, localised and more productive may help rapid economic development. This does not mean that land reform is not at all necessary. There

⁷Mohiuddin Alamgir, "Some Aspects of Bangladesh Agriculture: Review of Performance and Evaluation of Policies", *The Bangladesh Development Studies*, Vol. III, No. 3, July 1975, p. 295.

are a few aspects of land reform which should be considered immediately for rural development.

Few Aspects of Land Reform

Land reform may be undertaken where the land is kept unutilized and not intensively cultivated. Immediate importance is due to the adequate security of the tenants and modification of tenurial arrangements which vary from area to area. In some places land owners enjoy half of the produce after sharing of half of the costs of physical inputs. This can be easily introduced elsewhere. Further, share of the increased amount of produce resulted from state's support (deep tubewell, embankment) may be raised in favour of tenants. Similarly, available *khas* land, newly silted land, abandoned and re-excavated area can be distributed to the small and landless farmers instead of the big farmers as prevalent now a days. Further, government may provide finance for purchasing of land from the neighbours. That amount may be realised later in installments. Land occupied by rich absentee owners may also be recovered. Sometimes small farmers are found to rent out land because of small size and lack of bullock power. In such cases, the government may occupy the area and provide the displaced with suitable employment and residential facility. This will also help consolidation of holdings.

Further, instead of considering land as the simple means for economic development we should look into alternative enterprises (dairy and poultry farming, pisciculture and mini fruit processing plant). This will also enable them to organise themselves. The government may also follow some discriminating policy in favour of rural poor in terms of employment in the field of agriculture, education and trade and commerce.⁸

⁸Please see "Land Reform and Agrarian change in India and Pakistan since 1947" by P. C. Joshi in the *Journal of Peasant Studies*, Vol. 1, Nos. 2 and 3, 1974.

CONCLUSION

Land reform in terms of redistribution of land may not yield expected result. Considering the present level of technology, and productivity of land, and present size of family and cost of living, 7.5 acres of farm land per family is inadequate to maintain a minimum standard of living. Further, this being a sectoral reform it has been suggested that policy of 'Reform of Assets' in both urban and rural area may be undertaken simultaneously on the basis of some minimum standard of living.

Thoughts on Modernising Transformation of Bangladesh Agriculture

by

KHALEDA SALAHUDDIN*

I. INTRODUCTION

Bangladesh agriculture is characterised by a large number of small farms organised around the family unit which supplies bulk of the labour force, management and capital (though inadequate) for these farms. True to its characteristics, our agriculture has meagre resource, very low labour productivity and low level of production (and net income), unexploited capital formation potential and a large number of marginal and landless farmers. The number of surplus labourers is quite significant.

But the fact that this sector contributes more than 55% to the GDP and employs about 75% of the total population makes the place of agriculture in the economy very important indeed. Its importance is also underlined by the fact that with employment-capital ratio rather low in the non-agricultural sector and its size being too small, agriculture has to provide the bulk of productive work opportunities to our rapidly growing population (around 3% per annum) for quite a few years more. The fact that agriculture still represents a large proportion of the national economy, and demand for agriculture product is rising due to both demographic and income effects and that capital for industrial development is scarce, the inter-relationship of the development objectives and the means for development is particularly important for that sector.

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The size and backwardness of this sector suggest wide scope for raising GDP through agricultural development. The same factors provide scope for the rural sector to combine income-distribution objective through implementation of plans which increase production and employment objective across a wide spectrum of the agricultural sector. Again due to limited scope for economies of scale in agriculture, rapid expansion of non-farm sector where such scope exists is necessary.

Since it requires a vast amount of capital (a large part of which uses capital-intensive technology), we must logically turn to agriculture which initially commands most of the population, income and also capital, for raising a substantial part of additional capital required for such expansion. As development occurs, per capita demand for food and other agricultural products rises with the rising level of living. It, therefore, logically follows that the key to rapid economic development lies in modernising traditional agriculture of Bangladesh.

II. OBJECTIVES AND STRATEGIES

Evert M. Rogers has defined modernisation as "the process by which individuals change from a traditional way of life to a more complex, technologically advanced and rapidly changing way of life". This transformation is urgently needed not only to give a minimum possible decent living to the hardworking poor millions but to rescue them from what Dr. M. Alamgir has termed as the 'Below Poverty Level Equilibrium Trap'. The objective of rapid transformation of agriculture may be summarised as follows :

a) Raising the average level of living of our rural people. To realise that goal, the total production of goods and services must expand more rapidly than the population growth. Level of living certainly includes improved health, education as well as more hours of leisure which are the requirements for more efficient use of labour force in production. This can be done through development of productive forces and harnessing internal resources.

b) Reducing inequality of income by ensuring that benefits of development go to lower income groups whose productivity and wages

rise and who can begin to avail themselves of the lower priced goods and services available. It may slow down the rate of output growth a bit initially through its effects on saving due to redistribution of income in favour of groups with lower propensity to save, but it may also be more than counterbalanced through its effects on incentives as well as under-utilised talents which can contribute to an accelerated rate of economic growth.

A planned development of our physical and human resources can realise these objectives. The planning exercise should be made taking into consideration the following :

- i) Expansion of employment,
- ii) Growth of income,
- iii) Promotion of self-reliance,
- iv) Adequate production of consumables,
- v) Expansion of exportable goods.

While making sectoral allocation of resources related issues like :

- i) Choice of technique,
- ii) Locational priorities, and
- iii) Ownership distribution of assets must also be considered — (we cannot ignore this vital issue because studies have established the fact that unequal assets distribution leads to inequality of income).

Another related issue is identification of growth centres both existing and potential. This is required to reduce regional imbalances.

Macro or Micro Approach : What should be the most appropriate planning approach in the context of Bangladesh? For agricultural and rural development, planners everywhere are giving greater attention to micro level planning. Because the present macro planning approach suffers from aggregation problems. The strategies adopted in a macro plan do not take into account the regional peculiarities. Local and regional problems of agricultural development vary so widely that in some cases no common solution can be prescribed. To take a concrete example, macro planning approach may suggest HYV introduction in place of low-yielding local varieties as a solution

to the low productivity of land. But whether a specific HYV is suitable for a particular area depends on its ecological, topographical and physio-climatic conditions. It is only through micro planning approach that the suitability of a particular area for a specific variety can be ascertained.

Agriculture involves a large number of different kinds of production decisions made by millions of farmers widely scattered. A macro plan can at best provide only broad guidelines about the possible steps to be taken for accelerating development. But while emphasising micro level planning, macro planning approach cannot be totally ignored. For determination of national priorities, allocation of resources and identification of resource constraints macro planning exercise is also necessary. Micro and macro level planning should not be considered mutually exclusive exercises. One should always complement the other. A balance between the two should be struck. Where should that balance lie is, of course, a matter of detailed scientific analysis of the relevant data and identification of the factors involved.

While formulating a development plan the planners must take into consideration the following factors.

- a) The existing socio-political context.
- b) Need for the adoption of such strategies as will be consistent with the objectives of the plan.
- c) Necessity of striking a balance between centralised and decentralised planning.

III. RESOURCE BASE OF THE AGRICULTURAL SECTOR

Land : Within the construct of a traditional agriculture, land in Bangladesh may be termed as a scarce resource. The existing land-man ratio is an obstacle to rapid agricultural development. With a population density around 1306 per square mile and per capita landholding being 0.445 acre on an average, the situation is rather grave. The ownership distribution pattern has made the situation all the more worse.

The following table showing the pattern of ownership distribution will throw some light on the ownership distribution situation [4].

DISTRIBUTION OF FARM BY SIZE

(According to Agricultural Census—1960 and Master Survey of Agriculture—1968)

Size of Farm in Acre	Agricultural Census 1960		Master Survey 1968	
	Percentage of Farm Area	Percentage of Farms	Percentage of Farm Area _a	Percentage of Farms
Under 1.0	3.24	24.31	4.24	24.96
1 to under 2.5	13.01	27.32	17.08	31.67
2.5 to under 5.0	26.40	26.32	29.97	26.32
5.0 to under 7.5	19.30	11.38	17.77	9.20
12.5 to under 25.0	14.11	3.06	10.95	2.16
25.0 to under 40.0	2.91	0.35	3.30	0.36
40.0 and Above	1.89	0.08	1.17	0.08

Small farms — less than 2.5 acres

Medium farms — 2.5 to 12.5 acres

Large farms — 12.5 acres and above

(Agricultural Census, 1960 defines farm size as the total area that includes cultivated and uncultivated land. Master Survey defines it as cultivated area only.)

The table shows a general decline in the average farm size leading to higher percentage of smaller farms and lower percentage of medium and large farms over the 8 year period. It may partly be explained by the increasing pressure of population and operation of the law of inheritance and partly by the narrower definition of farm size adopted in the Master Survey of 1968.

In spite of the acute scarcity of land resource, it remains unused and under-utilised. There is a great wastage due to fragmentation situation, unsatisfactory cropping intensity and cropping pattern and inadequate irrigation facilities. Only about 35% of the area is cropped more than once. Rice production monopolises nearly

80% of the cropped area. By June 1973, irrigation coverage increased only upto 13.60 lac acres.

In a traditional agriculture like that of Bangladesh, a high degree of complementarity exists between land and labour. Population growth has forced down the marginal productivity of labour on the existing stock of land to the subsistence or below subsistence level. But agriculture remains technologically static. Under these conditions, land has low average productivity. With the addition of other complementary inputs (i. e., fertiliser, better seeds etc.) large increases in land productivity become possible.

Capital : In some specific forms, capital is also considered a scarce resource. However, agricultural capital in its traditional form is created by a production process in which labour is the primary and in some cases the only resource. A hand-dug well is a form of capital which can be expected to have the virtue of abundance and hence low marginal productivity. Provision of complementary scarce resource can raise the productivity of this forms of capital. This, in turn, should induce additional supply of these capital by activating the abundant labour supply which can produce them.

Labour : Labour in its unskilled form may be termed an abundant resource in Bangladesh. It is, therefore, important to know to what extent agricultural production can be increased within a static technological framework through greater use of labour. Contrary to the assumption of most of the development theories, there is considerable evidence that increased labour input within the traditional framework can increase output in most of the low-income countries. Again an introduction of special kind of technique some times requires a complementary input of labour. Attention, therefore, is to be given to identify the factors which influence the availability of labour in agriculture and the means by which existing labour can be mobilised.

On Bangladesh farms, weeding is poorly done, seed-beds poorly prepared, the number of hand-dug irrigation wells which could be produced by greater use of labour is inadequate. Better irrigation facilities will lead to greater possibilities of introduction of three crops a year increasing in its turn the demand for labour. It indicates

the possibilities of increasing production simply through the use of more labour.

If agricultural development occurs through application of appropriate technique which does not require major substitution of capital for labour, then the labour input per acre can be expected to rise very substantially. A recent study on introduction of MOSTI (Manually Operated Shallow Tubewells for Irrigation) in Bangladesh by Lawrence M. Hannah shows that on an average, each pump requires approximately the full working time of one person. Since almost all the pumping occurs at the traditionally slack season, absorption of idle labour is a positive aspect of MOSTI. The existing stock of MOSTI (numbering 36,000) creates some 40,000 man-season jobs [7].

Given a tendency for population to expand, avoidance of reaching a Malthusian equilibrium will depend on the nature of production function. A large scale employment programme based on a employment increasing new technology may not remove surplus labour in the agricultural sector of the peculiarity of agricultural unemployment is not understood. Though there exists surplus labour during slack season, in peak seasons there are even shortages in labour supply and the marginal product of labour is positive.

Production Facilities of Physical Inputs of New and Improved Varieties : Modern agriculture requires new methods and materials, new seed varieties and chemical fertilisers, improved varieties of live-stock etc. Facilities to produce and distribute them must be provided to the farmers. That will require trained workers as well as a tight quality control. Failure to provide any of these complements may easily lower the marginal productivity of many of the new inputs well below its marginal cost. For instance, improved seed varieties require such complements as adaptive research and testing, seed distribution, supply of fertilizers and careful instructions to the farmers as to how to use them.

Effective use of new inputs requires a host of servicing facilities. They are largely of an institutional nature for which trained manpower is the principal input. These include facilities for distribution

of new inputs, marketing and processing of the increased output, extension of credit and other means of marshalling capital resources at the farm level and efficient transportation facilities. Rural developmental bodies with adequate manpower are needed for collective action to develop such services.

Adaptive Research : Long term growth in agricultural production needs a research programme for continually generating new production technique suitable for this country. Adaptive research is needed because of physical, economic and cultural variability. It is a critical weak point in our development programmes.

Education for Farmers : Virtually all aspects of agricultural development hinge on creation of a broad range of educational institutions. The basic human raw material to be transformed is abundant. The allocation problem lies largely with the use of nucleus of trained personnel to staff a training programme. Efforts aimed at developing local institutions for increasing literacy and instituting rural social changes by community development and other techniques can be started by personnel with little initial training, supplemented by continued in-service training. The agricultural extension programmes at the early stages can concentrate on relatively simple innovations. In the long run such efforts will contribute much to increased agricultural production at low opportunity cost. In the short run they should be developed rapidly without letting them compete too hard for those scarce administrative talents which are required for the few programmes designed to give long-run increases in production.

Requisites for a Change in Motivation : The desire for increased material welfare, political ferment, education and improved health play important roles in developing a favourable personal and institutional attitude towards change.

The second most important requisite for such change is the expectation that the change will, in fact, increase wealth.

The third one is the expectation on the part of the farmer-innovator that he himself will be the beneficiary of the net increase in wealth which accompanies successful innovation,

But the farmer-innovator in Bangladesh may fail to participate in reaping the benefits for three sets of reasons.

- a) He does not have sufficient control over the factors of production to channel benefits to himself.
- b) He does not have sufficient control of the marketing process to channel benefits to himself.
- c) He does not have sufficient control of his own consumption pattern to allow increased benefits to be used for himself.

All three of these factors are likely to be closely related to the system of land tenure.

The solution of the problems of incentive may lie in abolishing the present sharecropping system and the feudal variant of land owner-tenant system prevailing in our agricultural sector. Since the bigger ownership units have a greater tendency to resort to sharecropping, economic arguments may be put forward in favour of cutting down the size of very big farms to a certain level to generate more employment and achieve greater productivity.

As the bigger farmers form a part of the rural 'Bhadraloks' (though they are not the descendants of the ancient landed aristocracy) they try to avoid farming both as a manual labour and entrepreneurial activity, imposing on agriculture serious cost, through high consumption, absenteeism and by perpetuation of the system of sharecropping. They do not have the motivation to organise farming on commercial lines so that agricultural output can be increased and sufficient surplus generated.

Again large number of surveys in Bangladesh have shown that employment per unit of land is a sharply decreasing function of farm size [8]. As Dr. A. R. Khan has rightly pointed out since the smaller farms are more often based on family labour having very little alternative earning opportunities in the market (and which is abundant in relation to farm size), there is a tendency to employ them as long as the marginal product of labour is positive. While, for quite a range, where there is work sharing of some sort, use of labour may cross the point where marginal product of a man-hour is zero.

The bigger farms depend more on hired labour partly because the farm size is too large and partly due to the fact that such farm households would not get involved in manual work. Such farm would, therefore, keep employment at the level where the marginal product will be equal to the market-wage.

Again, contrary to the popular belief, surveys show that in the context of Bangladesh, output per acre is larger for the smaller farms while profit per acre (valuing all inputs at market costs) may be higher for larger farms. (According to surveys conducted by the Bureau of Economic Research, Dacca University and Bangladesh Institute of Development Studies.)

In a state of given technology, the weight of evidence indicates higher agricultural productivity for smaller farms. Again in recent years, the seed-fertilizer technology has spread more among small and medium farms owing to its scale neutrality and divisibility.

It can be said, however, that the rate of adoption of improved technology would be greater for the larger farms, because of the existence of better scope for efficient use of modern inputs. But the fact remains that the bigger farms have not been able to seize the opportunity of dynamic growth and generate surplus due to the existence of inefficient institutions like sharecropping and lack of motivation to organise farming on capitalistic lines.

Another vital issue may be raised here. If a government agricultural assistance programme raises the profitability of large farms and no restriction is put on farm size, the larger farms may grab smaller units creating an additional army of landless farmers. Not only that, it will lead to greater inequality in the pattern of ownership distribution of land which in its turn will lead to greater inequality in income distribution in the rural area.

The large farmers are not big savers either. Their greater mobility and urban contact make them big consumers. According to Dr. A. R. Khan, fixing of ceiling around 7.5 acres per family will release 2.6 million acres of surplus land which will affect only 8% of the farmers. A redistribution of this surplus among very small farmers

may raise the size of each farm unit which is below 1.5 acres to this level. This is expected to create a very big impact in terms of increased productivity and employment and reduction of income inequality in our agricultural sector. A recent study on reduction of rural income inequality through land redistribution by Iftekhar Ahmed shows that at least 30% of the variation in rural income distribution can be explained by land-ownership distribution. Since no revolutionary step by way of land reforms can be expected in the near future, at least these small measures may be tried to put our stagnant agriculture on the path of progress.

Some kind of collective action is, of course, needed to solve various problems faced by our farmers.

Cooperative farms vary from owner-cultivator farm with collective actions taken with respect to a number of ancillary functions to a tightly knit alliance in which farmers completely pool their operations and centralise their decision making. Optional policy in this regard may lie in the inter-mixture of several variants of cooperative actions keeping in view the socio-economic conditions prevailing at the moment. What will really be the optimal policy in this regard will depend on its impact on :

- a) Saving and investment (i. e., effects of reforms on the propensity to save and invest of the various groups and its effects on income inequality),
- b) Production increasing innovation activities,
- c) Essential services (i. e., research, education, marketing, credit etc.).

A great deal of excess demand for credit exists in rural Bangladesh. Only about 50% of the farmers have access to credit. The 1967 survey report on agricultural credit in East Pakistan shows that a small proportion of the total borrowing is used for directly productive purposes. About half of the total credit is used for consumption purposes and one-tenth for non-agricultural use [13]. Reforms should produce a favourable effect on the credit situation in the rural area.

Modernising a traditional agriculture requires organisational and institutional changes by which production and income incentives may be transferred to the farmers and away from the vested interest groups who want to maintain a *status quo* because of their highly privileged position.

In Bangladesh, one of the main obstacles to rapid agricultural development is the lack of proper institutional arrangement. In the past, various types of rural institutions were tried which may be classified into :

- a) Local bodies,
- b) Cooperatives,
- c) Community organisations.

The concept of local planning was built into these institutions. The village aid, the rural works programme, the Thana Irrigation Programme (TIP), the Thana Training and Development Centre (TTDC) and the Integrated Rural Development Programme which is the culmination of the Comilla experiments are some of the attempts at building rural institutions.

Among the factors responsible for failure of these institutions to realise the objectives include :

- a) Failure to mobilise internal resources,
- b) Lack of efforts to draw a comprehensive plan involving all classes of people,
- c) Lack of attention to the class structure of the rural society which resulted in the concentration of benefits arising out of the development efforts in the hands of the wealthy farmers,
- d) Lack of definite attempts at piecing together individual production plans,
- e) Imposition of the institutions from the top and treating them as extensions of government departments,
- f) Lack of co-ordination and integration of activities both at the national as well field level where multiple agencies are providing almost similar services,
- g) Finally, lack of adequate finance to keep these institutions going.

The local institutions of Bangladesh had never provided an effective mechanism for collective decision-making by all classes of local people including landless farmers and women.

IV. A FEW SUGGESTIONS

In the light of the above discussion, a few suggestions may be put forward.

1) The extent to which farmers use new inputs is dependent on their physical productivity and relative prices. If agriculture is to pull high opportunity cost resources from other sectors, the return on it must be substantial. The emphasis should be less on reducing input cost by subsidisation and more on increasing productivity of inputs through research and technical improvements. Before distributing new farm inputs factors like :

- a) Physical conditions of the area,
- b) Economic responses (i. e., which region will respond better to a higher level of income etc.),
- c) Cultural responses,

must be taken into consideration.

2) Secondly, the families with small farms are expected to provide greater labour input per acre and achieve higher yield per acre, than families with large farms. Hence a policy of redistribution of land towards the landless and marginal farmers should provide a basis for an increase in production. The institution of sharecropping should also be abolished.

3) Thirdly, a progressive land tax on larger holdings would force a higher level of output in order to maintain a given level of living.

4) Fourthly, a programme with the objective of familiarising available new goods and services to increase their utility to the farmers would force up income above the subsistence requirements via higher level of output.

5) Fifthly, a drive to relieve the extreme scarcity situation, fuller utilisation of land by rapid increase in irrigation coverage along with a change in the cropping pattern, should be undertaken.

6) Sixthly, a suitable policy for the extension of credit facilities, simplification of lending procedures and effective supervision of loans to reduce the number of defaulters must be framed.

7) Seventhly, to arrest the alarming population growth-rate (so that further subdivision of holdings below economic size can be halted and significant surplus can be generated in the agricultural sector) quick implementation of a sound population-control plan incorporating a well-prepared family planning programme, amendment of existing laws regarding marriage and divorce (polygamy may be made illegal, for instance) as well as programmes for women's effective integration in the production process should be given high priority.

8) Eighthly, a constant appeal to community pride through mass media and other means for greater achievement through harder work may decrease the utility of leisure to the farm community relatively to work.

9) Attempt should be made to change seasonal labour demand through the introduction of new seeds. Conventional harvesting periods may also be changed by introducing varieties with shorter maturation period.

10) A suitable change in the rural institutions must be effected to make the rural community development-oriented by involving all classes of people including marginal farmers, landless labourers and women in the development process.

11) Finally, an appropriate policy for providing encouragement to efforts at technological innovation which is consistent with the factor endowment in the agricultural sector may boost production and increase employment.

V. CONCLUSION

Transformation of a traditional agriculture is an intricate process. All the aspects in it interact with one another which again is a continuous process. The present structure being unjust and rigid, only a deliberately planned effort aimed at releasing the creative

impulses and energies of all classes of people constituting the rural community can bring about a rapid transformation of our traditional agriculture. It involves technological, institutional and attitudinal changes. This transformation is a necessary condition, though not sufficient one, to initiate the desired process of growth and development in the Bangladesh Economy. If we fail to realise this, our dream of reaching the takeoff stage will never come true. 'Self-reliance' is the slogan of the day. Only a progressive agriculture with self-reliant farm-households can lay the foundation of a "Swanirvar Bangladesh".

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Mobilization of Rural Savings: Some Innovative Approaches Towards Tapping a Latent Resource for Development

by

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I. INTRODUCTION

The bid to accelerate the process of development by most LDCs like Bangladesh is severely handicapped by the lack of investible resources. Of these, shortage of capital is the most important and also the most sensitive bottleneck. Shortage of capital manifests itself in two ways in these economies: (a) low rate of domestic savings and (b) excessive dependence on foreign assistance for any development effort; the latter being largely a by-product of the former. Hence it is obvious that while formulating plans for economic development, the LDCs attempt to mitigate their requirement for capital from two sources: domestic capital formation and external aid. As the magnitude of development effort increases, the degree of dependence on foreign capital also tends to increase in the same or even in a greater proportion depending on the nature of projects undertaken. Along with the process of development a continued effort is thus witnessed everywhere to find ways and means for reducing dependence on foreign assistance. Since Bangladesh too has not lagged behind in this march towards the goal of self-sufficiency, mobilization of savings may be considered one of the strategic issues of development. Indeed, the strategy of building up

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a 'self-reliant' Bangladesh rests on the mobilization of domestic savings (reducing thereby the dependence on foreign assistance) and particularly that of rural savings.

The predominantly rural character of the Bangladesh economy both at present and for many years to come can hardly be disputed. About 85% of her population live in rural areas who are directly or indirectly supported by the rural economy. Thus to involve a large majority of people in the development process, their participation in the savings programme must be ensured through adequate measures. Further special efforts to mobilize rural savings will also be required to finance rural credit needs if the programme for Integrated Rural Development (IRDP) is to become a self-sustaining operation as envisaged in the principles of the 'Swanirvar' (self-reliant) movement.

Given the above background, the present paper aims at describing the experience with rural savings mobilization through the existing savings institutions and exploring what further steps may be made by them in this direction.

II. PROBLEMS CONFRONTING MOBILIZATION OF RURAL SAVINGS IN BANGLADESH

The fundamental problems confronting mobilization of rural savings in Bangladesh are poverty, illiteracy and inequality of income among the people. Majority of the people in rural areas live at the subsistence level and do not have surplus in their income over their consumption needs. The problem is further aggravated by the high rate of population growth which reduces the scope for savings. The recent high inflation is the other deterrent which worsens income distribution, reduces the propensity to save and discourages people from investing in financial assets. Last but not the least, social and cultural constraints also pose as formidable difficulties. As is well known, income earners in this relatively less monetized sector of the economy tend to hold their savings mainly in currency and to some extent in gold and jewellery, in real estate and in the form of loans given in the unorganized markets[4]. Savings held in such

forms (partly due to the ignorance of the income earners about the availability of appropriate savings institutions and partly due to the absence of necessary facilities to do so) are in most cases socially unproductive.

Given the shortage of investible resources, this situation demands proper utilization of the resources lying idle in rural areas through vigorous deposit mobilization efforts. The urgent need to intensify deposit mobilization efforts in the rural sector is further indicated by the data presented in the table which shows the magnitude of currency outside bank volts over the period June 1972 to October 1976.

TABLE I
MAGNITUDE OF CURRENCY OUTSIDE BANKS DURING JUNE 1972 TO
OCTOBER 1976

(Figures are in Crores of Taka)

	June 1972	June 1973	June 1974	June 1975	June 1976	June 1977
a) Demand Deposits	310.10	409.60	485.64	521.41	563.09	579.11
b) Time Deposits	213.51	293.08	399.75	473.17	536.90	614.66
c) Total	523.61	702.68	885.39	994.58	1099.99	1193.77
d) Currency Outside Banks	175.60	286.43	331.14	293.12	338.05	374.08
e) Money in Circulation or (a+d)	485.70	696.03	816.78	814.53	901.14	953.19

Source : See [5].

As the table shows, the money supply increased from Taka 485.70 in June 1972 to Taka 953.19 crores in October 1976 reflecting thereby a substantial rise in currency outside banks. Due to the socio-economic reasons mentioned earlier, income earners in the rural areas generally tend to hold a larger amount of currency compared to the income earners in the urban areas. Obviously, this suggests intensification of the deposit mobilization efforts in the rural sector to help a shift from currency holding to bank deposits.

III. ATTRACTION OF RURAL DEPOSITS THROUGH BANKS

The adverse socio-economic factors such as poverty, illiteracy and socio-cultural backwardness make the task of institutionalizing

rural deposits in a country like Bangladesh exceedingly difficult. Paradoxically, however, poverty itself highlights the urgent need for promoting savings without which economic growth and prosperity will be impossible. Thus despite adversities we must encourage mobilization of the whatever meagre resources we have. Needless to mention, banks must play a dominant part in this regard through an active participation in the savings movement rather than carrying merely the routine banking business.

Surprisingly, however, efforts made by the commercial banks at mobilizing rural savings in most LDCs are far from being adequate. They have so far restricted their activities to urban and semi-urban areas and have generally been hesitant to move into the rural setting. Their borrowers have thus most often been commercial enterprises or industrial firms and the capitalist agricultural producers selling in urban markets. Their depositors have also been the same groups. Where the urban banks have expanded into the small towns and rural areas these have tended to be relatively minor operations.

On the lending side also, the experience appears to be similar. A lack of interest in lending to small farmers or small rural enterprises is readily explainable by the high unit costs of administering small loans required by such borrowers and by the relatively high rates of defaults in repayment often encountered in small lending [2]. So banks generally regard rural lending as unlikely to be profitable. They also tend to think it unlikely that the inhabitants of rural areas have much savings capacity that could be mobilized in the form of savings deposits. The banks therefore do not expect much from the country side. Nor their educated employees in the rural branches feel at home and try on the contrary to manoeuvre their way back to the city rather than trying to find solutions to the local problems. Similarly rural people other than the well-to-do group do not expect much from the banks either.

This lack of interaction between the banks and the bulk of rural inhabitants may not be much of a problem if the banks change their traditional outlook towards the rural environment and if there are other institutions better suited to do what is needed. The rate at which small farmers and landowners are becoming landless is alarming.

The pressure of indebtedness due to high cost of credit from the unorganized money market is bringing misery to their economic plight[1]. It is, therefore, high time for the banking institutions to come forward to protect the rural poor against disinvestment of their land which is the only source of their livelihood.

The economic condition of the rural poor thus demands a changed outlook and closer participation of the banking institutions in rural credit programmes. The traditional 'Collateral Oriented' policy of the banks is of little help in the rural environment. What is needed is to create a sense of self-help among people in rural societies by educating and motivating them. While undertaking expansion programmes through setting up operational units at the doorsteps of the villagers, banks must make efforts to bring every unit of idle funds to the fold of the banking system. To reiterate, this savings campaign through institutional participation must not merely be considered a source of business, but should be looked at from the point of view of a savings programme as a national movement.

Another important reason why the banks should step up deposit mobilization efforts is to ensure that the credit they extend be met as far as possible, from their own resources. This will enable them to reduce their dependence on counterfinancing or borrowing from the Central Banks, which are inflationary. Similarly the agricultural credit programmes of the government which have been fulfilling some of the rural needs for production credit, act as a drain on the public budget. They do not accumulate capital from their lending profits nor do they make serious efforts at soliciting deposits. But if rural financing is to escape from the welfare expenditure category and become a self-sustaining operation, rural savings must be mobilized and the potential savers must be persuaded to make financial deposits.

At present the commercial bank branches in Bangladesh has spread upto the Thana Headquarters and some potential business centres in rural areas. The ultimate coverage will, therefore, have to be extended upto the union level, though such expansion may apparently seem to be viable from the point of view of profit earning capacity. However, as rural environment is the foundation

of our economic base simple profit/loss consideration cannot overlook the importance of serving the people. Instead the banking system should be properly organized to associate themselves closely with other sectors like agriculture, small and cottage industries to play an effective role for ensuring better utilization of the available resources. To this end, savings mobilization and credit for agriculture, small industries and handicrafts may be planned to be operated as package deals rather than being conducted as separate operations.

IV. MOBILIZATION OF SAVINGS THROUGH INTERMEDIATE INSTITUTIONS

Of the various agencies, i. e., Commercial Bank, Krishi Bank, Post Offices and Cooperative Bank/Union/Societies, the most impressive collection of savings deposits has been attained by the cooperative organizations. Though data for comparison by different sources are not available, the evidence presented below provides support to our statement. The National Agricultural Cooperative Federation of South Korea, for example, had accumulated \$ 291.00 million in savings deposits in 1971 of which \$ 69.00 million originated with the small farmers in the rural areas[3]. Of no less significance are the savings mobilized in the Comilla Cooperatives in Bangladesh. The total amount accumulated in three thanas during 1960-70 was about \$ 450,000 which, though inadequate to meet the capital needs, were nonetheless impressive and also indicative of the existence of potential savings capacity in the rural areas.

The above instances are not however typical. Instead most cooperatives are not very ambitious in their efforts to collect savings deposits. But the success stories do indicate that far more is possible than most people think if the organization and management defects inherent in the cooperative movement of the country can be removed. A local organization like a cooperative can more readily reach the villagers, better inspire their trust and if the leaders of such organizations are motivated to collect savings, the results may be surprising. Banks too can do business with the cooperatives using them as intermediaries not only in group lending but also in

collecting savings which can then be deposited with the banks. This last opportunity has seldom been conceived as a serious objective for the banking system, although it certainly merits further exploration.

Like cooperatives, the post offices are the other local organizations which have more easier access to the villagers than the commercial banks. The rate of interest paid on postal savings deposits are also much more attractive as compared to the rates offered by banks on fixed deposits. Hence, if organized properly the savings mobilization drive initiated by post offices is likely to meet with greater success. But the savings mobilization activities by post offices is still a secondary function. Generally, the postal staff lacks in an intimate knowledge of banking procedures and withdrawals from post office savings accounts are also difficult and cumbersome. Further, the mode of service of the village postmasters (who are often part-time employees) are such that they do not take sufficient interest to boost up savings in the form of deposits in Savings Bank Account. Thus in order to make deposit mobilization efforts of post offices a success, it is necessary not only to train and motivate post office staff but also to streamline their operations so as to make savings mobilization activities an important function of the post offices.

V. INCENTIVES FOR PROMOTION OF RURAL SAVINGS

The belief that savings capacity of the rural population is often under rated does seem to be without foundation. The rural economy which sustains large majority of our population cannot be considered dry of resources. Moreover the recent programmes for rural development channalised considerable amount of resources from urban to rural areas. For example, the supports to agriculture in the form of modern inputs of production have increased output. Further, the price support scheme introduced to promote procurement of crops like rice, paddy, jute and sugar involves large cash payments to the farmers leaving thereby substantial surpluses over consumption needs specially to the medium and large farmers. Hence, given the right kind of leadership and organization, various savings institutions may be deployed to the task of eliciting saving deposits from the rural areas.

An important variable that can be manipulated to attract rural savings is the rate of interest. The interest rates that most banks pay on savings deposits is relatively unattractive. The rates offered by the savings institutions (usually varying between 3 to 10 per cent) are particularly low compared to the rates (upto 30%) at which village money-lenders invest their surplus income. A further obstacle is the rate of inflation which erodes the value of savings when held in financial assets. If inflation continues, the solution lies in paying interest on deposits at a rate that will not only exceed the rate of inflation but also provide the depositor with an attractive income. This is seldom practiced by the banks, however, in part because the upper limit on loan rates place a ceiling on what a bank is able to pay to its depositors. Thus an important weapon for attaining a greater mobilization of rural capital would be to introduce flexible and realistic interest rates which can protect the nominal and real values of savings.

Another suggestion is to develop incentives within the banking system for expansion of rural activities. As regards lending this may include preferential rediscount rates at the Central Bank, portfolio requirements and tax concessions related to the proportion of banks' loans to define categories of borrowers. Conceivably such methods may be adopted to encourage increases in rural deposits thereby giving banks a stimulus to find new and perhaps unorthodox solutions to the unconventional problems they may have to face in dealing with the rural people.

A third suggestion is to charter small rural banks permitted to lend only within a prescribed area and which must accumulate local private capital if the bank is to come into existence. This has been tried in Philippines where capital raised in this method has been matched by an equal amount of interest-free public funds and preferential rediscount rates have been applied. More recently, the government of Vietnam has began to charter rural banks on the Philippine model. The means these banks have used in frantic search for attracting savings deposits may be useful for other countries including Bangladesh. First, they pay relatively favourable interest rates: 17 per cent for savings deposits and 17-24 per cent for

fixed deposits. They also send their employees into nearby villages to make door to door visits soliciting deposits. Further, a lottery with high pay-off levels (about one in three each year) is organized. In return for accepting a lower rate of interest, the depositor is given a lottery ticket and the value of payment, if he wins, is proportional to the amount of his savings deposits.

Various devices tried in other countries may also be of relevance to Bangladesh for attracting rural savings. For example, in the Philippines and Uganda, insurance on deposits eliminates risks of bank failure. In countries with high rates of inflation such as Brazil and Chile, the value of savings deposits is modified according to changes in price levels. In Columbia, depositors are eligible for educational scholarships which are drawn daily from the lists of savers in the Agricultural Bank. Finally, some countries (i. e., Taiwan and Vietnam) also offer tax concessions on income from savings deposits.

To conclude, while the achievement of an adequate level of savings is an essential prerequisite for development, the efforts to mobilize rural savings if carried on the lines suggested in the foregoing paragraphs, can become a significant complement to the development process. Accordingly, the strategies of mobilization should be considered not merely from the point of view of business of the relevant institutions but as an integral part of a national movement involving participation by large majority of people in the process of development.

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সেচ সংস্কার প্রসঙ্গে

আতিউর রহমান*

ভূমিকা

প্রাক মোগল এবং মোগল আমলে বাংলাদেশে অত্যন্ত উন্নতমানের সেচব্যবস্থা থাকলেও ঔপনিবেশিক ইংরেজ আমলে তা ধীরে ধীরে ভেঙ্গে পড়ে। পাকিস্তান সৃষ্টির পর পরও সেচব্যবস্থার তেমন কোন উল্লেখযোগ্য অগ্রগতি বাংলাদেশে লক্ষ্য করা যায় না। ষাটের দশকের শুরুতে কুমিল্লা পল্লী উন্নয়ন একাডেমীর ঐকান্তিক ইচ্ছায় যন্ত্রচালিত পাম্পের সাহায্যে কুমিল্লার দু'একটি গ্রামে জল সেচের মাধ্যমে বোরো ধান আঁবাদের সূচনা করা হয়। উপরিদেশের পানি ব্যবহারই এই সেচব্যবস্থার মূল উদ্দেশ্য ছিল। জলাশয়গুলোর সংস্কারের অভাবে যখন পর্যাপ্ত পানি পাওয়া যাচ্ছিলনা এবং একাধারে যখন চাহিদা বাড়ছিল তখন একাডেমী কর্মকর্তা এবং আন্তর্জাতিক সাহায্যদানকারী সংস্থা ও দেশগুলোর যোগসাজশে 'লো লিফট পাম্পের' পরিবর্তে 'টিউবওয়েলের' মাধ্যমে তলদেশ থেকে পানি উঠানোর প্রক্রিয়ায় সেচব্যবস্থার দিকে কুমিল্লা একাডেমী ঝুঁকে পড়লো। ষাটের দশকের শেষের দিকে এই প্রক্রিয়া দ্রুত রূপ নেয় এবং ১৯৬২ সনের মোট ২টি গভীর নলকূপ থেকে ১৯৭১/৭২ সনে তা ২১০ এসে দাঁড়ায়। কুমিল্লা এলাকার এই আপাতঃ সাফল্যে অধীর হয়ে বিদেশী সাহায্যদানকারীদের প্রত্যক্ষ মদদ দানের মাধ্যমে এই সেচব্যবস্থা সারা বাংলাদেশে ছড়িয়ে দেয়ার পরিকল্পনা নেয়া হয় এবং বর্তমানে প্রায় দশ হাজারের অধিক গভীর নলকূপ বাংলাদেশ কৃষি

*লেখক বাংলাদেশ ইনস্টিটিউট অব ডেভেলপমেন্ট স্টাডিজ-এর একজন স্টাফ ইকনমিস্ট। প্রবন্ধটি রচনায় বি, আই, ডি, এস-এর সর্ব জনাব সাদিক আছমেদ এবং মাহমুদুল আলম-এর সহযোগিতা লেখক কৃতজ্ঞতার সাথে শূরণ করছেন। বিশেষ করে জনাব আলম এবং তাঁর সহযোগী তথ্যসংগ্রহকারীদের মতামত প্রবন্ধটির উপর স্পষ্ট ছাপ রেখেছে। এজন্য তাঁদের সবাইকে ধন্যবাদ। অবশ্য প্রবন্ধের সীমাবদ্ধতা ও দুর্বলতা লেখকের নিজস্ব।

উন্নয়ন সংস্থার সৌজন্যে চালু রয়েছে। প্রথম পঞ্চবাষিকী পরিকল্পনা শেষে এ সংখ্যা গিয়ে দাঁড়াবে ১২২০৪। এই সেচব্যবস্থার প্রাসঙ্গিকতা কতটুকু রয়েছে এবং এর ফলে যে ধরনের কারিগরি এবং সামাজিক-রাজনৈতিক প্রতিক্রিয়া দেখা যাচ্ছে, বা ভবিষ্যতে যেতে পারে সেই আলোকেই বাংলাদেশের ঐতিহাসিক অভিজ্ঞতা এবং সমসাময়িক সামাজিক-রাজনৈতিক অবস্থার পরিপ্রেক্ষিতে কাঙ্ক্ষিত দীর্ঘমেয়াদী সেচ সংস্কারের ইংগিত দেয়ার চেষ্টা করা হয়েছে এই প্রবন্ধে। উপসংহারে অবশ্য 'জনসম্পদের' সর্বোচ্চ প্রয়োগের ভিত্তিতেই এ ধরনের সংস্কার ভাবনা আসা উচিত বলে জোর দেয়া হয়েছে।

গভীর নলকূপ

(ক) পরিকল্পনা ও বিনিয়োগ

বি, এ, ডি, সি, কর্তৃক প্রথম পঞ্চবাষিকী পরিকল্পনার আওতাধীন নেয়া 'বাংলাদেশের গভীর নলকূপ সেচব্যবস্থা' স্কীম থেকে যা জানা যায়, তাতে দেখা যায় যে পূর্বের ২২০৪টি গভীর নলকূপ সহ পরিকল্পনা কালীন সময়ে সর্বমোট ১২২০৪টি গভীর নলকূপ স্থাপন করার পরিকল্পনা নেয়া হয়েছে। এই পরিকল্পনা বাস্তবায়নের জন্য প্রায় সাড়ে পঞ্চাশ কোটি টাকার বৈদেশিক মুদ্রা সহ মোট প্রায় একশত পঞ্চাশ কোটি টাকার ব্যাপক পরিকল্পনা হাতে নেয়া হয়েছে। উক্ত পরিকল্পনার একটি সংক্ষিপ্ত হিসেব নিম্নে দেয়া হ'ল :

প্রস্তাবিত নলকূপের হিসেব

বৎসর	১৯৭৩-৭৪	'৭৪-৭৫	'৭৫-৭৬	'৭৬-৭৭	'৭৭-৭৮	মোট
১	১৮০৭	৩১৭৮	১৬৬৭	১০০০	২০৪৮	১০,০০০

তাছাড়া প্রাক-পরিকল্পনাধীন ২২০৪টি।

সর্বমোট প্রথম পঞ্চবাষিকী পরিকল্পনাধীন ১২২০৪টি।

প্রস্তাবিত অর্থ বরাদ্দ (লক্ষ টাকা)

	স্থানীয়	বৈদেশিক	মোট
১।	৮৫৭'৩৭	৭০০'৩৮	১৫৫৭'৭৫
২।	১৩৬৮'৯৪	৫১৯'২৫	১৮৮৮'১৯
৩।	১৭৬১'৩৫	১২২৭'৬১	১৯৮৮'৯৬
৪।	২১৮৭'২৪	৯৪৪'৮৮	৩১৩২'১২
৫।	৩২৩৫'৫৯	২১৫৫'৮১	৫৩৯১'৪০
	৯৪১০'৪৯	৫৫৪৭'৯০	১৪৯৫৮'৪২

[সূত্র : বি, এ, ডি, সি “স্বীম ফর ইরিগেশন বাই ডিপটিউবওয়েল (DTW) ইন বাংলাদেশ, ১৯৭৩/৭৪--'৭৭/৭৮] [BADC : 4].

(খ) ভাড়া এবং ভর্তুকী

পূর্বে একেকটি গভীর নলকূপ পিছু এক বছরে ভাড়া আদায় করা হ'ত তিনশত টাকা করে। বর্তমানে এ ভাড়া বছরে ১২০০ টাকা। একশত একর 'কমাও এরিয়া' দেখিয়ে এক একটি গ্রুপের পক্ষ থেকে একজন ম্যানেজার বছরে উক্ত ভাড়া বি, এ, ডি, সি-কে দিবেন, এই চুক্তিতে একটি গভীর নলকূপ ভাড়া নেয়া হয়।

বিদেশী সাহায্যে কেনা এই একটি গভীর নলকূপের জন্য তার মোট মূল্যের ৮৮% সরকারকে ভর্তুকী হিসেবে দিতে হয় [হান্নাহ্, ৭]।

(গ) ক্ষমতা ব্যবহারে প্রতিক্রিয়া

এমন পুঁজি নির্ভর প্রকল্পটিতে অল্প দিনের মধ্যেই বিভিন্নমুখী প্রতিক্রিয়া দেখা যাচ্ছে। অর্থনৈতিক এবং কারিগরি দিকটি লক্ষ্য করলে দেখা যায় এমন পুঁজি-

ভিত্তিক বিনিয়োগের পরেও উৎপাদন কিছুটা বাড়লেও এই নলকূপগুলোর পানি দেয়ার পূর্ণ ক্ষমতা ব্যবহৃত হয়না। এক একটি গভীর নলকূপের গড়ে প্রায় শতকরা পঁচিশ থেকে ত্রিশ ভাগ পানি যোগান ক্ষমতা মাত্র ব্যবহৃত হয়ে থাকে।

সেই অর্থে সরকারের ব্যাপক তত্ত্বাবধায় সত্যিকার অর্থে পুরোপুরি সহ্যবহার তো হচ্ছেই না বরং দিন দিন ধীরে ধীরে বোঝা বাড়ছে জাতির ঘাড়ে [মাহমুদুল আলম, ৩]। কুমিল্লা কোতোয়ালী থানায় ১৯৬২/৬৩ সন থেকে ১৯৭১/৭২ সন পর্যন্ত বিভিন্ন খামার যোগ্যতা (ফিল্ড এক্সিয়েন্সী) অনুসারে ক্ষমতা ব্যবহারের একটি টাইমসিরিজ দাঁড় করাতে চেষ্টা করেছেন। তাঁর হিসেবে ৫০% খামার যোগ্যতায় ৩৮% থেকে ৮৩% ক্ষমতা অব্যাহত থেকে যেত।

বোরো মৌসুম	গভীর নলকূপের সংখ্যা	ক্ষমতা (মোট কিউসেক জলসেচ হিসেবে)	সেচযোগ্য ক্ষমতা (জমির একর হিসেবে)			সেচকৃত মোট এলাকা (একর)	ক্ষমতা ব্যবহারের হার (শতকরা হিসেবে)		
			৫০% খামার যোগ্য- তায়	৬০% খামার যোগ্য- তায়	৭০% খামার যোগ্যতার		৫০% খামার যোগ্য- তায়	৬০% খামার যোগ্য- তায়	৭০% খামার যোগ্যতার
(১)	(২)	(৩)	(৪)	(৫)	(৬)	(৭)	(৮)	(৯)	(১০)
১৯৬২/৬৩	২	২'৫০	২১১	২৭৭	৩৫৪	৩৬	১৭	১২	১০
১৯৬৩/৬৪	১২	১২'৫৪	১০৬০	১৩৯০	১৭৭৭	৪২৪	৪০	৩০	২৩
১৯৬৪/৬৫	৩৪	৩০'২৯	২৮১৩	৩৬৯৫	৪৪১৭	১০০৬	৩৫	২৭	২২
১৯৬৫/৬৬	২৫	২৫'৬০	২১৬৫	২৮৪৪	৩৬৩২	১১২৭	৫২	৩৯	৩১
১৯৬৬/৬৭	৪৬	৪৭'৫৯	৪০২১	৫৫০৪	৬৭৪৩	২৩৫০	৫৮	৪২	৩৪
১৯৬৭/৬৮	৯৯	৯২'৩৩	৭৮০২	১০২৪৯	১৩০৮৩	৩৮৯২	৪৯	৩৭	২৯
১৯৬৮/৬৯	১২৬	১২৮'৯৫	১০৮৯৬	১৪৩১৩	১৮২৭২	৬২০৪	৫৬	৪৩	৩৩
১৯৬৯/৭০	১৬৪	১৬৫'২৬	১৩৮৬৪	১৮৩৪৪	২৩৪১৭	৮০০১	৫৭	৪৩	৩৪
১৯৭০/৭১	১৯৪	১৯৭'৫১	১৬৬৮১	২১৯২৪	২৭১৮৯	১০৩৫১	৬২	৪৭	৩৬
১৯৭১/৭২	২১০	২০৪'৮১	১৭০০৬	২২৭৩৩	২৯০২০	৮১৯০	৫১	৩৯	৩০

সূত্র : মাহমুদুল আলম [৩]

মাহমুদুল আলম সম্প্রতি তার 'ক্যাপাসিটি ইউটিলাইজেশন' সংক্রান্ত পর্যবেক্ষণ বাংলাদেশের ঢাকা, ময়মনসিংহ, টাংগাইল এবং যশোর এলাকায় বিস্তৃত করেছেন এবং এ ব্যাপারে তিনি আরো প্রাসঙ্গিক তথ্য যোগাড় করেছেন। সাম্প্রতিক ষ্টাডিতে তিনি অনুরূপ ফল পাচ্ছেন এবং কোন কোন ক্ষেত্রে ক্ষমতা ব্যবহারের হার পঁচিশের নীচে নেমে এসেছে।

তিনি ক্যাপাসিটি ইউটিলাইজেশনের এমন নিম্ন হারের জন্য অবশ্য সামাজিক এবং ব্যক্তিগত লভ্যাংশের স্বল্পতা, পানি চাহিদার অপরিপূর্ণ সম্পূরক উপকরণের অভাব, সামাজিক এবং প্রাতিষ্ঠানিক জটবদ্ধতা ইত্যাদিকে দায়ী করতে চেষ্টা করেছেন। একজন কৃষক নলকূপ ভাঙার টাকা দেয়া ছাড়াও, সার, বীজ, তেল ইত্যাদি কালো-বাজারী মূল্যে কিনে, প্রচুর 'রিস্ক' (যেমন খুচরা যন্ত্রাংশ না পেলে নলকূপ অকেজো থাকতে পারে, ম্যানজার বা ধনী কৃষক পানি বন্টনে পক্ষপাতিত্ব এবং অনিয়মানুবর্তিতা দেখতে পারে) নিয়ে অনেক ক্ষেত্রে ইচ্ছে থাকলেও স্কীমের অধীনে আসতে পারে না। তাছাড়া গ্রামীণ কোম্পল এবং গোষ্ঠীবদ্ধতার মতো বাধা তো সর্বদাই রয়েছে। এসব কারণে অনেক সময় সকলেই গভীর নলকূপ স্কীমে যোগ দিতে পারেনা এবং পর্যাপ্ত ক্ষমতা থাকা সত্ত্বেও কমান্ড এরিয়ার পুরোটা চাষের অধীনে আনা সম্ভব হয় না।

এর জন্য সরকারকে দিতে হয় ব্যাপক পরিমাণ গচ্ছা। জাতীয় এ অপচয়ের পাশাপাশি থাকে আন্তর্জাতিক মুৎসুদ্দী পুঁজির অনেক ধরনের হস্তক্ষেপ ও চাপ।

সামাজিক-রাজনৈতিক প্রতিক্রিয়া

উপরোক্ত জাতীয় অপচয় ছাড়াও, গভীর নলকূপের জন্য সামাজিক ও রাজনৈতিক এবং আন্তর্জাতিক ক্ষেত্রে বেশ কড়া মূল্য দিতে হয় জাতিকে।

প্রথমতঃ গভীর নলকূপ মূলতঃ ধনী কৃষক এবং ব্যবসায়ীদের জন্য লাভজনক প্রকল্প। একদিকে যেমন তাদের উৎপাদন বৃদ্ধি পায় (যেহেতু তাদের জমিই স্কীমে অধিক পরিমাণ), অন্যদিকে তাদের গ্রামীণ ক্ষমতাও বৃদ্ধি পায়। ঐতিহাসিক ভাবে অসম ভূমি বন্টন থেকে আয়ের যে বৈষম্য গ্রাম-বাংলায় গড়ে উঠেছে, জলসেচের উপর অধিকার পেয়ে, এই বৈষম্য আরো অধিক হারে বাড়ছে। এতে ক্ষমতার বলয়ও আরো পাকাপোক্ত হচ্ছে। এবং তা হতে পারছে এই জন্য যে শহরে আমলা, গ্রামীণ বেনিয়া এবং ধনী কৃষকদের ক্ষমতার চক্রান্ত দিন দিন তীব্রতর হচ্ছে। তার ফলে, ধনী কৃষক এবং শহরের কর্মচারীদের যোগসূত্র শক্ত হচ্ছে, এবং ক্ষুদ্র কৃষক শহরের কর্মচারী কর্তৃক বন্টনকৃত উপকরণ সময় মতো ন্যায্য মূল্যে পাচ্ছে না [কৃষি ঋণ দান উল্লেখ্য]। ভূমিহীনদের নিকট থেকে বর্গাকৃত জমি কেড়ে নেয়া হচ্ছে

এবং অনেক সময় সে জমি ইচ্ছে করেই ধনী কৃষক পতিত রাখছে। আধুনিক জল সেচ সেই অর্থে জলদস্যুতে পরিণত হচ্ছে এবং গ্রাম উন্নয়নের মূল বাধা স্বার্থান্বেষী মহলের গ্রামীণ ক্ষমতা সংহতকরণ প্রক্রিয়াই তীব্রতর হচ্ছে। গভীর নলকূপে যে ধনী কৃষকদের ক্ষমতার প্রাধান্য বেশী তা রাজশাহীর একটি এলাকার কোন একটি গভীর নলকূপ প্রকল্পের সদস্যদের শ্রেণীবিন্যাস এবং জমি সেচকরণ লক্ষ্য করলেই পরিষ্কার হবে [আবদুল্লাহ ও অন্যান্য, ১]।

গভীর নলকূপ নং-৫
রাজশাহী

জমির মালিকানা ধরন মোটাবেক শ্রেণী (একর)	সদস্যের সংখ্যা	মালিকানাধীন জমির পরিমাণ (একর)	সেচকৃত জমির পরিমাণ (একর)
০'০০-০'৯৯	১ (২'৯)	০'৬৬ (০'৪)	-
১'০০-১'৯৯	৫ (১৪'৩)	৫'৯৯ (৩'২৩)	০'৫১ (৬'৮)
২'০০-২'৯৯	৬ (১৭'১)	১২'৩৩ (৬'৬৪)	০'৮৭ (১১'৬)
৩'০০-৩'৯৯	৮ (২২'৯)	২৪'০০ (১২'১৩)	২'৩০ (৩০'৬)
৪'০০-৪'৯৯	২ (৫'৭)	৮'৬৬ (৪'৬৭)	০'৬৬ (৮'৮)
৫'০০-৫'৯৯	৬ (১৭'১)	৩০'৩৩ (১৬'৩৪)	১'৬৮ (২২'৪)
৬'০০-৬'৯৯	১ (২'৯)	৬'৬৬ (৩'৫৯)	--- ---
৭'০০ - তার উর্ধে	৬ (১৭'১)	১৬'৯৯ (৫২'২৫)	১'৪৯ (১৯'৮)
মোট	৩৫	১৮৫'৬২	৭'৫১

সূত্র : আবদুল্লাহ এবং অন্যান্য, টেবিল-৬, (ব্লেকেটের সংখ্যা শতকরা হিসেবে)
উপরোক্ত তথ্য থেকে আমাদের ক্ষমতার ঝাঙ্কিক প্রক্রিয়ার আশঙ্কাকেই
আরো বাস্তবভিত্তিক করে তুলছে।

দ্বিতীয়তঃ মাত্রাতিরিক্ত মূল্যের এই সব গভীর নলকূপ আনতে সরকারকে আন্তর্জাতিক ফিনান্স ক্যাপিটালের হাতে বন্দী হয়ে পড়তে হচ্ছে। আর এসব আন্তর্জাতিক সাহায্যের পরিমাণ যত সামান্যই হোক না কেন, তা দেশীয় নীতি নির্ধারণে হস্তক্ষেপ করে এবং অনেক ক্ষেত্রে একটি স্বাধীন দেশের পরিকল্পনা নীতির 'কনসেপশন'কেই প্রভাবান্বিত করে। এতে স্বাধীন পুঁজি বিকাশের পথে বাধা পড়ে এবং অনেক প্রয়োজনীয় সংস্কারে হাত দেয়া সম্ভব হয় না।

তৃতীয়তঃ পুঁজি বিনিয়োগের ধরনটাই এমন যে এর ফলে অধিক সংখ্যক মানুষকে চাকুরী দেয়া যায় না এবং বেশীর ভাগ মানুষকে উন্নয়ন কর্মকাণ্ডে অংশগ্রহণ করানো সম্ভবপর হয়ে উঠেনা। অথচ আমাদের মত জনসম্পদ বহুল দেশে জনশক্তির সর্বোচ্চ ব্যবহার ছাড়া সমাজ প্রগতি অনেকটা অকল্পনীয়।

চতুর্থতঃ রাজনৈতিক ক্ষেত্রে গ্রামীণ ক্ষমতার চক্র এবং জাতীয় পর্যায়ে নেতৃত্ব ও প্রশাসকদের মধ্যে অন্তত আঁতাতের ফলে অনেক শুভ কর্মকাণ্ডের সূচনাই অসম্ভব হয়ে উঠে।

পঞ্চমতঃ দেশীয় কারিগরী মান উন্নয়ন করা সম্ভব হয়না এবং এপ্রোপ্রিয়েট টেকনোলজি গড়ে উঠতে পারে না। গভীর নলকূপের এই প্রাধান্য বলবৎ থাকলে, সম্পৃতি ময়মনসিংহ জেলার সরিষাবাড়ী এলাকায় তৈরী সেচবস্ত্র (যা তেল ছাড়াই চালানো যাবে) কোনক্রমেই সার্বজনীনতা লাভ করতে পারবেনা।

ষষ্ঠতঃ দেশীয় টেকনিক ব্যবহার না করতে পারলে দেশীয় পর্যায়ে মূল ও খুচরা যন্ত্রাংশের কারখানাও গড়ে উঠবে না।

বিস্মিত হতে হয় এই ভেবে যে এত সব ঋণাত্মক প্রতিক্রিয়ার কথা জেনেও কি করে যে পরিকল্পনা কমিশন প্রথম পঞ্চ বার্ষিকী পরিকল্পনায় গভীর নলকূপের বেনিফিট কষ্ট রেশিও ৫ : ১ নির্ধারিত করলেন এবং বি, এ, ডি, সি-কে সেই ভিত্তিতে সারা দেশে নলকূপের সংখ্যা বাড়ানোর সবুজ সংকেত দেখালেন। পুরনো বিনিয়োগের ব্যবহার যেখানে অপর্ধ্যাপ্ত, সেখানে নতুন বিনিয়োগ এবং আমদানীর ওকালতি পরিকল্পনা কমিশন যে কি করে করলেন তাই ভাবনার বিষয়।

বিকল্প ভাবনা

(ক) তুলনামূলক স্বেচছিতা গ্রহণ

গভীর নলকূপ স্বল্পীয় উপরোক্ত হতাশাব্যঞ্জক প্রতিক্রিয়ার কথা মনে রাখলে বি, এ, ডি, সি, কোনক্রমেই এই প্রকল্পের অধীনে আরো অধিক সংখ্যক গভীর নলকূপ

স্থাপনে উৎসাহ দেখাতে পারেনা। তার চেয়ে অগভীর নলকুপই বোধ হয় অধিকতর সাফল্যজনক হতে পারে। এ ব্যাপারে যদিও পর্যাপ্ত তথ্য আমাদের হাতে নেই, তবুও মাহমুদুল আলমের সাম্প্রতিক সংগৃহীত তথ্য থেকে জানা যায় যে, প্রায় সব এলাকাতেই অগভীর নলকুপ অধিকতর 'ক্যাপাসিটি ইউটিলাইজেশনের' নজির দেখাতে পারছে। সাভার অঞ্চলে ক্ষমতা ব্যবহারের হার প্রায় ৭০ থেকে ৮০।

পনের হাজার টাকা মূল্যের এই সেচযন্ত্রটি ইচ্ছে করলে মধ্য ও ক্ষুদ্র কৃষকগণ (গ্রুপ ভিত্তিতে) নিজেরাই সরকারী ঋণ বা ব্যক্তিগত সঞ্চয় থেকে কিনতে পারেন এবং গভীর নলকুপের ক্ষমতার চক্রান্ত উপেক্ষা করতে পারেন। সেই দিক থেকে বিচার করলে এই প্রকল্পের সরকারী ভর্তুকী অপেক্ষাকৃত কম। ইউনিসেফ-এর সাহায্যে স্থাপিত হস্তচালিত নলকুপের সাফল্যের ব্যাপারে হান্নাহ [৭] আরো বেশী রকমের আশাবাদী মন্তব্য করেছেন।

(খ) জলসেচের মালিকানা বদল

আমাদের দেশের জমির বর্তমান ধরন যে ভাবে গড়ে উঠেছে তা রদবদল করার মত সংসাহস যতদিন না আমরা দেখাতে পারছি ততদিন মনে হয় ক্ষমতার এই বৈপরিত্য থেকেই যাবে। তবে জলসেচের অধিকার আবার ভূমি-মালিকদের হাতে দিয়ে তাদের সেই ক্ষমতার শেকড় আরো শক্তিশালী করার অর্থ এই হবে যে, বঞ্চিত মানুষের দুর্দশা আরো বাড়বে। সেই দিক থেকে চিন্তা করে, সরকার কর্তৃক প্রদত্ত 'জলসেচ' নামক এই নতুন সম্পদটির মালিকানা ভূমিহীন এবং ক্ষুদ্র কৃষকদের সংগঠনের—বা গড়ে তুলতে হবে—হাতে দিয়ে গ্রামীণ ক্ষমতার ভারসাম্য কিছুটা এদিক-সেদিক করা যায় কিনা সে বিষয়ে যথেষ্ট ভাবনা চিন্তা করা উচিত।

(গ) জলসেচে জনগণ

ইদানিং সরকারী পর্যায়ের কথাবাতায় বিভিন্ন কর্মকাণ্ডে 'জনগণের অংশগ্রহণ' কথাটার উপর বেশ জোর দেয়া হচ্ছে। সেই দিক থেকে বলা যায় পূর্বে বর্ণিত যান্ত্রিক জলসেচ সম্পূর্ণভাবে এই নীতির পরিপন্থী। সম্প্রতি বেশ কয়েকটি সেচ প্রকল্প জনগণের অংশগ্রহণের মাধ্যমে সম্পন্ন করা হয়েছে বলে দাবী করা হলেও, সত্যিকার অর্থে সেচ ব্যবস্থায় জনগণ যাতে স্বতঃস্ফূর্তভাবে অংশগ্রহণ করতে পারে তার জন্য প্রয়োজনীয় রাজনৈতিক-সামাজিক পূর্ব শর্তগুলোর প্রতি যথেষ্ট সচেতনতা দেখানো হয়নি। বলা হয়, চীন তার নদীগুলোর গভীরতা বৃদ্ধি করে, বন্যা নিয়ন্ত্রণ করে, বড় বড় জলাধার সৃষ্টি করে সেচ ব্যবস্থায় জনগণের অবদানের এক ইতিহাস সৃষ্টি করেছে [এ, কে, এম, আহসানের নেতৃত্বে বিশেষজ্ঞ দলের সাম্প্রতিক চীন সফর রিপোর্ট উল্লেখ্য

(BARD 5)]। রাজনৈতিক-অর্থনৈতিক আদর্শগুলোর বাস্তবায়নে যে সাংগঠনিক তৎপরতা চীনাবাসী এবং সে দেশীয় নেতৃষ দেখিয়েছে [হিলটন ১৫,] তার আংশিক প্রস্তুতিও কি আমাদের দেশে রয়েছে ?

মন্তব্য

বর্তমানে সেচ ব্যবস্থার ধরন যাই থাকনা কেন, অতীতে কিন্তু সমাজ তার আপন প্রয়োজনেই এক উন্নত মানের সেচব্যবস্থা এ দেশে গড়ে তুলেছিল। মূলতঃ বন্যার পানিকে জনশক্তির মাধ্যমে নিয়ন্ত্রণ করে, নদী থেকে খাল কেটে, ছোট বড় জলাধার সৃষ্টি করে, এই উন্নত সেচব্যবস্থা গড়ে উঠেছিল। স্যার উইলিয়াম উইলকক্স (যিনি আজীবন বিভিন্ন দেশের সেচব্যবস্থার সাথে প্রত্যক্ষ জড়িত ছিলেন) বাংলাদেশের সেচব্যবস্থাকে 'বেবিলনীয়' বা 'মিশরীয়' সেচব্যবস্থার সমপর্যায়ে স্থান দিতে একটুও ঝিবা করেন নি। তিনি (উইলকক্স) এদেশীয় সেচব্যবস্থার গুণগত বৈশিষ্ট্য দেখে এমনি অভিভূত হয়েছিলেন যে, এক পর্যায়ে বলেছেন :

“Let a return be made to the ancient irrigation of Bengal, and the country will be touched as with a magician's wand and your ancient prosperity will be at your doors”.

[William Wilcocks, pI, 28]

অতীতে এদেশে সমৃদ্ধি কতটুকু ছিল, সম্পদের ব্যবহার এবং অপচয় কে করতেন, তা নিয়ে বিতর্ক থাকতে পারে, তবে সমাজ তার সামাজিক মালিকানাধীন সম্পদ (যেমন পুকুর) গুলো যৌথভাবে সংস্কার করতো এবং জনসেচের ব্যবস্থা নিশ্চিত করতো। কিন্তু কালক্রমে সমাজের সেই অন্তর্নিহিত যৌথ মানসিকতা আন্তর্জাতিক এবং সামন্ত শক্তির শোষণে উবে যায়। অথচ শুধুমাত্র গ্রামবাংলার পুকুরগুলো পুনঃখনন করলে, মাছ, কৃষিদ্রব্য উৎপাদন বৃদ্ধির সাথে সাথে কর্মসংস্থানের যে ব্যাপক পরিবর্তন আসতে পারে তার একটি মোটামুটি হিসেবে রেনে ডুমঁ এক রিপোর্টে [ডুমঁ পৃ: ৭] দেখিয়েছেন। তাঁর মতে বাংলাদেশের প্রায় ৬৩০০০ একর জমি সম্বলিত পুকুরগুলো (যার ৭৫% মজে পড়ে আছে) এক উল্লেখযোগ্য সম্পদে পরিণত হতে পারে। তিনি মনে করেন যে, ২০০,০০০ (দু'লক্ষ) একর জমি পরিমাণ পুকুরে মাছের চাষ করলে, মাত্র সাত বছর সময়ে একরে গড়ে যদি ২২ মন মাছও উৎপন্ন হয় তবে প্রায় ৪৪ লক্ষ মন (অর্থাৎ ১৬০,০০০ টনেরও উর্ধে) মাছের উৎপাদন হবে এবং গড়পড়তা একজন মানুষ প্রায় দু'সের মাছ খেতে পারবে। পুষ্টিহীন গ্রামীণ সমাজে এ এক স্বন্দর পুষ্টি সম্পূরক উপাদান বটে। তা ছাড়া ঐ সব পুকুর যদি

১০/১২ ফুট গভীর করে খনন করা যায় তবে এসব জলাধার থেকে প্রায় ৬ লক্ষ একর বোরো, ইরি ধান চাষ করা যাবে। তাছাড়া শীতকালীন ফসল যথা গম, শাক-সব্জি ইত্যাদিও চাষ করা যাবে। এসব পুকুরের পানি উত্তোলনের সাথে সাথে তলদেশের পানি উঠানোর ক্ষমিকে একত্রিত করে একটি সমন্বিত পদক্ষেপ নিলে সেচের আওতাধীন জমির পরিমাণ প্রায় তিনগুণ বাড়ানো সম্ভব হবে।

পুকুর সংস্কার

অবশ্য সাথে সাথে ডুম্ব্রী প্রশ্ন তুলেছেন যে, ভূমি মালিকানার ধরন এমন যে ইচ্ছে করলেই পুকুরগুলো সংস্কার করা যাবে না। ধনী কৃষক এবং অনুপস্থিত ভূস্বামীদের মালিকানাধীন যে সব পুকুর রয়েছে, তারা অনেকটা ইচ্ছে করে এসব সংস্কারবিহীন করে রেখেছে। একাধিক মালিকানাধীন পুকুরগুলোর অবস্থাও অনেকটা অনুরূপ। যৌথ সিদ্ধান্ত নেয়ার মত অবস্থা তাদের মাঝে অনুপস্থিত। সেজন্য রেনে ডুম্ব্রী ভূমি সংস্কারের একটি প্রাথমিক পর্যায় হিসেবে 'পুকুর সংস্কারে' হাত দেয়ার পক্ষে মত দিয়েছেন। সেজন্য তিনি বেশ কিছু বিকল্প প্রস্তাব রেখেছেন। যে কোন পুকুর-মালিক (বা মালিকবর্গ)কে যে কোন দু'টো ব্যবস্থার একটি বেছে নেয়ার প্রস্তাব দেয়া যেতে পারে : হয় একটি নির্দিষ্ট সময়ের মধ্যে মজা পুকুরটি ১০/১২ ফুট গভীর করবেন (যার জন্য প্রয়োজনে সরকারী ঋণও দেয়া যেতে পারে) তা না হলে গ্রামীণ ভূমি-হীন বা ক্ষুদ্র কৃষকদের কোন সংগঠনের নিকট হস্তান্তর করবেন বিনা ক্ষতি পুরণে। অথবা পড়ে থাকা পুকুরের জন্য ভারী কর ব্যবস্থার প্রবর্তন করা উচিত। সে কর দিতে ব্যর্থ হলে পুকুরটি স্বাভাবিক নিয়মেই জনগণের সংগঠনে চলে যাবে। এভাবে উৎসাহ দিয়ে গ্রামীণ বিনিয়োগ বৃদ্ধি করা উচিত অথবা সে উৎসাহের ফল লাভ গ্রহণে ব্যর্থ হলে কঠোর ব্যবস্থা নেয়া উচিত। নদী-নালা, বিল, ইত্যাদি পুনঃখনন করেও জনসম্পদের সর্বোচ্চ ব্যবহারের মাধ্যমে সেচব্যবস্থার মৌলিক সংস্কার আনা উচিত।

উপসংহার

এসব আংশিক সংস্কারের সাফল্যকে আরো সংহত করে ধীরে ধীরে গ্রামীণ সেচ-ব্যবস্থা তথা পুরো-অর্থ-সামাজিক ব্যবস্থার খোল নলচে রদবদলের জন্য প্রাসঙ্গিক সংস্কারের দিকে অগ্রসর হওয়া বাঞ্ছনীয়। অবশ্য তাঁর জন্য প্রয়োজন হবে জাতীয় এবং সামাজিক দৃষ্টি নিরসনের পূর্ব শর্ত হিসেবে কিছু বাস্তব রাজনৈতিক ও সাংগঠনিক প্রয়াস। তা না হলে এসব কর্মকাণ্ডে জনগণের স্বতঃস্ফূর্ত অংশ গ্রহণ অন্ততঃ আশা করা সমীচীন হবেনা [আতিউর রহমান, ১১, ১২]।

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Some Preliminary Findings in the Study of Deep Tubewell Operation in Chittagong Division

by

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Study on deep tubewell operation in Chittagong Division was commissioned by Planning Commission. This paper attempts to give some indications on the state of affairs regarding the deep tubewell (DTW) operation in the area under study. Collection of field data has been completed for Comilla, Noakhali and Sylhet. It is yet to be completed for Chittagong where all the tubewells in the district will be included in this study. Findings presented here are on the basis of data that are already available for processing.

We had difficult time finding lists of DTW's installed in the districts under the study. BADC regional, zonal, even thana offices did not seem to have complete list of DTW's in their respective areas. We had to employ our own investigators to go through their documents to prepare these lists for each district. In some cases we failed even to have official authentication of the lists we prepared in the presence and cooperation of the BADC officials. There are instances in which information obtained from BADC offices turned out to be wrong. Our sample was drawn from the list of DTW's which were claimed to have been formally commissioned by BADC. Within our small sample of "commissioned" we came across DTW's which were never commissioned, never worked or simply cases of sinking failures.

Table I gives the number of DTW's in each district in Chittagong Division and the number of DTW's selected from each district for this report.

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TABLE I
NUMBER OF DTW's IN EACH DISTRICT AND NUMBER STUDIED

District	Number Installed	Number Commissioned	Number Covered
Comilla	906	825	85
Noakhali	87	70	14
Sylhet	6	5	2
Chittagong	49	47	28
Total	1048	946	129

All the DTW's included in the study have been classified into the groups: 1) Fully Active and 2) Partially Active (Table II). DTW's which were in operation every boro season ever since they were installed were put in the category of Fully Active, while those DTW's which were not in operation one or more boro seasons were put into the category of Partially Active DTW's. Of the 129 DTW's under study we found that only 69 DTW's fall in the Fully Active category. In the second category, that is, Partially Active, we found 50 DTW's. The remaining 10 did not qualify for either of the two categories. Five of these DTW's were never put to use, 2 were never commissioned and 3 were reported as 'sinking failures'.

TABLE II
OPERATIONAL STATUS OF DTW's

Operational Status	Comilla	Noakhali	Sylhet	Chittagong	Total
1. Fully Active	44	7	0	18	69
2. Partially Active	37	4	2	7	50
3. Never Worked	1	2	0	2	5
4. Never Commissioned	1	1	0	0	2
5. Sinking Failure	2	0	0	1	3
Total	85	14	2	28	129

An examination of the temporal pattern of Partially Active DTW revealed that first, about 50 per cent remained idle for 3 years and above and second, wastage (idleness) has increased over time (Table III).

Thus, for example, before 1969 there was no idleness among the tubewells under study. In eight years from 1969 to 1977, the number of working tubewells increased from 34 to 119, while the number of idle DTW's increased from 2 to 33. When this is viewed against the record of the first eight years, that is, from 1961 to 1968, when there was not a single machine remaining idle in any year, one cannot but be intrigued. Explanations for this phenomenon may be offered in terms of sharp deterioration in the maintenance and servicing facilities of the machines in the later years, absence of careful site selection for new deep tubewells, lack of institutional strength to provide competent management, or as a case of too many tubewells installed too fast.

TABLE III
TEMPORAL PATTERN OF DTW UTILISATION

Year	No. of DTW's Newly Commissioned	Cumulative Total	Cumulative Total of Unused DTW's	No. of Partially Active DTW's Remaining Idle	Total Remaining Idle
1962	1	1			
1963	0	0			
1964	5	6			
1965	4	10			
1966	4	14			
1967	7	21			
1968	7	28			
1969	6	34		2	2
1970	11	45	3	3	6
1971	9	54	3	8	11
1972	9	63	5	15	20
1973	20	83	6	18	24
1974	6	89	6	18	24
1975	17	106	7	23	30
1976	9	115	8	29	37
1977	4	119	8+2*	34	42+2

*Sinking of these two DTW's has not been completed at the time of field visits.

DTW users were asked to give their own reasons why their tubewells remained idle in some years. Users of partially active tubewells

gave variety of reasons, some are of a general nature, and some are specific to their particular tubewell.

One-half of the respondents pointed out that their tubewells remained idle because of mechanical failure. Next in order was the high cost of diesel which makes it uneconomic to undertake tubewell farming. Since so many other tubewells have survived, high cost of diesel cannot be the sole cause of idleness. It is perhaps the absence of good leadership that causes idleness in these tubewells rather than high cost of diesel which may, at best, be a discouraging factor.

Causes of idleness of DTW's as given by the respondents in partially active tubewells, are given in order of frequency of respondent :

1. Mechanical failure.
2. High cost of diesel which makes tubewell farming uneconomic.
3. Motor and/or parts were stolen.
4. Machine does not work properly.
5. Management failure.
6. Absence of cooperation among farmers. Bitter experience of the previous years in collecting water dues.
7. Machine produces saline water
(see Appendix A. 1 & 2).
8. Electrical connection was cut off.
9. Machine foundation collapsed
(see Appendix A 3).
10. Non-cooperation of BADC.
11. Tubewell farming needs large initial expenditure which is beyond the capacity of the farmers.

Age Distribution

Age distribution of the sampled DTW's gives out the history of DTW programme in Chittagong Division (Table IV). This programme particularly favoured Comilla, both in terms of an early start and the number of tubewells installed in the district. Noakhali comes in next as a poor cousin. It got a start slightly ahead of other

districts but the intensity of the programme in no way compares with that of Comilla. Sylhet is an apology. Chittagong has a programme of rather recent origin, but in terms of intensity it is closed to that of Comilla.

TABLE IV
AGE DISTRIBUTION OF DTW*

Age (years)	Comilla	Noakhali	Sylhet	Chittagong	Total
1	4	—	—	—	4
2	4	1	—	4	9
3	4	3	—	10	17
4	4	1	—	1	6
5	10	—	2	8	20
6	6	1	—	2	9
7	5	4	—	—	9
8	11	—	—	—	11
9	6	—	—	—	6
10	6	1	—	—	7
11	7	—	—	—	7
12	4	—	—	—	4
13	4	—	—	—	4
14	5	—	—	—	5
15	—	—	—	—	—
16	1	—	—	—	1
Total	81	11	2	25	119**

*Age has been calculated from the date of commissioning.

**Ten tubewells which were never used have been excluded.

Sample data from Comilla show a steady addition to the existing number of DTW's every year. That way Comilla offers a string of DTW's of every age. In case of Noakhali DTW-age varies from 2 to 7 years ; for Chittagong it varies from 2 to 6 years ; for Sylhet both DTW's included in the sample happen to have the same age, i. e., 5 years.

It may be noticed that half of the total number of tubewells fall in the range of 2 to 6 years.

While mean age of tubewells in Comilla is 7.7 years, it is 5.4 years in Noakhali, 5 years in Sylhet and 3.8 years in Chittagong.

Energy Source

Energy used for operating the DTW's comes primarily from diesel. In Noakhali, Sylhet and Chittagong all the sampled tubewells run on diesel. In Comilla just about half of the tubewells run on electricity.

TABLE V
ENERGY SOURCE OF DTW's

Energy Source	Comilla	Noakhali	Sylhet	Chittagong	Total
Diesel	45	11	2	27	85
Electricity	36+2*	—	—	—	36+2
Machine*					
Not Supplied**	2	3	—	1	6
Total	85	14	2	28	129

*These two tubewells have diesel engines; but the users run their machines with privately hired electrical motors.

**These tubewells were never supplied with any machine.

Most of the tubewells which are running with electricity were originally installed with diesel engines. Later they were converted from diesel to electricity. Only seven DTW's, among the tubewells included in the sample, were installed with electric motor. The remaining 29, out of 36 electrically powered DTW's, were converted from diesel to electricity.

Conversion of these DTW's from diesel to electricity began as early as 1964. But the rate at which this conversion was proceeding was very slow. Between 1964 and 1969 only 11 were converted from diesel to electricity. From 1970 to 1973 only one machine was converted. The process picked up speed from 1974 and reached its peak in 1976 in which year 13 DTW's (nearly one half of the total converted to date) were converted.

Acreage

Acreage under DTW's varied over the years. In some cases fluctuation are erratic, while in others there is a clear shrinking of coverage. Some DTW's simply never got going.

a) Over the years the machine is delivering less water because of poor maintenance of several DTW's.

b) Farmers are quitting the tubewell because of unreliability of its water supply.

c) Increasing number of privately owned shallow tubewells is attracting the DTW-farmers away.

d) During the first year, machine came at the late stage of the season. During the following year acreage increased but the machine started giving trouble.

e) The DTW is located in the sandy area. People reported that it is hard even to irrigate 10 acres. It is alleged that the location was selected to benefit one influential person.

f) The trouble with the tubewell comes primarily from the clash between two influential factions in the village. Leaders of both factions sought to locate the tubewell in front of their own *bari*. Finally BADC chose a location which happen to favour one leader against the other. But, by all accounts, the location was correctly chosen from the irrigation point of view.

The 'defeated' leader never accepted this as final. His supporters refused to cultivate their land with water coming from a DTW which is located in front of somebody they do not like. As a result acreage could not be increased in any year, and cost per acre could not be reduced.

Table VI gives yearly total acreage covered by all the deep tube:wells combined. In two years, once in '72 and again in '77, total acreage within sample area declined from the preceding year's total.

So far as average acreage in a particular year is concerned 1967 seem to have been the best year, yielding an average of 44 acres per DTW. Since 1971, average acreage fluctuated around 35 acres for all districts.

But when all the idle tubewells are included (including the unused tubewells) average acreage per DTW for all districts demonstrates declining tendency. This average fluctuates around 25 acres.

It is not possible to present detailed analysis of fluctuations in acreage under DTW. However, some reasons for poor performance g iven by respondents from a number af areas and outlined below.

TABLE VI
TOTAL DTW ACREAGE OVER THE YEARS

Dist/Year	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977
Comilla	20	35	194	348	534	924	1106	1346	1662	1650	1627	1919	2176	2109	2195	2156
Noakhali						08	20	20	20	70	66	67	90	169	275	197
Sylhet												23	105	71	30	—
Chittagong											08	149	126	482	592	594
Total	20	35	194	348	534	924	1109	1366	1682	1720	1701	2158	97	2777	3092	2947
Mean Acreage																
per DTW(a)*	20.00	35.00	32.33	34.80	38.14	44.00	39.60	42.68	40.04	37.39	35.43	33.20	35.16	33.45	35.95	34.67
Mean Acreage																
per DTW(b)**	20.00	35.00	32.33	34.80	38.14	44.00	39.60	40.17	35.04	30.17	25.01	24.24	26.28	24.57	25.13	23.20

*DTW's which were in operation during the year.

**DTW's which were in operation plus the ones which were not in operation during the year.

Acreage During 1977 Season

Data relating to acreage during the current (1977) *boro* season have the best chance of being reliable. Field visits were deliberately timed to coincide with the advanced stage of *boro* season. Visual checks along with checking with villagers were made to verify the acreage statements made by respondents.

Because of the higher reliability of these acreage data we separately analyzed the 1977 data to get a better picture of the acreage situation.

Out of the total of 129 DTW's in the sample we found 85 tubewells in operation this year. This means one in every three tubewells is not doing its job this year. When one considers the fact that 10 per cent of the DTW's installed have not yet been commissioned and among the "commissioned" tubewells every third tubewell remains idle, one cannot but feel alarmed at the waste.

TABLE VII
DTWs IN OPERATION (1977)

District	Total Number DTW'	Idle in 1977	Percentage Idle
Comilla	85	28	33
Noakhali	14	7	50
Sylhet	2	2	100
Chittagong	28	8	29
Total	129	44	34

Even with a large percentage of electrically operated DTW's (almost half of the total) Comilla still has every third tubewell idle.

Those machines which are in operation in this *boro* season are not doing a good job either. Modal value of the acreage covered in this year is only 28 acres for all districts. Districtwise modal values for Comilla, Noakhali and Chittagong are 42, 25 and 26 acres respectively. Total acreage covered by all 85 tubewells comes to 2947 acres, which gives a mean acreage of 34.67 acres per working tubewells,

TABLE VIII
DISTRIBUTION OF DTW ACREAGE DURING 1977 BORO SEASON
(No. of DTW's)

Acres	Comilla	Noakhali	Sylhet	Chittagong	Total
Less than 10	3	—	—	—	3
10-20	7	2	—	2	11
20-30	8	4	—	9	21
30-40	11	2	—	5	18
40-50	11	—	—	3	14
50-60	9	—	—	—	9
60-70	6	—	—	—	6
70-80	—	—	—	1	1
80-90	1	—	—	—	1
90-100	—	—	—	—	—
100-110	1	—	—	—	1
Total	57	8	—	20	85

Comilla having the largest number of working tubewells presents a wider variety of performance. Acreage in this district ranges from below 10 acres to around 100 acres. In other two districts the performance range is narrower.

Following table gives the comparative figures of acreage for all the districts.

TABLE IX
1977 ACREAGE

District	Total DTW Acreage	No. of DTWs in Operation	Mean Acreage
Comilla	2156	57	37.82
Noakhali	197	8	24.62
Sylhet	—	—	—
Chittagong	594	20	29.70
Total	2947	85	34.67

Comilla has the highest average per working tubewell, Noakhali has the smallest average,

Water-Rate During 1977

Rate charged per acre for tubewell irrigation during 1977 boro season varied widely. For diesel tubewells it varied from Tk. 64.00 plus diesel cost to Tk. 500.00. For electricity operated tubewells the rate was Tk. 44.00 plus share of electricity bill to Tk. 400.00.

In many places in Comilla there are dual rate system—one for the members of DTW cooperative society, another for non-members. The rate for non-member is fixed at a higher amount. There are cases where 3 rates prevail, one for members, one for non-members but from the same village, a third one for non-members from other villages.

Table below present these rates.

TABLE X
WATER RATES PER ACRE DURING 1977 BORO SEASON

Rate	Comilla		Noakhali	Sylhet	Chittagong
	Coop. Member	Non-Member			
Diesel :					
A. Highest	Tk. 500.00	500.00	400.00	—	400.00
B. Lowest	150.00	170.00	200.00	—	250.00
	64.00*				
Electric:					
A. Highest	375.00	400.00	—	—	—
B. Lowest	44.00**	44.00	—	—	—

* Plus cost of diesel.

** Plus sharing electricity bill.

Some Aspects of Past, Present and Future Strategies of Rural Development in Bangladesh

by

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INTRODUCTION AND BACKGROUND

The term 'Rural Development' whether properly understood or not is, perhaps, very conspicuously used by all and sundry all over the world. Rural Development is almost synonymous with overall economic development in many developing countries including Bangladesh where rural sector is either the major or only sector of the economy. Economic development is a continuous process and the present stage of development is the result and continuation of the past. Every country which is now advanced was initially rural ; but some countries developed more speedily than others and the acceleration in the pace of their development might be attributed to the existence of some favourable factors which were missing in some countries with the result that they lagged behind in respect of economic development.

BRITISH PERIOD

Unfortunately during the colonial rule of Indian sub-continent for about 200 years, sincere efforts were never made by the colonial government for the development of our rural economy. More specifically the area now included in Bangladesh has always been exploited as hinterland of Calcutta, the erstwhile capital of undivided Bengal

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for supplying raw materials to the industries owned mostly by the Britishers.

The foreign rulers not only isolated themselves from the masses and remained indifferent to the economic development of the country, but they also exploited our resources to their own interest. They did everything possible to destroy our economy and keep it crippled in order to perpetuate their rule through social, political, economic and cultural subjugation. For instance, the Muslin Industry of Dacca once renowned all over the world and local handloom industry of Bengal were deliberately destroyed to create a good market for machine-made textiles from England. The thumbs and hands of the skilled weavers of Muslin were chopped off so that they would not be able to weave Muslin.

Jute, the main cash crop of our farmers, was also utilized to build jute industries in Dundee in England and jute trade was the monopoly of the Britishers who exploited the farmers in different ways and made huge profit out of jute trade while the poor farmers were not given the fair price. There was not a single jute mill in Bangladesh area at the time of Division of India while 80% of the total jute production of the world came from the area now included in Bangladesh. The land tenure system introduced in Bengal was aimed at creating a highly privileged class in this country and the landlords, locally called *zaminders*, were used to strengthen the political and financial grip of the British Rulers and exploitation of the common people through them. These absentee landlords used to collect in Bengal about 140 million Taka per year; but they would pay only around 12 million Taka to the government and the balance of around 108 million Taka was spent in luxurious and wasteful expenditures by these *zamindars*. This potential source of rural capital was being wasted for about 200 years of British rule which might otherwise have been utilized for rural capital formation. The age-long cottage and small scale industries too could not flourish for absence of any encouragement from the government. The rural people and their economy thus remained in total deprivation, and eventually the erstwhile 'grannery' of British Empire was turned into a horrible famine stricken area with abject poverty and unspeakable economic sufferings.

Towards the latter part of the British rule some patriotic local administrators become conscious about the sufferings of the teeming millions and tried to give some relief to them in various ways. Inspired by one such person called Mr. Gurushodoy Dutta, there emerged the '*Bratachari*' movement to bring about change in the rural sector through motivating the rural youth. In spite of some initial success, this movement, however, could not sustain itself for very long. It was thrust upon the people from above and only the government officials were involved with the result that it died its natural death very early as there has always been a wide gap between the government officials and the rural masses, and a lack of participation and involvement by the latter in the process of change.

PAKISTAN PERIOD

During the Pakistan Rule V-AID programme and ultimately 'Works Programme' were also adopted for rural development through injecting more money to the rural sector, for creation of more job opportunities and changing rural infrastructures with the help of government officials. This did not also produce any lasting benefit to the rural people and their deteriorating economy.

Towards the latter part of Pakistan period a former civil servant Mr. Akhter Hamid Khan made a successful break-through by coming down to the people not as a high ranking government official but as a common man. He started mixing with the people, trying to organize the rural poor through cooperatives. He selected Comilla Kotwali Thana as his first place of experiments and set up the Bangladesh Academy for Rural Development (BARD). Rural people were mobilized and were involved in both initiation, and execution of plans. This made a tremendous impact on the rural economy in Comilla Kotwali Thana area and the people prospered very quickly. The theme of rural development in Comilla is now known as 'Comilla Approach' and the BARD is now an internationally recognized Institution for rural development. The clue to its success lies in the realization that development plans should be both initiated and executed at the grass root level instead of being imposed from above.

THE 'SWANIRVAR' MOVEMENT

Inspired by the success of Comilla Approach, the Government initiated the scheme of Intergrated Rural Development Programme (IRDP). It is a 'package deal' for rural development based on Comilla Model. Though it has created some impact on the rural economy, it has failed to realize the results as much as were experienced in Comilla. In the mean time Mahabub Alam Chashi,¹ a former bureaucrat came up with a new idea of rural development. He relinquished his rank and status as a Civil Servant and started farming himself in a village named Rangunia, in the District of Chittagong. He is the pioneer of 'Self-Reliance' or 'Swanirvar' movement in Bangladesh. Chashi¹ motivated the farmers to organize themselves to stand on their own feet.

In *Swanirvar* movement better results have been achieved than any other approaches. It might be attributed again to the organization of the movement by the people themselves at the grassroot level without direct or active participation by the Government initially. People have started organizing village Governments themselves drawing up plans and programmes and executing them for achieving self reliance.

SOME PRESENT AND FUTURE STRATEGIES

Economic development is a process of change—changes in methods of production, pattern of consumption, saving, investment and capital formation, distribution and exchange of goods and services. It also involves changes in the conduct and character of the people and their social, political and cultural values.

But our rural society is mostly characterized by traditionalism. To be more specific, our rural people produce, consume, eat, behave, think, dream, aspire and live a life as our forefathers did long long ago.

Whether our strategy for rural development is 'self-reliance' (*Swanirvar*) or any other former ones, all of them are inadequate in

¹He assumed the title 'Chashi' to change the attitude of the people towards farmers and to give emphasis on farming for rural development.

as much as they constitute a piece meal approach aimed at touching only a few of the above-mentioned variables. One of the characteristics of our present strategy of rural development is that it is mostly 'rice-oriented', that is, rural development is aimed at increasing food-grains only, more particularly rice. This change in one or few variables will be incapable of bringing about any significant, results in the rural economy as a whole. Government also has been encouraging and chalking out development plans and programmes which again are by and large 'rice-oriented'. But rural development involves many things other than increasing food production only.

In the following, we shall consider a multipronged strategy designed to affect all the variables that need to be tackled for overall development.

We may conveniently divide our future strategies into two broad categories : (a) short-run strategies which may be taken up immediately or within a short period and (b) long-run strategies which may be undertaken later or in due course of time.

(a) Short-Run Strategies

(1) Education and Training

Some sort of basic education is an essential pre-requisite for rural development. The failure of all our development plans in the past may be safely attributed to widespread illiteracy and many other evils connected with it. With a view to eradicating illiteracy, compulsory free primary education should be introduced immediately. All possible resources should be mobilized to fight out the monster of illiteracy in the country. I would even suggest imposition of 'illiteracy-tax' on people found illiterate between the age 16 and 60 after allowing, of course, 'tax-holiday' for one year. Every educational institution from primary to college levels should be utilized more intensively in more than one shifts to carry out this illiteracy eradication campaign.

The rural young educated unemployed people may be mobilized for offering their services for teaching the local adult people. Provision for small remuneration may be made to give incentive to them. Doctors, engineers or graduates or literate people after matriculation should not be given any opportunity of employment in government,

semi government or autonomous bodies until one has shown evidence that one has worked in a village for certain stipulated period for teaching adult illiterates. Students after their examinations get normally 2-3 months time before they enter next classes and this idle period may be utilized for teaching purposes if the educational institutions draw up their plans accordingly.

In addition to educational institutions even the village mosques may be utilized as centres for education and training. The curricula for primary education should be development-oriented and include both formal and non-formal aspects. Boys and girls should learn at least one vocation so that they may earn their bread through self employment according to their ability.

(2) Land Reform

Though land reform is a very delicate issue, it should attract immediate attention of the government. Sufficient development in agriculture cannot take place under the present tenorial conditions. It is reported that around 15 to 35% of the people is landless and land is the scarcest resource in Bangladesh with very little scope for increasing the cultivable land. So there should be more equitable distribution of land. Ceiling of land holding of 100 standard bighas should be drastically reduced for distribution of land among landless. It is to be noted that small farms have been found to be more efficient with higher yield per acre. On the other hand big land-owners do not properly use or utilize their land. Endless divisions and sub-divisions of farms together with their very odd shapes stand in the way of modernization of agriculture. In order to do away with this problem even compulsory consolidation of holdings must be introduced if voluntary measures or cooperatives fail to do it. Elimination of innumerable border lines after consolidation will result in the gaining of good cultivable land.

(3) Rural Electrification

It is an accepted fact that use of electricity is the life blood for any development activity. Our government has undertaken a policy of rural electrification. But indiscriminate rural electrification may result in misuse and wastage of scarce resources. Electricity should be taken

ultimately to every door step of the rural people no doubt, but since we cannot do it immediately we have to select the recipients according to some priority rules.

Sufficient supply of electricity should be ensured in the existing urban and industrial areas. Secondly, electricity should be carried to the railway stations, ports, market places, *hats & bazars*, Thana and union head quarters, schools, colleges, mosques, rural hospitals, family welfare centres, community development centres, places of irrigation, centres of cottage and small scale industries etc.

(4) Rural Infrastructure

It has been observed that village roads are constructed indiscriminately in zig-zag and serpentine manner consuming much cultivable land. Roads should be constructed straight as far as possible keeping in mind that they help the areas and centres of trade and commerce at the very first instance. Thanas and unions should be converted into urban centres. *Hats, bazars*, market places and new centres here and there should be developed as urban areas for the promotion of small scale and cottage industries. These areas should be provided with banks, insurance companies, telegraph and telephone facilities, post offices, medical facilities, centres for vocational training, community development centres, water and gas supply where possible, cinema houses, etc., so that trade, commerce and industries develop and farmers get off-farm job opportunities to increase their meagre income.

(b) Long Term Strategies

It will be a very fat book if one tries to enumerate all the strategies of rural development. The concept of a village in Bangladesh is different from that of West European and North American villages. A village of Bangladesh consists of homesteads indiscriminately scattered and separated from the others by a village road or 'foot path'. The spirit of individualism, social custom and attitude have intensified their isolated living and ways of life. This peculiar layout of our villages with dispersed homesteads stand in the way of development of the rural economy into a cohesive organized community. Water supply, measures of adult education, training,

supply of electricity or even gas in future to these scattered households are very complicated, and costly affair. Sustained development activities is be handicapped under this condition. Gradually the layout of the village has to be changed and clustered and centralized homesteads be encouraged for speedy development.

Food, cloth and shelter in suitable quantity and quality are basic necessities of human life. We talk a great deal about food, but very little about cloth and shelter. Rural people have inadequate clothes to protect their bodies against heat and cold. A homestead is both a place of business activities for farming and a home for shelter for the members of the farm family. A homestead consists of a few *huts* or tin-sheds haphazardly constructed here and there consuming much space but serving little purpose both as business house and home for good and suitable shelter. Good sanitation, ventilation and lighting facilities are either inadequate or absent. On many occasions the sleeping shed is also used for storage of cereals, jute, and other farm commodities, poultry birds, goats, etc. This sort of shelter is injurious to health and stands in the way of better health, mental and physical development of children.

In order that the villagers can construct their brick built houses themselves they should get adequate training in producing bricks, masonry, carpentry etc. so that idle time may be utilized for house building. Government may construct multistoried buildings to let them out to farmers on hire-purchase basis located in suitable places. These multistoried buildings may provide accommodation during floods in flood affected areas and save land. For single unit homesteads Government may construct demonstration houses well designed to resist floods, storms, tornadoes and cyclones and sell them out to the farmers. Demand for brick built houses will result in the establishment of many connected industries and promotion of trade and commerce and open new vista for rural development through creation of non-farm job opportunities.

Some Thoughts on the Problems of Developing Rural Bangladesh

by

SOFIA HASNA JAHAN ALI*

A current preoccupation of development economics seems to be how to organize the villages for economic development in the developing countries of Asia, Africa and Latin America. This thinking seems at least partly to be the result of the realization that the top-down planning process is not only of very limited effectiveness in the field of development of the low income countries, but also to a considerable extent self-defeating as it increases economic inequality between the urban and the rural sectors and aggravates the dependence of these countries on the developed countries. Sooner or later, this pattern of growth becomes difficult to maintain. Where this planning process also fails to ensure reasonable rise in per capita income, as has been the case in most developing economies, the increase in unemployment and poverty reinforces the disillusionment with this process itself. Invariably, the question arises: if we are unable to develop the economies of the developing countries of Asia, Africa and Latin America through the top-down planning process and if we also reject the Marxist prescriptions then what alternative should we choose?

In the 1950s, it was generally believed that there was nothing wrong with the capitalistic growth models. What the underdeveloped countries needed was inflow of capital and modern technology. These two inputs were supposed to increase the productivity of the economy in both agricultural and industrial sectors. Growth of income, savings,

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investment were to follow geometric progression. This however did not happen. Most developing countries remained poor or became poorer. In the 1960s, it was thought that there must have been something wrong with the administration of the programme. Hence the attention shifted to training in the process of project formulation, project evaluation and implementation. At the end of 1960, however, the dilemma seemed to have been increased in most of the developing countries, the gap between their expectation and the actual achievement widened. Increased poverty and unemployment, inequality of income, urban slums, and frustration with the inefficiency in industrialization made the people agitate against the system in many developing economies.

It is heartening to observe that the present Government has concentrated its focus on rural development. However, it is necessary to find out the right framework for macro-plan for Bangladesh in the present context.

Here a few questions are of vital importance. In discussing village planning for development, we would be basically considering micro-plans. What should be its relation with the macro-plan? Should the macro-plan follow from the lateral summation of all these micro-plans or do we still believe that the macro framework has to be made at the centre by a small group of politicians, bureaucrats and technocrats and then, the micro-plans will have to be fitted in?

Professionally, we are better equipped to put the macro-plan at the centre and micro-plan at the periphery. If we start with a modified Harrod-Domar type of planning model, our attention invariably focuses on such strategic questions as the saving and capital-output ratios and the desirable growth rates. We may even use some comprehensive input-output tables to find out the relevant coefficients of production or even a linear programming model to find out the feasible sets of solutions under the various constraints. All these indicate that we usually start with the macro framework and work out the sectoral plans at the same time or can offer the requisite framework for their mutual adjustment. In Bangladesh again, we have considerable experience in this type of exercises. We know how to formulate and

implement projects and how to integrate these in the sectoral and macro-planning framework.

The above is one way of the looking at problem and if this is actually the case then our discussion on village development in Bangladesh has to be projected within this framework. There might not be anything basically wrong with this. There are countries like India which has been using this analytical framework. It has adopted a growth model that emphasized industrialization primarily on the basis of import substitutions in its macro-economic context. The Indian community development programme was then adjusted to this growth model. India has also attained some success in both the industrial and agricultural fields, although there are serious criticisms about the distribution aspect of the developmental process. There are some other countries which have attained far more spectacular successes. There is, for example, South Korea where the country borrows heavily from foreign sources, but is also successful in increasing export to phenomenal heights and then 'reorganizes' its bureaucracy and motivates its people to have spectacular growth in the agricultural sector as well.

Alternatively, we can admit that such a capitalistic process of growth would not work in Bangladesh because of various historical and ideological constraints and we better find out an alternative framework and strategy for development. In this case, my observations are as follows :

1. In the developed countries, the entire economy is monetized. There is hardly any distinction between the rural and the urban sectors in the developed countries. The developing countries like Bangladesh are characterized by an agricultural economic base which is largely isolated from a few large urban centres.

2. The effort to convert the traditional sector of our economy into the modern sector through the capitalistic process has one great difficulty. Bangladesh aspires for a more egalitarian society as part of its historical struggle. Moreover, the capitalistic process of economic growth requires the national income cake to grow in size before it can be equitably distributed. In Bangladesh we are anxious that

the cake should be distributed as its size grows. Therefore, if there has to be capitalistic growth in Bangladesh, it has to be a very special kind of capitalism indeed.

3. We are basically individualistic and freedom loving and therefore, a socialistic economic system that do not guarantee these would also fall in disrepute in this country. It may be interesting to look at the experience of Vietnam. Like the other Marxists, the Vietnamese viewed the economy of small family farms as an obstacle to achieving the country's full agricultural potential. A movement to mobilize the peasants to struggle against the landlords was quickly organised in conjunction with the land redistribution campaign. However, the strategy they are following in the south is different. In the North, there was too little land per peasant and the government feared a reconcentration of ownership and the development of a new class division, if they did not collectivize quickly. So the lands were quickly collectivised. But in the more fertile and less densely populated Mekong delta region of the South, the organization of communist type cooperatives has been very slow. The aim here is to form cooperatives only when water conservancy projects, mechanization and the other 'material and technical' base for socialism are available. In the meantime, cadres are urged to persuade the farmers to form labour exchange teams in which each family is paid according to an agreed formula for human labour, or for the use of a buffalo, while retaining ownership of its land and other capital.

4. In Bangladesh, human resources are very rich in quality like our land, and therefore, our development should aim at maximizing utilization of our human potential.

On the basis of the above observations, the strategy for village development in Bangladesh should be reoriented.

First, the village has to be divided into self contained economic units which may be termed a ward. These basic units should be such that the people here are able to organise themselves on the basis of their demand, mobilize local resources to meet part of these demands and identify the areas where support from higher units may be needed.

Second, the various basic units may be coordinated at a higher, viz., village and union level. There should also be horizontal coordination between the different basic units.

Third, the organisations at the ward, village and union level may also be organised in terms of interest groups—landless labourers, small and medium farmers etc. as well as functional groups such as the agricultural production teams, health and sanitation team, family planning team. These various interest, functional and area group organisations should be further integrated vertically at the Thana level in a bigger representative organisation. The main function of the Thana level organisation is to integrate and supply the inputs demanded by the various organisations and provide for the training of the union, village and ward workers and develop managerial services, storage, transport and marketing facilities.

Fourth, the scope of these rural organisations should be comprehensive enough so as to cover most aspects of village life—social, economic, cultural, recreational and political.

The socio-political aspect of the organisational structure outlined above, needs to be explicitly worked out. For this purpose attention has to be focused on the following strategic areas :

i) The nature of social stratification and power structure in the village.

ii) The potential role that the younger generation in the village can play in weakening the hold of the traditional leaders.

iii) Every village will have to work out its own social welfare function within the constraints on the basis of (i) and (ii) above. Where the traditional leaders in the village are also relatively open minded, they may be persuaded to join some form of cooperatives that keeps their ownership of land intact but allows large scale farming at the sametime and provides for a distribution of the output of these farms to the relative advantage of the workers and makes increased provisions for introduction of modern farming practices.

iv) The nature of social and political pressure for a more rational distribution of assets and income through legislation at the national level.

If it is possible to organise the villages in these ways, and to have a comprehensive socio-economic survey in each area then efforts may be made to prepare comprehensive area plans which may be vertically and horizontally coordinated. This process may be helped by organising planning cells at appropriate levels and providing the required technological and financial support to these planning cells from the national level.

Various efforts have already been made in this direction in Bangladesh. There have been for example, the credit and then the multipurpose cooperatives that aimed at organising people in comprehensive cooperatives from the grassroot to the national level. These have largely failed. Similarly, the big effort to develop the villages through village agricultural and industrial development (V-Aid) programme also failed. Then there was the Comilla approach that eventually reduced itself into a government controlled works programme. In Bangladesh we now have the integrated rural development programme and the *Swanirvar* programme and of course a reformed cooperative movement—all aiming at building rural institutions—vertical and horizontal—from the grassroot to the national levels with varying degree of successes but mostly failures. Why?

To my mind the reasons are two fold : First, these have failed to take into consideration explicitly the village social stratification and the power structure, We may find that in certain villages, the well-to-do farmers would resist any attempt to bring the idle lands under cooperative, while in others it may be relatively easy to experiment with some form of collectives. Again, in some area it may be relatively easier to apportion a percentage of the total produce for the welfare of the needy, the poor and the unemployed.

Second, we need substantial as against superficial decentralization of power. The past effort in this field has been rather dismal. The decentralization that was conceded by the government was more rhetoric than real. So long as this is the case, the attempt to village development is likely to fail. Therefore, there has to be a very real and substantial decentralization of power in favour of the rural areas.

Here we might consider the crucial question of regional planning. Without comprehensive regional planning our current effort to promote rural development might fail. With this aim regional planning councils can be set up. There is currently an effort to set up Regional Planning Boards in Bangladesh at the district level but I am thinking of Regional Planning Councils, based on ecological and resource endowment consideration and not administrative consideration alone. The regional variation and the ecological considerations seem to be largely absent from our current planning. We are building roads that stops the natural flow of water. We have built industries where there is no adequate supply of raw materials. The primary task of the Regional Council would be to correct this imbalance. It seems that in our situation it is not possible to ensure this in our current macro-plan framework. So macro planning effort may be divided into several regional planning efforts. The number of regional planning areas may be fixed by a body of experts.

These Regional Planning Councils should be given substantial autonomy. Without this autonomy the regional concept of planning would be meaningless. However, just as the centre will give substantial autonomy to the regional councils so also these Regional Planning Councils should give substantial autonomy to the subsequent lower tiers of planning. Without this built-in autonomy, the rural organisations cannot plan on the basis of what is best for the area.

This, however, does not mean that the macro-planners at the centre will have no role to play. On the contrary, the task of macro-planners will actually increase many fold. First, they have to find out what the social welfare functions are in each region and sub-region and to what extent the regional and sub-regional plans need the support of the centre. Further they should also identify the areas of conflict between the regions and see what can be done to reduce the conflicts to the minimum. The representatives of the centre and the regions can sit together to sort these difficulties out.

Once there is broad consensus among the central and the regional planners then resources will have to be committed in advance, in favour of the regions and the sub-regions. Under the present system

the rural areas do not know in advance the quantity and the quality of the inputs to be made available to them and therefore, it is not possible for them to plan in advance. The regions and the sub-regions should know with some degree of certainty the various inputs that would be actually available and the policies that would be pursued so that they can plan.

Who will run the regional and sub-regional councils? If we are committed to democracy then eventually they will be run by the people's representatives. However, in the case of the planning cells it is desirable that the various interest and functional groups and some experts are duly represented, while administrators of that region may be the chief executive for plan implementation.

The policy options available to the autonomous regional councils for planning would be wide. No longer it would be possible for the central government to impose arbitrary policy decision on the regions made on ad-hoc basis. On the other hand, the first task of the central government would be to initiate a comprehensive regional study and divide the country on a rational basis. Next, the central government has to initiate a study on water resources development in cooperation with the regional councils. The development of transport and communication network has to follow and not proceed the development of water resources. Simultaneously the primary village organisations may be asked to fix priorities of their local plan objectives. In all likelihood the priority areas will be increased food production, provisions for clothing, shelter, health facilities and population control. But there can be regional variations. At the second stage, the centre and the regional council would discuss and provide the policy support and the required inputs to make regional planning successful. As has been pointed out earlier there is now hardly any coordination among various input flows to the local level.

All these things would be possible if only sufficient resources are placed at the command of the regions concerned. At present, the investment allocation programme is highly centralised and resources are released only in bits and pieces. Also, the policy instruments are highly biased in favour of the urban areas. In our scheme,

there has to be real decentralisation in this field. A beginning can be made as follows :

First, it may be assessed how much the central government is likely to spend in a region through the various central Ministries and through local government institutions.

Second, it may be explored what the revenue sources are that can be completely handed over to the regions and what can be kept exclusively under the centre and what could be shared between the centre and the region.

This system is likely to promote greater competition among the regions to utilise the resources better. This competitiveness could be increased by compelling regions which are insufficient in fund utilisation to surrender the unutilised fund in favour of the region that would utilise the fund better. However, in every country there would be the problem of differential growth of regional income and this is where the centre should come in. The national macro-plan should concentrate on such questions as how to pull the backward regions up and reduce difference in regional as well as personal income from property and work. As has been pointed out earlier Bangladesh prefers an egalitarian society with individual freedom. Further we have said that the local planning would have to follow the local social welfare function. At the national level the national social welfare function will have to be worked out taking into account these vexed questions of assets and income distribution and compensatory fiscal, monetary and commercial policies.

For Bangladesh it is imperative that for stability and to avoid stagnation food production should rise, deficit financing should drop to the minimum and domestic resources should be mobilised to the maximum. As fiscal policy at this level of our development has not been very successful in producing desirable results we have to pay more attention to the potential of fiscal policy in mobilising savings and redistributing resources on regional basis.

In our scheme, the Regional Planning Councils will have sufficient control over some area of fiscal policy and it should be possible for them to use it to their advantage. More important, there are

many hidden and potential sources of resources in the rural areas and if fiscal weapons are properly used, the revenue resources of the local units can be sufficiently augmented. For this purpose, it is also necessary to strengthen the institutional framework for channelling private and collective savings into productive utilisation and also to strengthen and reorganise institutions for supplying funds to the right persons at right time and at right prices.

This is a new area for our planners to look into.

CONCLUSIONS

The main conclusions of my paper may be summarized as follows :

(i) Village development cannot be conceived in isolation. It has to be a part of comprehensive macro-economic plan. However, under the conventional macro-plan industrialization is frequently inefficient, agricultural production stagnates while poverty, unemployment and inequality of income increases.

(ii) The problems of rural development in developed and developing countries differ significantly. In the former, rural areas are an integral part of the monetized economy. In the developing countries rural areas exist in significant isolation with different socio-economic cultural matrix compared to the urban areas and so development policies should be specially devised to bridge this dual character of the economy.

(iii) In Bangladesh people are historically inclined towards egalitarianism but they are also individualistic. Bangladesh, therefore, has to evolve its own politico-economic system which might be one in between capitalism and socialism. In addition, the most precious resources in Bangladesh is its human resources. So the system has to provide for the best possible development of its human resources.

(iv) Rural development in Bangladesh has to be promoted through organisational structures in ascending order—ward, village, thana and regions.

To be viable planning units, these organisations have to represent the various group interests in the locality, have to be sufficiently autonomous in character and be integrated both horizontally and vertically with each other.

(v) Such integration and independence are possible only if there is sufficient decentralisation of power in favour of the regions. It is necessary for the regional councils to be able to prepare the required regional plan, leaving the coordination function and other policy matters to the centre in the hands of the macro-planners.

(vi) One way to develop this pattern of growth is to allow the centre to share the revenue raised in these regions in accordance with an agreed formula as is usually the case in a federal state. However, there could be problems of differential regional growth, which the macro-planners will have to tackle through a policy of taxation and subsidies and such other relevant policy instruments including direct investment where necessary.

(vii) The policy instruments would have to be specifically devised to ensure that the system works. This would imply that the various regions will have significant say over some policy instruments while the centre will have the strategic role to coordinate the development policy of the different regions. In these, both the regions and the subregions, as well as the central government, must give primary importance to the social welfare functions at the appropriate levels.

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জাতীয় কৃষিনীতি : প্রাসঙ্গিক কিছু ভাবনা

জাহাঙ্গীর আলম*

দেশের অর্থনীতিকে স্নদুচ করার প্রশ্নে আমাদের সরকার ও রাজনৈতিক নেতৃবৃন্দ থেকে শুরু করে প্রতিটি নাগরিক কৃষি উন্নয়নের গুরুত্বকে একবাক্যে স্বীকার করে নিয়েছেন। কিন্তু এ পর্যন্ত একটি জাতীয় কৃষিনীতি প্রণয়নে আমরা সক্ষম হইনি। বিভিন্ন সময়ে সরকার পরিবর্তনের সাথে সাথে কৃষি উন্নয়নের রূপরেখা বদলে গেছে। এমনকি একই সরকারের আমলেও কৃষি উন্নয়নের গতি ও প্রকৃতি নিয়ে স্ববিরোধীতা লক্ষ্য করা গেছে। এই মতবিরোধ থেকেই আমাদের কৃষি উন্নয়নের মূল ধারাবাহিকতায় ছেদ পড়েছে। আবার নতুন করে ভাবনার সূত্রপাত হয়েছে কৃষি উন্নয়ন প্রসঙ্গে। এই পালা বদলের খেলা থেকে আমাদের কৃষি ব্যবস্থাকে মুক্ত করতে হলে একটি উন্নয়নমুখী কৃষিনীতি প্রণয়ন করা একান্ত কর্তব্য। আশার কথা, জাতীয় কৃষিনীতি প্রণয়নের জন্য সরকার ইতিমধ্যেই উদ্যোগ নিয়েছেন। স্মরণে এ সম্পর্কে এখন বিস্তারিতভাবে আলোচনা করা প্রয়োজন।

এক কথায় কৃষিনীতির সংজ্ঞা নির্ণয় করা কঠিন। রাষ্ট্রীয় নীতি ও প্রতিশ্রুতিকে সামনে রেখে কৃষি উন্নয়নের ভবিষ্যৎ রূপরেখা উপস্থাপন করাই হলো কৃষিনীতির মূল কথা। দেশের কৃষি উন্নয়নের গতি কি হবে? সরকার ও কৃষকের মাঝে উৎপাদন ক্ষেত্রে কি সম্পর্ক থাকবে? কৃষি উন্নয়নের জন্য প্রয়োজনীয় সম্পদ দেশের অভ্যন্তরে রয়েছে কি? যদি না থাকে তাহলে বিদেশ থেকে কোন সহযোগিতা গ্রহণ করা হবে কি? যদি তাই হয় তাহলে কোন্ ধরনের সহযোগিতা বাঞ্ছিত? উন্নয়নের পথে বর্তমান প্রাতিষ্ঠানিক ও সাংগঠনিক দুর্বলতা কোথায়? দুর্বলতাগুলো কাটিয়ে উঠার উপায় কি? এর জন্য কি নতুন কোন সাংগঠনিক কাঠামো স্ফূরণ করা যাবে? নতুন কাঠামোর স্বরূপ কি হবে? দেশের কৃষিনীতি প্রণয়নের পূর্বে এসব প্রশ্নের মীমাংসা করতে হবে। সেই সঙ্গে মীমাংসা করতে হবে ভূমি সংস্কারের প্রশ্নটিও। কৃষি আধুনিকীকরণ, কৃষি গবেষণা ও কৃষি শিক্ষার কর্মসূচী

*লেখক বাংলাদেশ কৃষি গবেষণা কাউন্সিল, ঢাকা-এর একজন সিনিয়র সারেন্টিফিক অফিসার।

প্রণয়নও কৃষিনীতির একটি অবিচ্ছেদ্য অঙ্গ। মোট কথা কৃষি উন্নয়নের সঙ্গে জড়িত যাবতীয় প্রশ্নের সমাধান লিপিবদ্ধ থাকবে কৃষিনীতিতে। ইহা দেশের জনগণের প্রতি সরকারী অঙ্গীকার।

কৃষিনীতি প্রণয়নের জন্য সর্বপ্রথম রাষ্ট্র পরিচালনার মূল নীতিমালা নির্ধারণ করা দরকার। সমাজতান্ত্রিক না ধনতান্ত্রিক পদ্ধতিতে দেশ এগিয়ে চলবে তার উপর ভিত্তি করেই রচিত হবে দেশের কৃষিনীতি। আমাদের জাতীয় নীতিতে সমাজতন্ত্র প্রতিষ্ঠার প্রতিশ্রুতি রয়েছে। বাংলাদেশের প্রথম পঞ্চবার্ষিক পরিকল্পনায় জাতীয় লক্ষ্য হিসেবে সমাজতন্ত্রকে চিহ্নিত করা হয়েছে। সুতরাং সমাজতান্ত্রিক কাঠামোর উপর ভিত্তি করেই রচিত হবে আমাদের জাতীয় কৃষিনীতি। কিন্তু রাষ্ট্রীয় ও সমাজ-জীবনের এখানে সেখানে কিঞ্চিৎ প্রলেপ লাগিয়ে নতুন কৃষিনীতি প্রণয়ন হবে অর্থহীন। এর জন্য কৃষিনীতির ক্ষেত্রেও পরিপূর্ণ রাষ্ট্রীয় অঙ্গীকার থাকা দরকার।

কৃষি উন্নয়ন একটি জটিল প্রশ্ন। অতি অল্প সময়ের মাঝে এই প্রশ্নের মীমাংসা অসম্ভব। এর জন্য সময়ের প্রয়োজন। সুতরাং আমাদের কৃষিনীতিতেও উন্নয়নের একটি দীর্ঘ মেয়াদী পরিকল্পনা থাকা দরকার। এই সময়সীমা ২০ বছরও হতে পারে। তার মাঝে জাতীয় কৃষি ব্যবস্থাকে একটি নির্দিষ্ট লক্ষ্যে পৌঁছানোর অঙ্গীকার থাকবে। এর জন্য দরকার হবে পরিবর্তনশীল স্বরমেরাদী এবং মাঝারী ধরনের পরিকল্পনা। একটি নির্ধারিত সময় পেরিয়ে এই পরিকল্পনার রূপ ভিন্নতর হতে পারে। তবে তার একটি খণ্ডা ছক পূর্বেই লিখিত থাকা দরকার।

বাংলাদেশের জন্য চাই একটি সুসম কৃষি উন্নয়ন নীতি। শুধু শস্যের উৎপাদন বৃদ্ধি নয়—সামগ্রিক পল্লী উন্নয়নের দৃষ্টিকোণ থেকেই গ্রহণ করতে হবে এর দীর্ঘ মেয়াদী পরিকল্পনা। এখানে শস্যের উৎপাদন বৃদ্ধির সঙ্গে হাঁস, মুরগী ও গবাদিপশুর উন্নয়ন, মৎস্য চাষ, গ্রামীণ ক্ষুদ্রশিল্পের সম্প্রসারণ, বাজার সময়্যার সমাধান এবং সেই সঙ্গে বাধ্যতামূলক কৃষি সমবায়ের উপর গুরুত্ব আরোপ করতে হবে। জনসংখ্যার সঠিক নিয়ন্ত্রণও পল্লী উন্নয়নের একটি অপরিহার্য কর্মসূচী। এসব বিক্ষিপ্ত কর্মসূচীকে একটি ছকে বেঁধে স্বর মেরাদী থেকে দীর্ঘ মেয়াদী পরিকল্পনায় উত্তরণ ঘটিয়ে উৎপাদন বৃদ্ধির সঙ্গে গ্রামীণ বেকারত্ব দূরীকরণ এবং সুসম বন্টনের নিশ্চয়তা বিধান করাই হবে আমাদের জাতীয় কৃষিনীতি প্রণয়নের উদ্দেশ্য।

কৃষিনীতি প্রণয়নের পূর্বে আমাদের জন সম্পদ ও প্রাকৃতিক সম্পদের সঠিক তথ্য জানা দরকার। এর জন্য জরিপ প্রয়োজন। কৃষি-নির্ভর জনগোষ্ঠীর পরিসংখ্যান, বেকারত্ব, প্রচলিত ভূমি ব্যবস্থা, হালের বলদ শক্তি, গৃহপালিত পশু-পক্ষী ও প্রাকৃতিক

সম্পদের বর্তমান তথ্যের উপর ভিত্তি করেই ভবিষ্যৎ কর্মসূচী নির্ধারণ করতে হবে। উন্নয়ন খাতে আমাদের কি পরিমাণ উপকরণের প্রয়োজন, ঘাটতির পরিমাণ কি, তা থেকে নির্ণয় করা হবে বৈদেশিক সাহায্য ও সহযোগিতার নীতি। বর্তমানে বাংলাদেশ স্বনির্ভর অর্থনীতি প্রতিষ্ঠার প্রতিশ্রুতি দিয়েছে। উৎপাদনের উপকরণের জন্যে পরমুখাপেক্ষী হয়ে বসে থাকা এখন জাতীয় আদর্শের পরিপন্থী। সুতরাং বৈদেশিক সাহায্যের উপর থেকে নির্ভরতা কমিয়ে আমাদের সম্পদের স্তর ব্যবহারের নিশ্চয়তা বিধান করাই হবে জাতীয় কৃষিনীতির লক্ষ্য। ঘাটতিটুকু মোটামুটি জন্যে অবশ্য আমাদের বৈদেশিক সহযোগিতার প্রয়োজন। তবে এই সহযোগিতার অর্থ অনুদান নয়, এক্ষেত্রে কারিগরি সহযোগিতাই আমাদের একান্ত কাম্য।

কৃষি উন্নয়ন একটি মাত্র শস্যের উৎপাদন বৃদ্ধির উপরই নির্ভরশীল নয়। সব ধরনের শস্যের উৎপাদন বৃদ্ধির মাধ্যমেই সম্ভব সুষম কৃষি উন্নয়ন। খাদ্যে স্বয়ংস্বত্ব অর্জনের জন্য মূল্য-নীতি যদি শুধু চাউলের অনুকূলে থাকে তাহলে কৃষকগণ শুধু ধান চাষে আগ্রহী হবে। কিন্তু সেই সঙ্গে পাট, গম ও অন্যান্য যাবতীয় ফসলের উৎপাদন কমে আসবে। সুতরাং চাউলের জন্য আমাদের ঘাটতি না থাকলেও অন্যান্য কৃষিজাত দ্রব্যের জন্য পরমুখাপেক্ষী হয়ে থাকতে হবে। এক্ষেত্রে শুধু চাউলের উৎপাদন বাড়িয়ে আমরা যদি তা রপ্তানি করে অন্যান্য শস্যের ঘাটতি মিটাতে চাই তাহলে আন্তর্জাতিক বাজার পরিস্থিতিতে সমস্যা সৃষ্টি হতে পারে। আন্তর্জাতিক বাজার দর বাংলাদেশের চাউলের অনুকূলে নাও থাকতে পারে। এ সব দিক চিন্তা করে প্রয়োজন অনুযায়ী সব ধরনের ফসলের উৎপাদন বাড়ানোর জন্যেই কৃষকদের উৎসাহিত করা দরকার। এর জন্যে বিভিন্ন শস্যের মূল্যনীতি উৎপাদন বৃদ্ধির অনুকূলে রাখতে হবে। কারণ মূল্যনীতি হচ্ছে শস্যের উৎপাদন নিয়ন্ত্রণের একটি প্রধান হাতিয়ার। ১৯৭৪/৭৫ সনে মরিচের দাম হঠাৎ বেড়ে গিয়ে প্রায় একশো টাকার দাঁড়িয়েছিলো। পরবর্তী বছর কাচা লংকার আবাদ এবং উৎপাদন এতো বেশী বেড়ে গিয়েছিলো যে আমাদের আর কোন অভাব রইল না। মরিচের দাম ১৯৭৫/৭৬ সনে আবার পূর্ব সীমায় নেমে এলো। মাঝখানে মরিচের দিক থেকে স্বয়ংসম্পূর্ণ হয়ে গেল অনেক কৃষক পরিবার। স্বাধীনতার পর থেকে ধান চাষের জন্য আবাদী জমির পরিমাণ বৃদ্ধি এবং পাটের জন্য জমির পরিমাণ হ্রাসের কারণে দুটো শস্যের মূল্যনীতি। পাট অপেক্ষা চাউলের মূল্য বেশী ছিলো বলে আয়-ব্যয়ের হিসাব কষে পাট চাষ অপেক্ষা ধান চাষের প্রতি কৃষকগণ আগ্রহ দেখিয়েছেন বেশী। সুতরাং সুষম কৃষি উন্নয়নের জন্য দ্রব্য-মূল্যকে এমনভাবে নিয়ন্ত্রণ করতে হবে যাতে সব ধরনের ফসলের উৎপাদন বাড়ানোর জন্যেই কৃষকদের উৎসাহ থাকে।

একজন কৃষক শুধু উৎপাদনই করে না। সে তার সমগ্র উৎপাদন কার্যক্রমের পরিকল্পনাও গ্রহণ করে থাকে। একজন বিচক্ষণ পরিকল্পনাবিদ হিসেবে সে কোন্ বছর কত একর জমিতে ধানের চাষ করবে এবং কত একর জমিতে পাটের চাষ করবে কিংবা কোন্ জমিতে কি ফসল ফলিয়ে সে অধিক লাভবান হবে তার সঠিক সিদ্ধান্ত গ্রহণ করে থাকে। এ ক্ষেত্রে সরকার পূর্ববর্তী বছরগুলোর মূল্যনীতি এবং উৎপাদন পদ্ধতির বিশ্লেষণ করে ভবিষ্যৎ মূল্য ও উৎপাদন নীতি রচনা করবেন। কোন্ বছর কি পরিমাণ জমিতে ধান, পাট কিংবা অন্যান্য শস্য ফলাতে হবে, এর জন্য কি উপকরণ দরকার, তার সঠিক উল্লেখ থাকবে কৃষিনীতির স্বল্প-মেয়াদী পরিকল্পনায়। এর জন্য কৃষি পণ্যের মূল্যমানে স্থিতিশীল নীতি গ্রহণ করা প্রয়োজন।

স্বাধীনতার পর বাংলাদেশ পরিকল্পনা কমিশন তাদের প্রথম পঞ্চবার্ষিক পরিকল্পনা প্রণয়ন করেছেন। সেই রিপোর্ট অনুসারে ১৯৭৮ সন নাগাদ বাংলাদেশ খাদ্যে স্বরস্তরতা অর্জন করবে। এর জন্যে নিবিড় উৎপাদন কার্যক্রম গ্রহণের সুপারিশ করেছেন পরিকল্পনা কমিশন। তাছাড়া অধিক উৎপাদনশীল ধান চাষের পরিকল্পনাও গ্রহণ করা হয়েছে। এই পরিকল্পনা বাস্তবায়নের জন্য কৃষক পর্ষায়ে যথোপযুক্ত দামে উৎপাদনের উপকরণ সরবরাহ করার সুপারিশ করা হয়েছে। তদুপরি এ সব উৎপাদনের উপকরণ যথাসময়ে কৃষক পর্ষায়ে পৌঁছে দেয়ার জন্য সরকারী প্রশাসন-যন্ত্রকে আরো সক্রিয় করার উপর গুরুত্ব আরোপ করা হয়েছে। তাছাড়া কৃষকগণ যাতে তাদের উৎপাদিত দ্রব্যের ন্যায্য মূল্য পায় এবং যথোপযুক্ত মূল্যে উৎপাদনের উপকরণ ক্রয় করতে পারে তার জন্য উৎপাদনকারীদের সংগঠন আরো জোরদার করার উপর গুরুত্ব আরোপ করা হয়েছে। সেই সঙ্গে কৃষিপণ্যের মূল্যমান সারা বছর ধরে যাতে স্থিতিশীল রাখা যায় তার জন্য একটি 'প্রাইস কমিশন' প্রতিষ্ঠার প্রস্তাব করা হয়েছিলো প্রথম পঞ্চবার্ষিক পরিকল্পনায়। সর্বোপরি গ্রামের জন-সাধারণের মাঝে আয়ের বৈষম্য দূর করা তথা ভূমিহীন ও ক্ষুদ্র কৃষকের স্বার্থ রক্ষার জন্য কৃষক সংগঠনকে জোরদার করা এবং সমবার প্রতিষ্ঠানগুলোতে ক্ষুদ্র ও ভূমিহীন কৃষকের প্রতিনিধি রাখার জন্য সুপারিশ করা হয়েছিলো।

প্রথম পঞ্চবার্ষিক পরিকল্পনার তিন বছর অতিবাহিত হয়েছে। এর মাঝে উচ্চ ফলনশীল ধান চাষের মাধ্যমে কৃষি উৎপাদন অনেক বেড়েছে। ১৯৭৫/৭৬ সনে খাদ্য-শস্যের মোট উৎপাদন ছিলো ১৩০ লক্ষ টন অর্থাৎ এর দুই বছর আগের গড় উৎপাদনের চেয়ে প্রায় ২০ লক্ষ টন বেশী। তাতে খাদ্য-শস্যের দাম কিছুটা কমেছে। কিন্তু সার্বিক মূল্য পরিস্থিতিতে তেমন কোন স্থিতিশীলতা পরিলক্ষিত হচ্ছে না। প্রস্তাবিত 'প্রাইস কমিশন' এখনো গঠিত হয়নি। তবে উৎপাদনের

উপকরণ সরবরাহের ক্ষেত্রে কিছুটা উন্নতি লক্ষ্য করা গেছে। তাতে কৃষকের উৎসাহ বেড়েছে। ভাল আবহাওয়ার জন্য গত বছরও উৎপাদন বৃদ্ধি পেয়েছে। কিন্তু উৎপাদন বৃদ্ধিকে স্থিতিশীল করার জন্য আমাদের গ্রামীণ সংগঠনগুলোকে জোরদার করার জন্য কোন পদক্ষেপ গ্রহণ করা হয়নি।

প্রথম পাঁচসাল পরিকল্পনার উৎপাদন বৃদ্ধির সঙ্গে স্মরণ বণ্টনের কথাও বলা হয়েছিলো। কিন্তু গত তিন বছর ধরে এর জন্য কোন কার্যকরী পদক্ষেপ নেয়া হয়নি। বাধ্যতামূলক গ্রাম সমবায়-এর নীল নকশা প্রণীত হতে গিয়েও শেষ পর্যন্ত প্রণয়ন করা হলোনা। আধুনিক চাষাবাদরীতির প্রভাবে অনেক ক্ষেত্রেই উৎপাদন বেড়েছে কিন্তু তাতে স্মরণ অর্থনীতি বিকাশের পথ উন্মুক্ত হয়নি। বরং ফলাফল হয়েছে উল্টোটা। সমাজের বিত্তবান কৃষকগণই আধুনিক চাষাবাদের মুনাফা লুটেছে। অপর দিকে বিত্তহীন হয়েছে ছোট কৃষক পরিবার। তদুপরি বন্যা, খরা এবং অন্যান্য প্রাকৃতিক দুর্বিপাকে পড়ে ছোট কৃষকগণ তাদের শেষ সঞ্চয়টুকু পর্যন্ত বিক্রি করে দিয়ে অবশেষে নিঃস্ব হয়েছেন। ১৯৭৪/৭৫-এর বন্যা ও মনুষ্যের পরবর্তী সময়ে সরকারী ভাবেও একথা স্বীকার করা হয়েছে। সুতরাং পঞ্চবার্ষিক পরিকল্পনার যতই স্মরণ বণ্টন এবং সমাজতান্ত্রিক অর্থনীতি প্রতিষ্ঠার কথা বলা হোক না কেন, বাস্তবে আমরা তার ধারে কাছেও নেই। বর্তমান সামাজিক কাঠামোয় তা সম্ভবও নয়। এর জন্য গ্রামীণ সংগঠনের পরিবর্তন দরকার।

গ্রামীণ সংগঠনের পুনর্বিন্যাস সম্পর্কে সবাই একমত হলেও এর রূপরেখা নিয়ে ভিন্নতর মত পোষণের অবকাশ রয়েছে। বাংলাদেশ কৃষি বিশ্ববিদ্যালয়ের কৃষি সমবায় ও বিপণন বিভাগের নেতৃত্বে ময়মনসিংহের শিমলা গ্রামে এক ধরনের সংগঠন গড়ে উঠেছে। ইহা উৎপাদন ভিত্তিক বহুমুখী যৌথ কৃষি সমবায় ব্যবস্থার অনুরূপ। সেখানে উৎপাদন পর্যায়ে বিত্তবান কৃষকদের প্রাধান্য থাকলেও বিত্তহীন ও ভূমিহীন কৃষকদের স্বার্থ রক্ষার জন্য কিছু প্রগতিশীল পদক্ষেপ গ্রহণ করা হয়েছে। জমির মালিকানার উপর গুরুত্ব কমিয়ে এবং শ্রমের উপর গুরুত্ব বাড়িয়ে শিমলায় কৃষকগণ স্মরণ বণ্টনের পথ কিছুটা উন্মুক্ত করেছেন। আমাদের ভবিষ্যৎ কৃষিনীতি প্রণয়নের ক্ষেত্রে শিমলার অভিজ্ঞতা অবশ্যই কাজে লাগবে।

বর্তমান স্বনির্ভর কর্মসূচী একটি নতুন গ্রামীণ সংগঠনের রূপরেখা উপস্থাপন করেছে। গ্রামের বর্তমান শ্রেণী বিন্যাসের উপর ভিত্তি করে প্রতি গ্রামে আলাদাভাবে পাঁচটি সংগঠন প্রতিষ্ঠার প্রস্তাব এতে রয়েছে। সংগঠনগুলির চরিত্র নিম্নরূপ : (ক) ভূমিহীন ও স্বল্পবিত্ত কৃষক সংগঠন, (খ) মাঝারী ও বিত্তবান কৃষক সংগঠন, (গ) জেলে, নাপিত, ধোপা ইত্যাদি শ্রেণীর প্রতিনিধি নিয়ে সংগঠন, (ঘ) গ্রামীণ মহিলা

সংগঠন এবং (ঙ) একটি যুব সংগঠন। এই পাঁচটি সংগঠন থেকে সমান সংখ্যক প্রতিনিধি নিয়ে গঠিত হবে গ্রাম সংগঠন বা গ্রাম সরকার। গ্রামের উৎপাদন ব্যবস্থা থেকে শুরু করে যাবতীয় উন্নয়নমূলক পরিকল্পনা গ্রহণের দায়িত্ব থাকবে এই গ্রাম সরকারের উপর। এক্ষেত্রে গ্রাম সরকারকে সহযোগিতা করার জন্য একটি পরিকল্পনা সেলও স্থাপন করা হবে। এই পরিকল্পনা বাস্তবায়ন তথা একটি নতুন সমাজ গঠন করার দায়িত্ব থাকবে গ্রামের যুব সংগঠনের উপর। পরবর্তী পর্ষায় গ্রাম সরকারের প্রতিনিধি নিয়ে গঠিত হবে ইউনিয়ন সরকার এবং বিভিন্ন ইউনিয়নের প্রতিনিধিগণ গঠন করা হবে থানা সরকার। এমনভাবে সমাজের নিম্নস্তর থেকে শুরু করে রাষ্ট্রের উপরিতন কাঠামো পর্যন্ত বিভিন্ন সংগঠন গড়ে উঠবে এবং এদের যাবতীয় কার্যে একের সঙ্গে অপরের বর্নিষ্ঠ সংযোগ থাকবে।

স্বনির্ভর কর্মসূচীর দর্শন অনুযায়ী অনুরূপ সংগঠনের মাধ্যমে বেকার যুব শক্তির কর্মসংস্থান হবে এবং ভূমিহীন ও ক্ষুদ্র চাষীদের স্বার্থ রক্ষা করা যাবে। এ ছাড়া এই সংগঠনের মাধ্যমে ভূস্বামীদের একচেটিয়া আধিপত্যকে খর্ব করে পল্লী অঞ্চলের শ্রম ব্যবহারের নীতি কৃষি শ্রমিকের অনুকূলে প্রণয়ন করা সম্ভব হবে। তাতে সামাজিক ন্যায় বিচার প্রতিষ্ঠার পথও উন্মুক্ত হবে। এই পরিকল্পনাকে স্থায়ী রূপ দেয়ার জন্য বাস্তবভিত্তিক কৃষি ও পল্লী উন্নয়ন শিক্ষাকে বাধ্যতামূলক কার্যক্রম হিসেবে গ্রহণ করার পরিকল্পনা স্বনির্ভর আন্দোলনের নীতিমালায় রয়েছে। অতি সম্প্রতি 'মুক্তাঙ্গণ' নামে একটি কৃষি শিক্ষা কার্যক্রমের মহড়াও চলেছে বিভিন্ন স্বনির্ভর গ্রামে। এই শিক্ষাসূচীর অধীনে গ্রামের জনসাধারণকে কৃষি শিক্ষার সঙ্গে পরিবার পরিকল্পনা ও জনসংখ্যা নিয়ন্ত্রণের বিভিন্ন পন্থা সম্পর্কে অবহিত করা হচ্ছে। স্বনির্ভর কর্মসূচীর নীতি অনুযায়ী মুক্তাঙ্গণের সঙ্গে সম্পর্ক রেখে কৃষি বিশ্ববিদ্যালয়ের ছাত্রদের পল্লী উন্নয়ন ও সামাজিক স্মম বিকাশের পথে যে সব প্রতিবন্ধকতা রয়েছে তা দূর করার পন্থা সম্পর্কে প্রশিক্ষণ প্রদানের উপর গুরুত্ব আরোপ করা হয়েছে।

স্বনির্ভর আন্দোলনের নেতৃত্বে যাঁরা রয়েছেন তাঁরা সরকারী কর্মচারী হলেও গোটা আন্দোলনকে সরকারী আন্দোলন বলে চিহ্নিত করা হয়নি। এর অন্যতম উদ্যোক্তা ও সংগঠক জনাব মাহুব আলম চাষী বাংলাদেশ অর্থনীতি সমিতির দ্বিতীয় বাষিক সম্মেলনে প্রদত্ত ভাষণে একে একটি অনানুষ্ঠানিক বা বেসরকারী আন্দোলন বলে অভিহিত করেছেন। তাঁর মতে এ আন্দোলন এখনো পথ খুঁজছে। বাস্তব অভিজ্ঞতার আলোকেই এর ভবিষ্যৎ কর্মসূচী নির্ধারণ করা হবে। সুতরাং স্বনির্ভর আন্দোলনের কর্মসূচী নিয়ে এখনো কোন সমালোচনার সময় আসেনি। এই আন্দোলন স্থায়ী রূপ নেবে কিনা তাও ঠিক করে বলা যায় না। ভবিষ্যৎ কৃষিনীতির সাংগঠনিক রূপরেখায় স্বনির্ভর

নীতিমালা কতোটা গ্রহণোপযোগী হবে তার উপরই অনেকটা নির্ভর করবে স্বনির্ভর আন্দোলনের সাফল্য।

কৃষির উৎপাদন বৃদ্ধি এবং সেই সঙ্গে সুষম বণ্টনকে নিশ্চিত করার জন্য অনেকেই ভূমি সংস্কারের কথা বলেন। এ দেশের ভূমিহীন এবং ক্ষুদ্র কৃষকদের সমস্যার কথা-ভেবেই অনুরূপ ভূমি সংস্কারের সুপারিশ করা হয়ে থাকে। ১৯৭৩ সালের ১৯শে জুন জাতীয় সংসদে প্রস্তোত্তরকালে দেশের ভূমিহীন কৃষক পরিবারের সংখ্যা ২৬ লক্ষ বলে জানানো হয়েছিলো। বিশ্ব ব্যাঙ্কের নমুনা জরীপের উদ্ধৃতি দিয়ে ১৯৭৪ সনের ১৭ই জানুয়ারী জাতীয় সংসদে প্রস্তোত্তরকালে দেশের ১৯টি জেলার ১ লক্ষ ২৩ হাজার ভূমিহীন কৃষকের মধ্যে খাস জমি বণ্টন করা হয়েছে বলে দাবী করা হয়েছিল। অবশ্য খাস জমি বণ্টনের ভিত্তি সরকারী নথিপত্র। ১৯৬০ এর কৃষি স্তমারী অনুযায়ী এ দেশের ভূমিহীন কৃষকের সংখ্যা ছিল ১ লক্ষ। কোন কোন কৃষক সংগঠনের মতে দেশের শতকরা ৪০ জন কৃষক ভূমিহীন। আবার কারো মতে এই সংখ্যা শতকরা ২০ জন। এক্ষেত্রে আমরা যদি সরকারী হিসেব মতো ভূমিহীন কৃষক পরিবারের সংখ্যা ২৬ লক্ষকে মেনে নিই এবং প্রতি পরিবারের লোক সংখ্যা গড়ে ৫ জন করে ধরে নিই তাহলে এ দেশের মোট ১ কোটি ৩০ লাখ লোক ভূমিহীন। সেই সঙ্গে রয়েছে ১৪ লক্ষ ৯২ হাজার ৪৯০টি ক্ষুদ্র কৃষক পরিবার (১'৫ একরের নীচে)। জনসংখ্যা বৃদ্ধির সঙ্গে ক্ষুদ্র ভূমিহীনদের জমি উত্তরাধিকার আইনের সূত্রে ভাগ হতে হতে এমন ক্ষুদ্র জোতের সীমায় পৌঁছেছে যে 'ভূমি আছে'—এমন একটু সাহসতার বাণী ছাড়া তাদের আর কিছুই অবশিষ্ট থাকছে না। ফলে শহরে লোক সমাগম বাড়ছে। কল-কারখানায় শ্রমিক নিয়োগ সহজতর নয় বলে অর্থনীতি আমাদের উল্টো দিকে চলছে। স্তরায় গ্রামাঞ্চলের এই ছিন্নমূল জনগোষ্ঠী না গ্রামে না শহরে কোথাও টিকতে না পেরে ভেসে বেড়াচ্ছে কখনো গ্রামে আবার কখনো শহরে। ১৯৬১ সন থেকে ১৯৭৪ সন নাগাদ এ দেশে শহরাঞ্চলের জনসংখ্যা শতকরা ১৩৭ দশমিক ৬১ ভাগ বেড়ে গেছে। মূলতঃ গ্রামের ছিন্নমূল জনগণের শহরাভিমুখী যাত্রার ফলেই। শুধু মানবিক মূল্যবোধের প্রশ্নই নয়, রাজনৈতিক কারণেও এই ছিন্নমূলদের সমস্যা সমাধান করা দরকার। কারণ যার হারাবার কিছু নেই সে যে কোন মুহূর্তে মরণপণ আঘাত হানার জন্যে প্রস্তুত থাকতে পারে। সম্ভবত এই কারণেই খাইল্যাণ্ডের শহরবাসী প্রধানমন্ত্রীর মনে হঠাৎ করে গ্রাম-প্রীতি জেগে উঠেছে। এশিয়ার জাকার্তা-কেন্দ্রীক নয়। জোট 'আসিয়ান'-এর সমর্থক এশিয়া উইকের ১৩ই ফেব্রুয়ারী, ১৯৭৬ সংখ্যায় খাইল্যাণ্ডের সম্পদ বন্টনের এক নতুনতর ইংগিত পাওয়া যায়। খাইল্যাণ্ডের রাজধানী ব্যাংককের লোকজন যখন শহরে তাদের মাসিডিজ গাড়ীর জন্য চকচকে নতুন রাস্তা খুঁজছেন তখন সরকার সম্পদের প্রবাহ অন্যদিকে ঘুরিয়ে

দিচ্ছেন। সম্পদ স্বজনে যারা মাথার ঘাম পায়ে ফেলেছে, সেই গ্রামবাসীদের দিকেই সম্পদের গতি উৎসারিত করা হচ্ছে। খাইবাসী শতকরা ৮০ জন বঞ্চিত কৃষকের মর্মবেদনা যখন গ্রামে গ্রামে সামাজিক-বিপ্লবের রূপ ধরে আসছিলো ঠিক তখনই রাজা ভূমিবলের দেশে এসেছে এই মতি-শুদ্ধি। আমাদের দেশে এখনো তেমন সামাজিক বিপ্লবের লক্ষণ দেখা যাচ্ছে না। তবু আশ্চর্য হয়ে আমরা দেখছি, এদেশে বুলভোজার দিয়ে শহরের বস্তি সমস্যার সমাধান করা হয়েছে। ১৯৭৫ সনে শহরাশ্রিত উচ্ছন্ন জনসংখ্যার ব্যাপকতা দেখে বিশ্বব্যাংক সতর্ক করে দিয়েছিলেন। এ শ্রোত ঠেকাতে না পারলে ভয়ঙ্কর বিপদ হবে নির্বাণ।

কেবলমাত্র ভূমি সংস্কারই কি এই ছিন্নমূল জনসংখ্যার পুনর্বাসনের উপায়? স্বাধীনতার পর ১০০ বিঘা পর্বস্ত জমির সর্বোচ্চ সীমা নির্ধারণ এবং সর্বহারাদের মাঝে উদ্ধৃত্ত জমি বিতরণের চেহারা আমরা দেখছি। প্রকৃত প্তস্তাবে খুব অল্প সংখ্যক জোতদারের নিকট থেকেই উদ্ধৃত্ত জমি পাওয়া গেছে। নিজেদের আঙ্গীয়-স্বজনদের মাঝে জমি ভাগাভাগি করে দিয়ে জোতদারগণ যে জমিটুকু সরকারের হাতে তুলে দিয়েছেন তাতে দেশের শতকরা ২২ জন ভূমিহীন কৃষকের প্রয়োজন মেটানো সম্ভব হয়নি। তদুপরি ১৯৭৪ সনের বন্যা এবং পরবর্তী দুভিক্ষের কবলে পড়ে এ দেশের ভূমিহীন ও ছিন্নমূল জনগোষ্ঠির মিছিল আবারও দীর্ঘায়িত হয়েছে। ইতিপূর্বে দুভিক্ষাবস্থায় বিক্রি করা জমি ফিরিয়ে দেয়ার জন্য সরকার যে নীতিমালা ঘোষণা করেছিলেন তাতেও খুব একটা আশাব্যঞ্জক সাড়া মিলেছে বলে প্রমাণ পাওয়া যাচ্ছে না। কারণ এই দুভিক্ষের সময়েও যারা জমি কিনতে সক্ষম ছিলেন তারা শুধু অর্থনৈতিক দিক থেকেই নয়, সবদিক থেকেই তারা গ্রামীণ সমাজের প্রভুত্ব করে থাকে। তাদের চোখ রাঙানী উপেক্ষা করে বিক্রি করা জমি ফিরিয়ে নেয়ার জন্য কাচারীর ঘারে এসে হাজির হওয়ার মতো শক্তি-সামর্থ্য অনেকেরই নেই। স্তরাতং প্রচলিত অর্থে ভূমির সর্বোচ্চ সীমা নির্ধারণ তথা সাধারণ গোছের একটা কাণ্ডজে ভূমি সংস্কারই ভূমিহীন কৃষকের সমস্যা সমাধানের সব কথা নয়। তার আগে ভূমিহীন কৃষকদের গ্রামে গ্রামে সংগঠিত করা দরকার। এদেরকে আন্দ্র-সচেতন করে দাবী প্রতিষ্ঠার সংগ্রামে জোতদারদের মুখোমুখি দাঁড়াবার মতো শক্তিশালী করে তোলা দরকার যাতে কোন অজুহাতেই জোতদারগণ এদের আর ঠেকাতে না পারে।

প্রশ্ন উঠতে পারে, ভূমিহীন কৃষকদের সংগঠিত করে জোতদারদের নিকট থেকে কেড়ে নেয়া জমি ভাগাভাগি করে দিলেই কি সমস্যার সমাধান হবে? কৃষি অর্থনীতি-বিদগণ এক্ষেত্রে আরো অধিক সমস্যা সৃষ্টির ইঙ্গিত বুঁজে থাকেন। প্রথমতঃ

জোতদারদের হাতে যে অতিরিক্ত জমি আছে তা যতোই অবহেলার সাথে চাষাবাদ করা হোক না কেন তার উৎপাদনটুকু মূলতঃ পারিবারিক ভরণ-পোষণের অতিরিক্ত পাওনা। অন্য কথায় এই অতিরিক্ত পাওনাটুকু জাতীয় উদ্বৃত্ত। কিন্তু এই অতিরিক্ত জমি যখন ভূমিহীন কৃষকদের মাঝে বন্টন করা হবে তখন তার উৎপাদনটুকু সম্পূর্ণই ওরা খেয়ে ফেলবে। জাতীয় উদ্বৃত্ত বলতে তখন আর কিছুই থাকবে না। দ্বিতীয়তঃ ভূমিহীন কৃষকদের হাতে উৎপাদনের উপকরণ কিছুই থাকে না। এমনকি বাদের কিছু জমি আছে, চাষাবাদ-এর সময় তারাও প্রায় অসহায় থাকে। ১৯৬০ সনের কৃষি জরীপ থেকে জানা যায়, এক একর ও তার কম জমি সম্পন্ন কৃষকদের শতকরা মাত্র ১৬.৭ জনের লাংগল আছে। আর ৫ একর বা তার বেশী জমির সমস্ত জোতের কৃষকদের রয়েছে শতকরা একশো ভাগ। এই খতিয়ান থেকে স্পষ্টই বোঝা যায় যে, জমির মালিকানার পরিধি যতোই কমে আসে উৎপাদনের উপকরণের অভাব ততোই প্রকট হয়ে উঠে। সুতরাং জমি ভোগদখলের সর্বোচ্চ সীমা যদি আরো অনেক কমিয়ে আনা হয় এবং জমি ভূমিহীন কৃষকদের মাঝে বন্টন করা হয় তাহলেও (যদি এ দেশের উদ্বৃত্ত জমি বন্টন করে শতকরা ৩৬-৪০ জন ভূমিহীন কৃষককে অন্ততঃ মাঝারী কৃষকেও পরিণত করা সম্ভব হয়) উৎপাদনের উপকরণের সমস্যা লেগেই থাকবে। এক্ষেত্রে সরকারী সাহায্য ও সহযোগিতা সাময়িক ভাবে সমস্যার সমাধান করতে সক্ষম হলেও দীর্ঘ মেয়াদী কোন সমাধান দেখানো নেই। সুতরাং স্বাভাবিক কারণেই স্বয়ং ভূমির কৃষকদের জমি থাকবে উনকণ্ঠিত। আধুনিক চাষাবাদ পদ্ধতির আশ্রয় নেয়া তাদের পক্ষে অসম্ভব হয়ে দাঁড়াবে। ফলে এরা কেবল বেঁচে থাকার জন্য যা কিছু উৎপাদন করবে পরিবারের ভোগের চাহিদা মেটাতেই তার সবকিছু চলে যাবে। সঞ্চয় বলতে তাদের আর কিছুই অবশিষ্ট থাকবে না। পরবর্তী বছরে এদের হাতে কোন কানা কড়িও থাকবে না। উৎপাদন কাজে বিনিয়োগ করার জন্যে কাজেই ঋণের জন্য হাত বাড়াতে হবে। পরবর্তী মৌসুমে মাঠের ফসল আর ঘরে উঠবে না। জোতদারদের নিকট থেকে ছিনিয়ে নেয়া জমি আবার জোতদারদের হাতে চলে যাবে। দারিদ্রের নিষ্ঠুর নিষ্পেষণে অতলান্ত অন্ধকারের দিকে তলিয়ে যাবে ভূমিহীন কৃষক। মৃত্যু এসে হয়তো এদের অনেককেই ছিনিয়ে নিয়ে যাবে। কিন্তু যারা বেঁচে থেকেও মরবে না এদের সামনে একটাই পথ। আবার এরা ভিন্কার ঝুলি কাঁধে নিয়ে প্লা বাড়াতে শহরের পথে। আবার সমস্যা হবে ছিন্নমূল জনগোষ্ঠির।

উপরের উদাহরণ দিয়ে আমি ভবিষ্যতের ব্যাপক ভূমি সংস্কারকে ঠেকাতে চাচ্ছি না। উৎপাদন বৃদ্ধি ও সুষম বন্টনকে নিশ্চিত করতে হলে ভূমি সংস্কার

অবশ্যই প্রয়োজন। কিন্তু তার আগে গ্রামের ভূমিহীন ও ক্ষুদ্র কৃষকদের সংগঠন শক্তিশালী করা দরকার। সেই সঙ্গে বন্ডিত ভূমি চাষাবাদের জন্য ক্ষুদ্র কৃষকদের বাধ্যতামূলক কৃষি সমবায়ের অন্তর্ভুক্ত করে উৎপাদন ব্যবস্থায় যৌথ মালিকানা প্রতিষ্ঠিত করা দরকার। ভূমিহীনদের মাঝে জমি বিতরণ করার অর্থ জমির মালিকানা সমর্পণ করা নয়। শ্রমের বিনিময়ে জমির উৎপাদনের উপর অধিকার প্রতিষ্ঠাই হবে ভূমি বন্টনের আসল কথা।

বাংলাদেশের শতকরা ২২ জন লোক ভূমিহীন কৃষকে উপনীত হয়েছে যে সব কারণে তনুধ্যে অন্যতম হলো সরকারী কৃষি উপকরণ ও সাভিসের অসম বণ্টন। যারা এই অসম বণ্টনে লাভবান তারাই অসহায় প্রতিবেশীর শেষ জোত ও ভিটেটুকু কিনে নেয়। ফলে এক দিকে সম্পদ ও অন্যদিকে ভূমির পুঞ্জীভবন গড়ে উঠে তাদের হাতে। গ্রামাঞ্চলের অতিবৃদ্ধিমান টাউট শ্রেণীর সাথে ধনাঢ্য কৃষকের আঁতাত এমন এক চরম পর্যায়ে উন্নীত হয়ে এখন আবার হানছে অসহায় কৃষকদের উপর। সরকারের কৃষি উন্নয়নের সমস্ত সুফলের শতকরা ৬০ ভাগ থেকে ৭০ ভাগ একচেটিয়া ভাবে বড় কৃষকের ঘরে যাচ্ছে। স্বাধীনতার পর বলগাহীন মুদ্রাস্ফীতিতে কারো পৌষ মাস হয়ে থাকলে নিঃসন্দেহে তারা হচ্ছেন ঐ জোতদার টাউট শ্রেণীর লোক। স্তরাতঃ শুধু উপকরণের 'সাবসিডি' দিয়ে যে ক্ষুদ্র কৃষকের স্বার্থ রক্ষা করা যাবেনা সে কথা বলাই বাহুল্য। এর জন্যও চাই কৃষি সমবায়।

আমাদের ভবিষ্যৎ কৃষিনীতিতে সমবায়ের কি রূপ প্রতিফলিত হবে তা নিয়ে বিতর্কের অবকাশ রয়েছে। তবে জাতীয় আদর্শে যদি সুষম বণ্টন তথা সমাজতান্ত্রিক অর্থনীতি প্রতিষ্ঠার প্রতিশ্রুতি থাকে তাহলে এ দেশের ভূমি বণ্টন ও কৃষি সমবায়ের নীতিমালা বিপ্লব সমাজতান্ত্রিক রাষ্ট্রগুলোর নীতিমালাকে অনুসরণ করেই প্রণয়ন করতে হবে। এক্ষেত্রে জোড়াতালি দেবার মতো অবকাশ সীমিত। কিন্তু আমাদের জাতীয় আদর্শ সমাজতন্ত্র হলেও আমরা ধনতন্ত্র এবং সমাজতন্ত্রের মাঝে যেন দীর্ঘ দিন ধরে আপোষ করে চলছি। কোন নীতিমালাই আমরা পরিপূর্ণ ভাবে গ্রহণ করতে পারছি না। কারণ আমরা বিদেশী ঋণ চাই। অতএব আমরা সবার দলেই আছি। এর পেছনেও একটা যুক্তি আছে। স্বাধীনতা উত্তরকালে আমাদের যাত্রা শুরু হয়েছে মোট ব্যয়ের ৭০/৭২ শতাংশ বৈদেশিক সাহায্যের উপর নির্ভর করে। ইচ্ছা করলেই এই পরনির্ভরতা এড়ানো যাবে না। কারণ অপরিহার্য খাত গুলোতে স্বাবলম্বী হবার আগে আনুসঙ্গিক খাতগুলোতে পরনির্ভরশীলতা এড়ানো সম্ভব নয়। কিন্তু গ্রামবাংলায় বহুল প্রচলিত একটি প্রবাদ আছে— তোলা দুখে ছেলেকে বাঁচিয়ে রাখা যায় না। যদি বাঁচিয়ে রাখতে হয় তবে অবশ্যই তাঁকে স্বাবলম্বী করে

তুলতে হবে। বর্তমান স্বনির্ভর আন্দোলন যদি এ উপলক্ষের প্রথম দীক্ষা হয়ে থাকে তবে আশাবাদের কথা। কারণ বৈদেশিক খাদ্যশস্যের আমদানী বন্ধ করে দেওয়া হলে পেটের দায়েই কৃষকগণ উৎপাদন বাড়ানোর জন্যে যত্নবান হবে। পনেরো কি বিশ লাখ টনের খাদ্য ঘাটতি মেটানো যাবে অতি অল্প সময়ের মাঝেই। এটাও সমাজতন্ত্রেরই শিক্ষা। এরূপ উপলক্ষি যদি আমাদের জাতীয় চেতনাকে নিয়ন্ত্রণ করে তাহলে প্রতিশ্রুতি অনুযায়ী সমাজতান্ত্রিক নীতিমালা প্রণয়নে আর কোম বাধা থাকবে না।

উপরের আলোচনা থেকে একটা উপসংহার টানা যায়। এ দেশের কৃষি উন্নয়নের মূলে রয়েছে সামাজিক-রাজনৈতিক বিবর্তন। এ ক্ষেত্রে দেশের সকল মানুষের অবদান অপরিহার্য। কিন্তু পেছনে রয়েছে প্রতিক্রিয়াশীলদের চক্রান্ত। দীর্ঘদিন ধরে লালিত জনস্বার্থবিরোধী এই চক্রান্তকে নস্যাত্ন করতে হলে জনগণের উপর নির্ভর করেই প্রগতিশীল শক্তিসমূহকে সংগ্রামে অবতীর্ণ হতে হবে। সেই সংগ্রামের প্রাথমিক বিজয় সূচিত হবে একটি গণমুখী জাতীয় কৃষিনিতি প্রণয়নের মাধ্যমে।

An Approach to Rural Development

by

M. RAIHAN SHARIF*

I. RURAL DEVELOPMENT : WHY AND WHAT

In the recent years, there has been a significant change in the understanding of the problems of rural development of Bangladesh. Researches have exposed the multi-dimensional effects of modernisation such as the creation of major problems like accentuation of 'dualism' and cleavages between urban and rural economy, increased dependence on foreign aid and imports of capital-intensive technology, accentuation of inequality of income, increasing unemployment and heightening of social tensions and instabilities. Such major problems, with their intricate but pronounced interactions with the socio-economic scenario, threaten to become highly 'explosive' in an economy that is handicapped by seriously adverse man-land ratio and high rate of population growth. Previously, rural development was an adjunct to urban development. The 'adjunct' treatment to the 90%-population-based rural sector continued to create the world of topsyturvydom which has distorted all priorities.

Apart from the issue of conceptual inadequacies of investment priorities, even from the financial investment point of view, the First Plan of Bangladesh (1973-78) provided for only 24 per cent of total investment in the rural sector (composed of agriculture, rural development and water development). Such a provision was awkward in contrast with a comparable 43 per cent provision in the

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Pakistan Fourth Plan (1970-75) for this Region. Even the marginal improvement in the Bangladesh Annual Development Plan for 1975-76 with 31.5 per cent investment allocation looks quite embarrassing. It is now necessary to change the planning priorities in such a way that the epicentre of development impulses will be shifted from the urban to the rural sector. A mere increased emphasis in investment alone will not be enough for such a remodelled strategy. The emphasis and thrust must be reflected in the allocations of investment pattern which will contribute towards the corrections of the distortions and deteriorations in terms of unemployment and poverty in the rural economy.

The emphasis on rural development is needed, not only to correct past neglect and the investment-imbances but also to take advantage of the development potential of the economy. A massive study by IBRD in 1971 examined the future of the application of the HYV-based modern input technology in agriculture and found out, as reported by Faaland and Parkinson: "While current rice production runs at a level of 10 to 11 million tons annually, known technologies coupled with the gradual development of irrigation and drainage facilities and of course adequate institutional support, could quadruple output by the end of the century. But even with the impressive potentialities of agricultural development, employment opportunities in the agriculture sector are likely to increase from 15 million man-years to only 20 million man-years. This implies that unemployment, despite optimum exploitation of the potential in agriculture, is likely to soar to a level of $2\frac{1}{2}$ times the present level.¹ Thus it appears that because of the concentration of unemployment and under-employment in agriculture, rural development programmes of the future have not only to face the challenge of full exploitation of the development potential in crop production but also to confront the bigger challenge of much greater employment creation through broad-based comprehensive rural development.

¹Faaland, J. and Parkinson, J. R., "Bangladesh: The Test Case for Development", C. Hurst Co., London, 1976, p. 85.

On the employment-generation issue, it is often suggested that planning can be started from the employment rather than from the investment end. With given employable labour, we may plan to allocate all such labour to available capital and aim at 'full employment'.² This is nothing but a hollow gimmick. Even the most advanced economies like USA, France, UK and others are suffering from more than normal unemployment and are unable to employ all labour on available capital. In an underdeveloped economy characterised by acute shortage of capital and narrow limits of technological choice, spreading labour thinly on capital is neither feasible nor problem solving. Deliberate expansion of employment on the basis of available resources is to be limited only to the productive ones, if runaway inflation is to be avoided. That is the reason why too much of distributive justice which leads to a big push in consumption can hardly be resorted to before actually increasing production to a satisfactory level.

Thus we are left with only one option: to push ahead with expansion of production of mass consumption that involves application of relatively labour-intensive technology. And this option can be planned and executed with multi-sectoral Rural Development Programme. This is not a mere extension of the old structure of the rural development within the conventional investment planning approach. Rural Works, Food for Work, Water Development will only be a few integral parts of the envisaged comprehensive multi-sectoral programme. First, commitments on allocation of resources for the urban sector have to be re-examined in view of the new criteria and new priorities so that within the limits of flexibility of technological choice, it becomes possible to promote employment creation. Second, regional planning of the production of agricultural inputs (fertilisers, pumps, tubewells, ploughs, tillers and other implements) has to be formulated in view of the need for rural oriented development strategy. Third, domestic engineering industries will need to be

²Vide Mahbulul Haq, "Employment in the 1970's: A New Perspective", *International Development Review*, Vol. XIII, No. 4, 1971-74. Dr. Hans Singer of the Sussex School also hinted an approach like this in a lecture seminar in Bangkok (at the UN Asian Institute for Economic Development) in 1979

developed and supported for the production of small tools and spare parts and components, both for import substitution and for employment generation. Fourth, location of new projects on power, water and transportation will need to be determined with a view to providing the facilities to the rural development projects. Fifth, investment allocations in the Annual and Five Year Plans must reflect the emphasis on rural development; the ranking procedure based on benefit-cost analysis has to be modified accordingly.

II. INSTITUTIONAL PREPAREDNESS

Rural institutions fell into neglect and disorganisation in the past. The application of centralised approach to planning has tended to worsen the situation. While the emphasis on all-sided rural development draws attention to the need for decentralisation, a hard look at the existing institutional framework becomes indispensable. Any review will accordingly point to the gaps in the institutional preparedness for undertaking the responsibilities of planning and executing the programmes of rural development. The problem of filling in the gaps with new institution-building and necessary adjustments as well as improvements in the existing institutions is really one of providing the pre-requisites to successful implementation of rural development planning. Even the task of identification of priorities in planning and implementation will be a matter of fulfilment of the pre-requisites.

A. Political

Institution building at the political level is vital for reflecting the aspirations of the people in the process of planning activities as well as for ensuring participation of the people in decision-making for development, be it for planning or for implementation at various levels. Local government institutions are to be designed to meet this objective. Ideally, local government institutions with representation of people could be effectively organised at district, thana, union and village levels to undertake the responsibilities in a co-ordinated network approach.

B. Administrative

We have to develop a viable decentralised system of decision-making and control in a manner that suits the country's present situation of resources and skills. It would be feasible and desirable to make the districts the centre of all activities of administrative decision-making, control and coordination for the programmes of rural development. Such institutions could be entrusted with the work of preparation of District Plans of Rural Development, of coordination with the national Planning Commission and of ensuring the implementation of the District Plans. The district institutions will, with proper changes, provide conditions of effectiveness because of these advantages: (i) nearness to the people and nearness to regional and local physical resources; (ii) determination of priorities based on the identification and use of physical resources; (iii) reliance on local technology as practicable; (iv) planning of available manpower for the reduction of the educated unemployed with necessary training; (v) preparation of districtwise surplus labour mobilisation programmes on a coordination basis; (vi) continuous surveys and reviews on the identification of problems, identification of real resources and establishment of criteria for the determination of priorities in project preparation in consultation with the Thana/Union Planning Agencies; (vii) creation of an environment of development partnership; and (viii) guidance and assistance to the unions and villages for creating the same conditions.

C. Technical

The work of formulation of the Rural Development Plan, by districts, will be feasible when enough technical skill of the required disciplines and professions are placed at the disposal of the district, thana and union institutions. Although we may start with a very modest beginning at the union level substantially large supply of technical skills will be required at the district level. To a large extent, this problem of supply of skills can be met by sizable transfers from metropolis as logically demanded by decentralisation of the decision-making process. The trained personnel dealing with

development in Ministries/Departments and in the various Divisions of the Planning Commission at the middle and junior levels should be made available to the district and thana level.

D. Financial

Financially, the districtwise Rural Development Programme is likely to be more viable and productive. The districts, thanas and unions are not only to establish development partnership in terms of participation in the process of identification of regional and local physical resources and the investment priorities but are also to mobilise financial resources partially towards execution of the programme. The financial partnership of course is vital for consolidating the significance of development partnership so that the district planning and other local institutions can also share financial responsibility to a certain extent.

But financial partnership will be an institutional innovation. With the organisation of the District Development Board/Commission it will be necessary to create district authorities with statutory taxation and financial powers. The Taxation Commission which now considers the taxation issues of the nation, should include this vital issue of decentralisation of financial powers in support of decentralisation of planning the development process. If a permanent arrangement on the basis of constitutional amendment and ordinance/decreed is not feasible at this stage, an interim arrangement has to be designed.

E. Social

Socially, big challenges are involved in making the social system of the country (outside the urban areas) forward looking and development-motivated. Both man and social institutions including the traditional stagnation-prompting practices of land and other assets management must be suitably changed in feasible phases. To meet the social challenges, the role of education and training will be crucial; but quick results cannot be expected because of the complexities involved and also because of the resource constraints.

A phased approach will be socially desirable. In this, even in the first phase, efforts must be concentrated on two vital institutional changes : (a) primary and secondary education must be made functional and development-oriented, and (b) emergency training programme are to be undertaken to orient all personnel involved in the functioning of the local government institutions to the understanding of the problems of socio-economic development and the procedures of planning and coordination.

On the whole, the institutional preparedness, however phased has to be geared to the need for effecting a viable decentralisation mechanism for planning and development administration centering round the 17 districts. Such a mechanism will provide the golden mean between the top-down and bottom-up approaches and will be sustained by available administrative skills and mobilisable other resources.

The formulation of a well-designed Rural Development Programme can hardly be easy. First, the preparedness of the Planning Institutions has to be so matched and coordinated that wastage of scarce manpower resources can be avoided. How far planning techniques are to be applied adequately at the district level will depend on the decision of the NEC and the distribution of the planning functions along with the distribution of experienced trained personnel between the central institution and the district institutions. Second, to seek the application of flexibility in technological choices in the interest of employment-creation in the industrial sector is also not quite easy, even if planning is restricted to small industries. The study of the handloom industry and the hand-pounding versus machine-milling of rice in India³ has shown that the lower capital labour ratios do not necessarily mean lower capital-output ratios. How to strike at a sustainable balance between efficiency criteria and

³Vide "Choosing Techniques : Hand-Pounding vs. Machine-milling of Rice ; An Indian Case", Oxford Economic Papers, Maexh, 1965. Also P. N. Dhar and H. F. Lydall "The Role of Small Enterprises in Indian Economic Development" (memo.) discussed by Dr. N. A. Khan in a Special Course paper, UN Asian Institute, Bangkok : 69/Spl.

value criteria in this regard represents a challenge to planning technicians. Thus skilled planning is also called for at the district level. Third, the quality of national planning ultimately depend on effective and socially desirable coordination of the levels of planning. And such coordination will be technically feasible when the technical quality of planning work is substantially maintained in the linked chain of the planning institutions.

In the unified aggregative approach also, it is possible to apply the top-down and bottom-up methods for checking consistency and for adjustments and readjustments in the structure of a Plan Programme. Here we have to think of one system being composed of two main subsystems ; these two subsystems have to be developed as the Urban Programme and Rural Programme. In the formulation of these two subsystems, the old methods of top-down and bottom-up procedures will be required for separate application. And subsequently, coordination and integration of the two will result in the production of the master system. The Planning Commission of the metropolis will have to undertake the dual responsibility of formulating the Urban Programme and integrating the two programmes—urban and rural, into the master system.

When the framework of institutional and procedural preparedness will be completed, the formulation of the Rural Development programme should proceed substantively at the district level within the guidelines, criteria and constraints of the planning process. Guidelines may emerge from the relevant NEC decision. And among constraints, the investment constraint will play a critical role.

If we initiate work with some rules of thumb developed on the basis of current experience in the area of urban and rural investment, there is no harm, provided the rules are eventually replaced by criteria resulting from the needed studies.

Development Planning for Mobilization of Womanpower : Some Thoughts

by

JAHANARA HUQ*

The avowed objective of development planning is to "bring about a sustained improvement in the well-being of the individual of a society and to bestow benefits on all". This interpretation of development planning refers both to the growth and the distribution of benefits covering a wide range of economic and social change which to a large extent depends on the human resource mobilization and its effective usage. It is the human component that acts as an instrumental in harnessing national resources, mobilizing capital, developing technology and producing goods.

It is undeniable that human capital may either be a vital resource for development or can be a constraint depending on economic factors and level of technological achievement.

In a more developed country the problem of human resources can be identified with shortage of manpower trained to suit a particular technic of production or inadequacy of manpower appropriate to a newly discovered technology. But in the L. D. Cs there is the abundance of manpower than what the economy can absorb. In these countries there is the existence of surplus human labour, under-employment and disguised unemployment. These facts pose serious challenge to planners and policy makers.

The planning authorities in Bangladesh has not been able to reflect any substantial departure from the traditional planning codes. The

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planning authorities with their experienced staff and sophisticated planning machinery had in the past set impressive and often ambitious physical targets but hardly anything has ever been said about the development and utilization of vast unemployed manpower and virtually nothing about harnessing the vast reservoir of womanpower—a vital part of the manpower in the country.

In the contemporary world particularly in this decade (incidentally this is the international women's decade) people have demonstrated new enthusiasm and interest in women's domain. It seems that somewhere in the history of human race man assumed power, authority, acquired knowledge, experience, became the proprietor and the master of the world and all over the world women were relegated to a lower status and position than men. Fortunately a new dialogue has been initiated for the rectification of the existing economic and social inequalities between men and women. At least a social consciousness is awakened that women can play a vital role in economic development and social progress. Realization has also dawned upon many thinkers regarding the high social costs of women's total exclusion from a planned change.

Why Development Planning for Women ?

Development Planning to-day necessitates a shift and careful refixation in its strategies and priorities if the integration of women in development is to take place.

There is a controversy whether the gamut of women's development should be separately dealt with. It has also been argued by some that women asking for a separate identity distracts attention from the main struggle for the amelioration of poverty and against exploitation. Historically, women have unequal access to the social power. In the legal, political and economic systems women are rated to be of secondary importance.

It would, therefore, be best for women to consolidate their identity as a separate group, identify common interest, work for a just adjustment and then join with men for social uplift. For a social transformation concerted efforts on the part of men and women are vital and essential.

II

Before any attempt at rationalization of development planning for making any adjustment for fuller utilization and integration of womanpower is to be considered, before any formulation of development strategy for women can be made, it is imperative that certain conceptual inadequacies, ambiguities are to be removed for greater clarity of thought and action.

Meaning and Implication of Integration

(a) "Integration of women in the development process as equal partners with men", is the declaration of U. N. Charter for the International Women's Year.¹ The question of integration follows from the perception that women are "marginal" if at all and not "central" agents of the productive process. This is not certainly true in case of many African and Asian countries including Bangladesh. Agriculture in such countries is family based and subsistence oriented. In the studies of eminent scholars we find that in many Asian countries women have to undertake husking, winnowing, transplanting, seed processing and preservation, poultry farming, cattle tending, even irrigation, over and above their domestic responsibilities like cooking, cleaning and looking after children. In fact the entire post-harvest agricultural and para-agricultural work is done by women.

What needs to be emphasized is that the question of integration must be conceptualized in such a way that one clearly understands, recognizes and appreciates the role of women in national production. Integration in the functional sense must ensure that the non-monetized and non-marketed part of women's work is enumerated and remunerated.

(b) Development planning must aim at benefitting women as part and parcels of the entire development process. Setting up a ministry or a division, creating a women's cell in the Planning Commission, fixing job quotas for women are a few palliatives which do not touch even a fringe of the total problem. Planning economic development for women must necessarily resolve these inadequacies.

¹Hanna Papanek, "Goals and Premises of Development Planning for Women". Paper read at the Regional South and South East Seminar on "Women and Development"—Dacca, March—April 1977.

c) Before making any substantial headway for development planning with specific goals set for women certain conceptual issues must be settled such as the problem of identifying the nature of "gainful work" in the total range of women's activities. Recent surveys on households in India have identified women's time allocation for the following purposes.

These are :

- i) Income earning market production.
- ii) Income earning work at home.
- iii) Consumption and enjoyment of the goods produced.²

It has been found in such studies that individual members of the family allocate time in a manner that maximizes utility. It has also been found that there is higher participation of women in the sphere of domestic production and higher participation of men in market production.

Similar studies can be undertaken in Bangladesh for a better understanding of the problem.

It may be suggested here that all work done by women are not gainful. All gainful work are not economic activities, in the conventional sense. At least her domestic work must be imputed for market values. This recognition in addition to providing income to women who do not make their productive contribution felt in the market, will bestow upon them the status of an economic producers.

III

Before the planners get set for chalking out appropriate programmes for better participation and integration of women certain truths regarding existing socio-economic conditions of women must be fully known.

i) That women are subject to class exploitation and also exploitation by men. Even in a given class, women are exploited by men because society is patriarchal and ownership of property is patrilineal. As such, a woman whichever class she may belong to, is sub-

²Devaki Jain and Nalini Singh, "Women's Work : Methodological Issues", p. 9.

ject to lower status and power because she is not the owner of the means of production, and can never be equal to a man.

ii) A woman bears the burnt of the poverty more than a man does. It may be said without much exaggeration that under normal circumstances the women appears to be the residual claimant of food and other minimum necessities. Conventionally a woman is responsible for the welfare of the husband and numerous children even at the cost of her own starvation.

iii) Apart from exploitation of women in the society, women have to bear certain burdens in a traditional society such as Bangladesh. Ashish Bose of the Delhi Institute of Economic Growth, has very thoughtfully classified these burdens into three categories. These are :

(i) **The Demographic Burden.** Because of traditional values, religious prescriptions and social bias, there is high fertility among women. The women have to undergo the burden of bearing, feeding and rearing children even at the cost of their health.

(ii) **Gastronomic Burden.** Because of the traditional and typical style in cooking and eating and the lack of gadgets and also other constraints of poverty women are under the burden of excessive work for preparing food, grinding spices, gathering fuelwood, drawing water from wells, or fetching water from ponds/ivers

iii) **The Gerontological Burden.** Because of extended families and a close knit kinship network a woman has additional burden of work to perform in her in-laws' house. Under the existing social and cultural norms the daughter-in-law in the in-laws house has obligation to please everybody which in many cases she cannot.

iv) A further burden may be identified which a widowed mother or a divorced women is in, the burden of being a non-entity and social non-acceptance. Under the Islamic law of inheritance, if a woman's husband dies before her father in-law she is deprived of the property and other belongings. Moreover, if she is left behind by the husband she is neither accepted in her fathers' house nor does she belong to the in-laws' house.

IV

Certain steps may now be prescribed to serve as a pre-condition for launching any programme for women.

(a) Detailed investigations are necessary both at micro and macro level. Investigations must cover questions regarding female participation in the labour force and also how women spend time. A significant proportion of females do not qualify to be in the employment statistics, regardless of the reasons for non-participation. These causes of non-participation should be investigated and identified.

(b) Proper evaluation of women's work is necessary. The issue of productive and gainful work is to be conceptualized before any programme is chalked out.

(c) Enumeration of female labour force is necessary with reference to the socio-economic setting.

V

There is the need to document the content and quality of women's participation in the development process because the degree and level of participation determines the extent to which she is the beneficiary of the process. Undoubtedly women's participation covers a wide range of social and economic activities. In order to measure the participation there is the need for constructing indicators by which we can measure involvement of women in the development process. These indicators are necessary to judge and justify a programme in action.

The primary responsibility of planning machinery is to (i) identify areas of economic and social activities relevant to women's involvement in development and (ii) suggest variables or indicators to monitor the economic and social impact of women's participation on development process.

These indicators may direct attention to :

1. The degree of consciousness among women ; how consciousness is being raised and the attitude is changed from virtual dependences to self-reliance.

2. Proportion of time allocated and type of activity in household production.

From such data, programmes specifically suitable for women may be formulated.

(a) Technological improvements which release women from unnecessary drudgery. Simple gadgets for grinding spices or supplying drinking water and other services at home, gas connections for cooking in rural areas could have released time for income earning activities or health care, children etc.

(b) Designing small and manageable employment programmes which offer employment to women depending on available time and skill.

(c) Designing training and education programmes matched to the needs of the locality or area. Training should be work oriented and given only on those vocations the markets of which can be ensured.

(d) Health and service schemes designed to suit habits, needs, resources and existing knowledge.

(e) Initiating local women's institutions for mobilizing womanpower based on the spirit of self-reliance.

(f) Measure for ensuring participation of women in local committees upto the highest national decision making level.

Existing Agencies for Mobilization

A sketch of the existing institutions are given below which can act as mobilizers of womanpower. These institutions may be utilized with added power, funds and autonomy for effective existence.

(1) Political Mobilization. History of women's movements have shown that mobilization is mainly based on political consideration. It has been seen that women's movements in many countries have mobilized women over specific issues, This is the result of a prolonged political process,

(2) Mobilization of women by various pressure groups such as trade unions, unions of co-operative workers, domestic helpers, baby-minders, part time domestic servants and so on, can take place.

(3) Mobilization can be effected by voluntary associations.

(4) Female members of more than 4000 Union Parishad can form an effective group and can be programme initiators suiting to the needs of the locality.

(5) IRDP Women's Programme. This programme teaches members the habit of forced savings, tries to disseminate ideas on family planning and give vocational training to selected representatives at thana levels. These trained women can in turn impart these ideas and training to the fellow co-operators at the village level.

(6) The *Swanirvar* Local Committees can create an atmosphere of motivation of self-reliance amongst women.

(7) Government Family Planning Social Welfare Departments with its programmes can organize and mobilize women efficiently. The Government through its programme on primary education can employ more female primary school teachers. The Government with its team of Thana Family Planning Officers and Lady Family Planning Visitors is the largest employee and mobilizer of womanpower.

(8) Food for work. Food for work is a programme where many women can find employment instead of looking forward for relief and doles.

(9) *Ganashaystha Kendra*. A Brigade of Paramedics and Bare foot lady doctors have been trained. The project has already gained world reputation and can be cited as an example of success and achievement in village development.

(10) National Women's Welfare Foundation has initiated specific projects offering employment opportunities to women in specific areas.

For effective mobilization certain existing misconceptions about Bangladeshi women must be dispelled from our minds.

(i) That Bangladeshi women are ignorant, helpless, traditional and resistant to new values. On the contrary they are more receptive to new ideas.

(ii) That Bangladeshi women do not perform any productive work when she is a housewife.

(iii) That they have no leisure time and are too busy to take additional responsibility.

(iv) That the women's role in Bangladesh is predetermined and static.

(v) That if women are encouraged to work this will add to male unemployment.

(vi) That women necessarily benefit from development programmes initiated for men.

(vii) That women are not motivated by economic incentives.

In the game of civilization a woman is a loser. She has lost in terms of knowledge, insight and acumen. Legend, tradition and literature depict women as being weak, passive and without intellectual curiosity to grasp any change. It will not be surprising if the 20th century experiences a radical change in many of its set values. The women all over the world are moving ahead for a take over.

Few Implications of Public Financing of Education and Work-Oriented Self-Financing of Educational Institutions

by

TAHERUL ISLAM*

The aim of this paper is to discuss (i) the equity implications of public financing of education, (ii) the problems of 'external balance' of the education system and (iii) the nature and implications of work-oriented self-financing programmes of educational institutions. It should be noted that though the discussion is undertaken in the context of Bangladesh, the issues involved are also relevant to most of the developing countries of the third world.

EQUITY IMPLICATIONS OF PUBLIC FINANCING OF EDUCATION

One important argument for public financing of education is that it ensures greater opportunity for all able students. Since equality of opportunity for all social classes permits able individuals of whatever social background to rise in the social status it tends to corroborate the view that education is an equalizing institution in society.

Recently, however, doubts are being raised about the supposed implications of public subsidy on equity. Studies made in this connection

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have cast serious doubts regarding equalization of educational opportunities through public subsidies. A study¹ made by the author on the education system of Bangladesh shows that publicly supported educational facilities even at the primary level are enjoyed, by and large, by the relatively better off families. Even if education is tuition free (as is the case with primary education) the poorer families cannot participate in the education system, as they cannot bear private costs of education (maintenance, travel and stationary, etc.). Therefore, only the rich families which are capable of meeting private costs can enjoy public subsidy through effective participation in the subsidized education system.

Public subsidy comes from the general budget and as such is tax payer's money. It is well known that more than 80% of the tax revenue in Bangladesh comes from indirect taxes which are known to be regressive in nature. So in matters of sharing the cost of education to the extent it is subsidized through tax payers' money, the poorer section probably bears the main burden. Therefore, financing of the education sector out of tax revenue works as a vehicle for redistributing income from the poor to the rich. If the objective of public financing of education is on the grounds of equity, it seems, the purpose is not served, rather the reverse of what is intended is realised.

EXTERNAL BALANCE AND EFFICIENCY IN THE ALLOCATION OF PUBLIC FUNDS

Musgrave rightly observed that "perhaps the most important aspect of the external benefits of education lies in the change in the social and cultural climate incident to the widening of horizons, which education entails". He further observes that "at the same time, this benefit result is not an automatic consequence of education at large, but only of the proper type, quality and quantity of education. Supply of professional people who cannot be absorbed into appropriate positions may readily become an external dis-economy and source of instability."

¹T. Islam, *Social Justice and Education System of Bangladesh*, Bureau of Economic Research, Dacca University, 1975.

It may be mentioned here in passing that 'external benefit' comprises some non-economic aspect—for example, education may improve functioning of the democratic government (a social improvement) by educating the electorate. There is, however, a problem in this regard as there may not be any agreement about the nature of the 'good society'. "For example, totalitarian regimes have commonly used the education system to indoctrinate the young with a particular view of the society. Those who introduce such policies must clearly believe that they bring social benefits. Others need not accept this evaluation of them."²

External benefit in the pure economic sense will arise from what is called 'external balance' of the education system. External balance is attained when there is match of the manpower needs of the economy with the education given to students coming out of the education system. External efficiency of education is dependant upon the extent of this match or mis-match. The existence of rather huge mass of educated unemployed youths in Bangladesh testifies to the mis-match between the education system and the manpower needs of the economy.

A system can be externally balanced in quantitative terms (quantitative matching) but qualitatively may be in imbalance in the sense that though there is match in terms of quantity, there is mis-match in quality of graduates who may not fit well into their respective occupations. Like quantitative mis-match there is ample evidence of qualitative mis-match in Bangladesh.³

POLICY IMPLICATIONS

The public subsidies to the educational institutions can be meaningfully divided into two components. One component is meant for meeting general expenditure of the institutions and other component

²Alan Peacock and Jack Wiseman, *Economic 'Growth and the Principles of Educational Finance in Developed Countries'* in *Financing of Education for Economic Growth*, OECD, Paris, p. 96.

³T. Islam, *An Analysis of Public Recurring Expenditure of Higher Education in Bangladesh*, University Grants Commission, Government of the People's Republic of Bangladesh, 1975 (mimeo.).

is direct transfers to some of the students in the form of stipends/scholarship distributed as per certain criteria. The distinguishing feature of the first component is that all enrolled students equally enjoy this (implicit) subsidy irrespective of their socio-economic standing. The second component can be distributed if so desired, taking into account the socio-economic circumstances of the individual students. If instead of outright grant to the institutions, more of public funds is directed towards payment of scholarships/stipends, poorer students can be discriminated favourably to compensate for the socio-economic disadvantages of their family. Keeping total public subsidy the same, such change in the method of payment of subsidy can vastly improve equity aspect of public funds devoted to the education sector.

In addition, if the amount of scholarships/stipends can be made dependant on the field of their study the suggested change in the method of payment of public grant can also improve external balance of the education system. The differential subsidy will make socially desirable fields of study less costly and the less desirables ones more costly.

For the achievement of universal primary education, construction of school building, training of teachers and making education tuition free are not of much significance to those students who are unable to enrol due to their poverty. To enable them to meet private costs of education economic help in the form of mid-day meals, free books and stationery etc. would be required.

Once such a method of financing is accepted, the present scholarship/stipend system has to be drastically changed and also the funds allocated for award of scholarships have to be increased. Correspondingly, tuition fees charged will have to be increased and also have to be different for different fields. Talented students will get scholarships when they enter into the desired fields of study and the amount will vary depending upon priority of the field in the context of manpower needs. Public examination result will **not** automatically make one eligible to a specific amount of scholarships irrespective of the field of study that the scholar may prefer to pursue.

WORK-ORIENTED SELF-FINANCING OF EDUCATIONAL INSTITUTIONS

It is well known that the education system of Bangladesh is a mixed one in the sense that it comprises both public sector and private sector. The university education and most of primary education fall in the public sector while private sector is over whelming at the secondary, higher secondary and graduate (pass course) level. Public institutions are almost entirely financed (both capital expenditure and revenue expenditure) by public exchequer while private institutions receive public grants of varying amounts both for capital expenditure and revenue expenditure. But these grants are too inadequate in relation to the requirement of these institutions. The deficit in the current budget of these private institutions is so large that often even teachers cannot be regularly paid. It will involve a very big amount of public subsidy if the deficit in the current budget of the private educational institution is to be met by public grant. Given the present socio-economic realities of Bangladesh it is reasonable to assume, that public grants to the private educational institutions cannot be raised to the extent sufficient to meet the deficit of current budget. The need of work-oriented self-financing of educational institutions have to be examined in the above context.

Financing of education through work by students in the primary level of education can, at best, be of marginal value in that boys and girls may not generally be physically fit for any productive (in the sense of earning income) work. However, for formation of work habit and for exposing them to the environment of work this may be necessary. But there are, it seems, good possibilities of financing through work at the institutions of general education and technical education from secondary to college level. While determining the nature of work for the students for self-financing of educational institutions the following points should be taken into account :

a) The majority of the private educational institutions are situated in the rural areas. Most of the students in these institutions hail from agriculturists' family. The Government for obvious reasons is emphasizing rural development through modernization as well as diversification of agriculture.

b) It is alleged that 'social dualism' is created by the education system. 'Dualism' in the economic field has captured development economists' attention, but the above kind of dualism which is unconsciously created by the process of education has not yet received due attention. It is a pity that youths after graduation from different levels of institutions think themselves alienated from mass of people and their education almost useless unless they get any 'white colour' job.

c) There is a general complaint that technical education in Bangladesh is more theoretically oriented. So practical training at work during their course of education will improve their quality.

Keeping the above points in mind, we may now consider the nature of the work. The type and nature of work should vary depending on whether they are technical institutions or general education institutions and also whether they are located in the rural areas or urban or semi-urban areas.

For the institution of general education in the rural areas, public grant for capital expenditure may be given not for the purpose of construction of building but for establishing what may be called 'demonstration farms' adjacent to the school or college as the case may be. The farm may either be agricultural farm, poultry farm or livestock farm. It should be noted that in rural areas at least at the thana level there are technical personnel appointed for the purpose of helping people in different activities. So in cooperation with these officials it is possible to operate these farms. It is puzzling that most dynamic and energetic section of rural population (enrolled students in the rural areas) is not taken within the institutional ambit of rural development. It may be considered whether with necessary modifications for the purpose, the concept of IRDP can be extended to include these types of educational institutions. Apart from earning for the school, these farms will inculcate work habit among students and also train them in modern farming.

Technical and vocational institutions are situated mostly in the urban and semi-urban areas. Factories and work-shops relevant for the trades may be established near these institutes, so that students can work and earn. Alternatively the technical institutions should

be located near the activities for which they will train technical persons. For these things cooperation between educational authorities and the authorities of industries etc. is required. It may be argued that there is no logic of establishing costly technical institutes, if there is no effective demand for them in the economy. If the trainees are meant for foreign employment there should be some scheme of loan to the trainees, which in turn can be recovered if and when they can get foreign employment.

The general aversion of the educated people to do physical work will go and the feeling of alienation of the educated people from the general mass will tend to be removed if the above approach to education is accepted. Moreover, demonstration effect of these farms in modernising agriculture will be tremendous. Love for white colour job may be substituted by effort to do something in the rural areas. Irrelevance of the education system to the needs of society at large will be removed. The external imbalance of the education system will be lessened and externalities of the system will increase through demonstration effect in the rural societies. To the extent institutions are financed through students' earning equity aspect will improve as those who enjoy the service will also pay for it.

Human Resource, Its Uses As A Development Strategy : Educational Implication

by

MD. MUSTAFA*

I. EDUCATION IN MANPOWER PLANNING

Manpower is a fundamental factor in economic development in any economic system. To a significant extent the success of a country's development effort depends on the mobilisation and utilisation of its human resource. No country can achieve the goal of social and economic development without proper mobilisation and direction of human resource to the need of the society. Therefore, human resource development through proper planning occupies a key position in the overall development of a country.

Education system of a country is an instrument for fulfilling the national desire and thereby building the society and nation. Education can play a vital role in manpower planning by helping the people to acquire knowledge and skill. It enlightens the people in a conservative and traditional society.

II. IMBALANCE IN MANPOWER AND EDUCATIONAL DEVELOPMENT

Since Pakistani days 4 different education commissions were appointed. These commissions produced four learned documents dealing with the problems related to education in our country. These documents

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discussed in details some of the problems relating to educational processes, but unfortunately they failed to come up with a unified strategy for the restructuring of education as a source of skilled manpower. Different reports gave emphasis on different types of education without any reference to the ultimate need of the economy over time. For example, the education commission report of 1959 put greater emphasis on secondary and higher secondary education at the cost of elementary education. The Report of 1969 criticised the above report for such an unbalanced emphasis on one aspect of education and pointed out that priority should be attached to elementary education on the one hand, and technical and vocational education on the other.

It has been rightly pointed out by many that disequilibrium between demand for and supply of education and inconsistency between different types of education has been a source of crisis and tension in the developing countries. The crisis and tension arising from the disequilibrium in the educational system becomes clear if one should distinguish between two markets—the education market and the labour market. It should be pointed out that the demand for education is partly a derived demand and partly a direct demand while the demand for various types of labour is entirely a derived demand. Again one can distinguish between two types of demand for education—the ‘social demand’ and the ‘economic demand’. Social demand concerns the education market, while the concept of economic demand is relevant only in the labour market. Supply in both the markets is a function of a large number of factors, e. g., labour force participation rate, age distribution of the population, supply of different types of (educational) graduates and dropout, availability of the job training facilities etc. Supply in the educational market is determined by the availability of seats in educational institutions, scope for non-formal education, cost of education, amounts of subsidy and finally the rate of return on education. A situation of crisis and tension develops from three sources :

- a) imbalance between demand and supply in the labour market ;
- b) imbalance between social demand and the market demand for education, and

- c) imbalance between social demand for education and supply of education.

For a developing country like Bangladesh (a) is the most important source of crisis and tensions. This suggests that the main emphasis should be on the manpower planning and educational development of under developed countries.

The population of Bangladesh has been growing at the rate of 3%. Bangladesh has one of the highest population density and dependency ratio in the Asian region. This represents a potential in terms of human resource but it also poses a great challenge for both the country's economy and education. Moreover, it brings growing pressure on the agricultural and rural sectors and great burden on both economy and education of the country. Even if population control policy succeeds in reducing the birth rate it will not have any effect on size of the active labour force during the next 15 years.

TABLE I

STRUCTURE OF POPULATION IN BANGLADESH IN 1961 & 1974

Year	0-4	5-9	10-14	15-19	20-24	Over 25 Years
1961	9,264,236 (18.3%)	9,529,436 (18.7%)	4,646,884 (9.0%)	3,815,180 (7.7%)	3,813,180 (7.5%)	19,681,028 (38.7%)
1974	11,946,382 (16.7%)	13,685,550 (19.1%)	6,570,000 (9.2%)	5,860,000 (8.2%)	5,718,000 (8.0%)	27,700,000 (38.8%)

Source: Census Reports, 1961 and 1974.

A comparison of the structure of population in 1961 and 1974 in Table I points out:

- i) An increase in the population of 15 years and above from 27.4 million in 1961 to 39.8 in 1974, i. e., by 44% and
- ii) an increase in the population between 5 and 14 years from 14.18 million in 1961 to 20.66 in 1974, i. e., by 66% indicating the magnitude of the task of employment generation and education.

TABLE II

Level of Education (age group)	Year	Enrolment (in million)	Age Group Population (in million)	Participa- tion Rate	Out of School Population (in million)
Primary (6-10)	1950/51	2.449	6.017	41.0	3.568
	1960/61	3.330	7.630	44.0	4.300
	1972/73	6.000	10.260	58.0	4.260
Secondary (11-15)	1950/51	0.514	4.610	11.0	4.096
	1960/61	0.533	5.990	9.0	5.457
	1972/73	1.700	9.890	17.0	8.190
College Intermediate (16-17)	1950/51	0.013	1.804	0.69	1.827
	1960/61	0.037	2.220	1.67	2.183
	1972/73	0.230	3.550	6.48	3.320
College Degree (18-19)	1950/51	0.005	1.480	0.34	1.475
	1960/61	0.014	1.660	0.84	1.646
	1972/73	0.098	3.431	2.86	3.329

Sources: Census Reports 1961 and 1974.

First Five Year Plan of Bangladesh, p. 445.

The above table shows the estimated population of the various age groups, the number enrolled and the number outside the educational system. It will be apparent that the present system of education is utterly inadequate even quantitatively to meet the basic educational needs of the vast population of school age and the active labour force.

TABLE III

WASTAGE IN PRIMARY STAGE INDICATED BY DROPOUT
RATE IN BANGLADESH

Cohort Year	Dropout rate (in percentage)
1947/48	91.2
1952/53	81.7
1957/58	81.7
1962/63	72.2
1967/68	64.67

Source: Annual Reports, Directorate of Public Instruction.

The most damaging aspect of imbalance in manpower and educational development is the wastage in education due to (i) dropouts, (ii) repeaters, (iii) retardation in intellectual and educational development due to unfavourable environment, and (iv) non-utilization of knowledge acquired earlier. The following table shows the wastage at all levels both in terms of human and financial resources. This continues to be very high ranging from 65% at primary level and 42% to 66% at the second and third levels of education.

TABLE IV
WASTAGE IN SECONDARY AND HIGHER STAGES AS INDICATED
BY EXAMINATION IN BANGLADESH

Stages	Number Appeared	Number Passed	Percent Passed	Wastage (percent)
S. S. C.	141,767	82,111	57.90	42.10
H. S. C.	66,870	35,166	52.58	47.42
Degree (Pass)	30,342	10,391	34.24	65.76

Source: Annual Reports, Directorate of Public Instruction.

The present education system in Bangladesh is characterised by investment rates rising while the participation rates declining as the level of education goes up (Table V).

TABLE V
PER CAPITA COST OF EDUCATION

(Year 1973/74)

Level/and Types of Education	Total Recurring Expenditure	Total Enrolment	Per Capita Cost
Primary	254,537,000 (56.6%)	7,879,400	32.30
Secondary	87,454,000 (19.2%)	1,691,017	51.71
Intermediate and Degree Colleges	41,042,000 (9.2%)	398,184	103.07
University	66,771,000 (14.9%)	27,902	2,393.01

Source: Directorate of Public Instruction and University Grants Commission.

Another striking characteristic of our educational system in its present form is that instead of a social equalizer as it is generally believed to be it is actually operating to widen the existing social and economic inequalities. The high dropout rates from the economically and socially disadvantaged groups at the primary stage has been estimated at 70% in one study. The very low participation rate of the same group in higher education also accentuates the inequalities. A large number of manifestations of inequality in the distribution of educational facilities have been pointed out : (a) in secondary and higher education the participation rate from higher social strata is much greater than that from lower social strata, (b) dropout rate is higher among students from economically disadvantaged class, (c) selective schooling system seems to favour upper income group as compared with lower income group, (d) for all comparable age groups and educational levels, dropout rate is higher and student participation rate lower in rural areas as compared with urban areas, (e) facilities per student (teachers, building space, equipment and other resources) are better in urban areas as compared with rural areas.

III. THE EDUCATIONAL FUNCTION IN A DEVELOPING SOCIETY

It follows from the foregoing analysis that if education is to perform its function of an effective change-agent in converting the vast human resource into human capital then education must change its concept, structure, content, technology and institutional arrangements. The suggested educational transformation has many aspects some of which are outlined below :

- a) Education must transmit to the new generation the wisdom of human heritage which has evolved in the specific culture.
- b) Education must fulfill the skill needs of the various occupational groups. Programmes of training will have to be job-specific, based on the identification of various groups and their occupational needs.

As for the population in dependency age groups, an important planning strategy reducing the incidence of educational courses seems to warrant relatively shorter programmes of specialised training according to needs.

- c) Education must be easily available to the vast mass of population. It must include the uneducated labour force, out of school youths, school youths and school dropouts.
- d) Education must provide seeds for new understanding, new capacities to adapt, and new sources of leadership. This may spread through the educational system : introduction to scientific outlook, an emphasis on achievement, the highlighting of new roles in social action and the ideas of progress together with spritual and moral values. In first stage of development, this role of education may be limited to a small fraction of the population, but at later stages it may be spread to all population having access to the educational institutions.
- e) Education must provide a general education content for personal development. An important function of education derived from man's central role as an agent of development is to stimulate and sustain his impulses of intellectual curiosity and creativity. One of the recent studies shows the existence of a high degree of correlation between general education and production norms due to the effect of general education on learning new skills, management ability, attitude to work and general alertness and self reliance.

IV. SPECIFIC MEASURES

a) Integrated Planning

One of the most important strategies relevant for Bangladesh is an integrated approach to planning, i.e., the development of education, manpower and economy as complementary and interacting components of development. The new strategy should be based on the recognition of the complementarity of education and economy. This implies that education and economy must sustain their growth in mutually supportive roles through the development of human resource and its productive utilisation.

b) Introduction of Compulsory Primary Education

Attempts should be made to introduce compulsory primary education immediately. This will make modernization of agriculture, implementation of family planning and increasing labour productivity much easier,

To avoid unemployment and frustration among the educated youth higher education need to be restricted only to the deserving by making the admission criteria more stringent.

c) Need-oriented Technical-Vocational Education

Technical-vocational education should be introduced as a part of both formal and informal education. This strategy is desired on the one hand by the resource constraint and on the other by the necessity of making the education system more responsive to developmental needs. Technical-vocational education must aim at turning out more technically trained people at the intermediate level than at the higher level. The bulk of this type of trained manpower should be made available to agricultural and rural sector.

d) Work and Education Centres

As improved production techniques are gradually adopted in the agricultural sector a process of change in the use of technology is expected to be set into motion creating the demand for new skill, new types of farm implements, power pumps, chemicals, fertilizers, insecticides, etc. thereby also creating the demand for such ancillary services as management of farms, manufacturing and maintaining farm machinery, supplying seeds, fertilizers, insecticides etc. Special programmes of formal and non-formal education involving the youths may be designed to provide additional impetus to the process of development and generation of additional employment not only in the agricultural sector but also in the related industries and ancillary services. To meet these types of demand, "Works and Education Centre" may be set up at selected places where practical training will be imparted to our youths.

A relatively less sophisticated and less costly training, and various types of non-formal education, including adult education and part-time course may provide our unemployed people with suitable jobs opportunities in numerous small scale industries.

To keep down expenses of training and non-formal education the existing educational institutions may be used. The facilities in these institutions and the services of the teachers, now very much under-utilised, should be made available at little or no cost. Moreover, the programmes in the existing technical and professional schools can

also be adapted to meet the needs of various occupational groups. Training in repairing of radio, TV, freeze, airconditioning etc. will also be helpful for getting jobs. People with these training and skill are getting employment in Middle East countries. The export of unskilled and semiskilled labour to the labour-scarce countries of the Middle East is one of the most important sources of foreign exchange earning in Bangladesh.

e) Rural Bias in Education

The task of converting the available human stock into viable human capital cannot be performed without community participation and without mobilising local resources—both human and national. Local planning, in addition to integrated planning, is a necessity. Along with measures for boosting farm production Bangladesh will have to take steps to create enough skilled man-power in the rural areas to attend to the problems arising out of agricultural modernization. Education in Bangladesh has created a privileged class which has only contempt for manual work and field practices. In fact education is a passport to get away from the villages. This simply cannot be allowed to continue any longer. Rural bias in education, emphasis on basic education, manual labour in villages as a prerequisite for entering higher educational institutions like colleges and universities should be some of the component of a re-structured educational system.

Rural Employment in Bangladesh

by

M. HABIBULLAH*

1. Government's Employment Policy

Providing gainful employment to the people is one of the stated goals of the Government's economic development strategy. This means creation of primary, secondary and tertiary activities both in the urban and rural areas.

2. Inadequate Town-oriented Industrial Growth

Traditionally industry, trade and service activities have been town-oriented. They have also been instrumental in drawing workers from the rural areas particularly from the agricultural sector. In Bangladesh, the expansion of industrial activities has failed to absorb the year to year addition to the labour force resulting from population increase. For instance, the target of employment generation for industry both in the public and private sectors was set at 611,300 persons only between 1972/73 and 1977/78 (First Five Year Plan, page 223).

3. Size of Agricultural Labour Force

A population and labour force survey showed that in 1972/73 the labour force constituted 35.1 per cent of the total population and of the labour force, some 76.3 per cent was agricultural. The number of agricultural labourers was 198.2 lakhs while the requirement of agriculture was estimated at 125.2 lakhs. Apparently agricultural unemployment was 36.8 per cent.

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4. Non-shiftability of Farm Labour

As agricultural operations are seasonal in nature, the unemployed labour force is not always capable of being transferred from the village economy without making any organisational change in agriculture. As long as farmers operate within the present institutional framework, most of the unemployed and underemployed workers cannot be shifted out of agriculture without affecting agricultural production.

5. Wasteful Use of Farm Land

It may be noted that wasteful use of land is one of the major characteristics of our land system. It is time to see how we can develop a land policy for promoting more productive utilisation of our scarce land resource.

6. Land Re-distribution

There is evidence that the sharecropping system under which more than one-fifth of the farm land is cultivated encourages most ineffectual use of land through disincentives for the optimum use of capital and labour. Small farms do not offer full employment to farm families though they give higher per acre yield by the application of extra doses of labour. Big farms do not follow the pattern of land use necessary to permit intensive use of labour. A sound policy of land re-distribution can probably promote better utilisation of both the farm land and the farm labour leading to increased agricultural production.

7. Nature and Pattern of Rural Manpower Utilisation

As agriculture constitutes the major segment of the rural economy, it may be useful to have a review of the nature and pattern of agricultural employment. For this purpose, we shall refer to our study of village Sabilpur in which we stayed for one complete year and made intensive investigation of 129 families by taking 52 weekly readings of available farm labour, and its use in farm and non-farm activities as well as the farm output and wages of paid labour.¹

¹For details vide Habibullah, M., "The Pattern of Agricultural Unemployment", Bureau of Economic Research, Dacca University, 1962.

The following data show average of man-days spent in different ways during the year.

Agricultural work	41.55%	of man-days
Work in garden	6.98	„
Total of farm work	48.53	„
Non-farm work	19.80	„
Days not available for work due to rain socials etc.	6.24	„
Not employed	25.43	„
Total supply	100.00	„

8. Ups and Downs in Manpower Utilisation

It appeared that the volume of gainful economic activity on the farm is not uniform throughout the year. The variations have a rhythmic movement of rise and fall. There are peaks and troughs of employment—March to May is the season of maximum employment while in October employment is reduced to the lowest. Compared to this, non-farm activity has the least variation from week to week.

9. Net Unemployment

When the labour use was examined by allowing one day as break and 8 hour daily workload as is true of factory work, it appeared that from March to early June, there is a significant volume of negative unemployment i.e., over employment. This meant over-work during busy season. Even if this overtime work in busy season are allowed to be compensated at other times, there is still a net period of unemployment in the village during the slack season.

10. Farm-based Use of Rural Manpower

In the context of growing volume of unemployment, employment generation has come to be regarded as a separate goal of development of the government. One of the objectives of planning in Bangladesh is to increase employment in agriculture. Since the population is overwhelmingly dependent on agriculture and since it is not possible to bring about a major structural change in the economy within a short period, agriculture will have to continue to provide the bulk of the employment. The authors of the First Five Year Plan considered such employment generation as quite feasible (FFYP, p. 185).

It is felt that through the development of irrigation, increased application of fertiliser and raising of multiple crops, particularly the high yielding variety rice, there is scope of employment generation through labour intensive techniques.

11. Prospects of Increasing Use of Labour in the Farm

The Planning Commission estimated that the action programmes suggested by it will increase the volume of farm employment, particularly because new varieties of rice and wheat are found to increase yields as well as employment. But it felt that the key to increasing output and employment lies in rapidly enlarging the acreage under irrigation which will lead to the replacement of local variety by the HYV. It was planned to raise HYV acreage from 26.0 lakhs in 1972/73 to 94.4 lakhs in 1977/78. Additional employment in crop sector was estimated at 18.60 lakh man-years. For this emphasis was to be placed on labour intensive techniques rather than mechanisation and application of weedicides which is rather less labour intensive. In order to discourage mechanisation fiscal measures were suggested for preventing their negative impact on employment. Extension workers were asked to instruct villagers of such production and labour use techniques as change over from broadcasting to transplanting etc.

In the non-crop sector of agriculture, livestock and fisheries, works programmes, and execution of agricultural projects have been identified as important sources of employment generation. The Planning Commission hoped that 12 lakh man-years of extra employment would be created in the non-crop sector during the Plan period.

12. Result of First Five Year Plan Activities

The Commission expected that agricultural unemployment will fall from 73.7 lakhs in 1972/73 to 72.2 lakhs in 1977/78. This meant fall of unemployment from 36.8 per cent to 31.6 per cent (FFYP, p. 187).

The result of the first three years of the First Five Year Plan shows that employment in crop sector rose from 79.3 lakh man-years to 89.1 lakh man-years and in the non-crop sector it fell from 45.9 lakh man-years to 39.3 lakh man-years (UNDP report April

1977). As a result net position remained almost unchanged. The total agricultural employment in 1975/76 was 127.4 lakh man-years compared to 125.2 man-years in 1972/73.

13. Position of Agricultural Unemployment in 1975/76

The extent of unemployment in 1975/76 was estimated (by UNDP) at 70 lakh man-years which constituted 36 per cent of agricultural labour force in those years. The number of unemployed persons in the agricultural sector is likely to increase by 2 lakhs every year which amounts to an annual increase of 3 per cent. By 1985, we are likely to have 90 lakhs unemployed in the agricultural sector.

14. The Problem of Landless Labourers

Thirty three per cent of all families in the rural area are now landless. About 90 per cent of agricultural population is now below the poverty line and 80 per cent is said to be undernourished (UNDP estimate).

Despite considerable increase in production in 1975/76 the extent of landlessness and inequality has increased. There has been little impact on poverty and landlessness despite increase in investment in the agricultural sector or higher level of adoption of high yielding varieties.

15. Farm Size and Employment Generation

As already stated, studies in Bangladesh have shown that higher yields are obtained on holding of less than 2.5 acres. Farm management studies confirm the fact that smaller holdings absorb a greater number of man-days on a given unit of land, producing higher yields. But this is dependent on at least four things: (a) ready availability of inputs, such as better seeds, irrigation water, fertilizer, insecticides etc., (b) prompt supply of adequate capital and credit, (c) reduction of risks, and (d) availability of right kind of extension service.

16. Policy Implication

The policy implications are as follows:

- a) Ensuring the supply of adequate and timely credit to the farmers.
- b) Ensuring the supply of inputs in time and in adequate quantity.
- c) Ensuring proper re-distribution of land.

- d) Ensuring proper guidance and extension service on time.
- e) Ensuring institutional arrangement for crop insurance.
- f) Undertaking RWP on a large scale.

17. Limits of Employment Generation in Agriculture

Despite the use of most labour intensive methods of farming, Bangladesh will have agricultural unemployment to the extent of about 90 lakh man-years and landless families of 50 lakhs (UNDP estimate) in 1985. This will mean that over 37 per cent of our agricultural labour force will be without employment in that year. The conclusion is that even an optimum broad-based agricultural production strategy will reduce neither the absolute numbers of unemployed nor the landless in the agricultural sector.

18. Development of Non-farm Activities

Obviously the problem of landlessness, unemployment and under-employment and poverty cannot be tackled in the agricultural sector alone. It will call for a much broader rural development strategy which will include development of rural industries and rural public works on a massive scale as well as development of tertiary activities such as rural trade, transport and storage. The emphasis on the promotion of rural non-farm activities emanates from the recognition of the limitations of employment generating ability of the HYV. It is found that substitution of HYV package of inputs and practices has an employment elasticity of 0.5, but cross sectional studies indicate that variations in productivity within a established technology imply a much lower employment elasticity of 0.20 (UNDP report). The implication is that after an initial high rate of increase in employment by the transition to HYV technology, the rate of increase will fall sharply once this new technology is well adopted. This points out to the need for planning and organising rural non-farm activities on sound lines.

19. Rehabilitation of Rural Unemployed in Rural Setting

There is little sense in encouraging rural uprooted destitutes to migrate to towns and cities. This will merely swell the already high volume of disguised unemployment in retailing, pedling and hawking activities. Concentration of too many people in too little urban

space has a social cost of its own. It is, of course, true that rural people are pushed into urban centres rather than pulled. If integrated efforts are made it may be several times cheaper to settle a rural worker in his rural setting. Hence stress should be laid on promoting intensive and extensive development of rural industries and rural trade with the objective of enlargement of employment opportunities, diversifications of rural occupations and development of agro-based industries to support agricultural production.

20. Aid to Rural Industrial Development

The Planning Commission suggested a programme to provide technical assistance and consultancy services to the rural industrial enterprises to be implemented by Rural Industrial Service (RIS) under the Cottage Industries Corporation (FFYP, p. 277). The programme aims at :

- a) Providing extension services by giving in-plant counselling to the existing units and investment counselling to the potential entrepreneurs from the primary stage of the selection of units to the final stage of production.
- b) Organising and imparting training courses in different trades both for existing artisans to improve and update their skill and also for the new entrants.
- c) Making available institutional credit and marketing services. Implementation of this programme will sure serve an useful purpose.

21. Facilitating Growth of Rural Entrepreneurship

The Government and the specialised agencies have played a big role in the promotion and development of urban-based industrial entrepreneurs. The Investment Advisory Centre and the Investment Counselling Cell of the Shilpa Bank made significant contribution in the past towards this task of entrepreneur development. The Commercial Banks have now launched rural banking. We expect them to play a similar role in rural entrepreneur development. Whatever fund is mobilised from the rural sectors should be invested there. Also Commercial Banks should aim at providing advisory services in respect of project preparation for new investment.

22. Use of Rural Saving for Rural Development

Deposit and loan data for 1975 indicate that commercial banks invested in rural areas some 29 per cent of the rural peoples' saving mobilised by them. This meant transfer of rural capital out of the villages. This should not happen in future. For the sake of balanced development of rural and urban segments of the economy, it is necessary to deemphasize on urban based development. Rural industrial expansion should be nurtured even by the grant of subsidy and other assistance. Social profitability of investment in the rural sector is likely to be greater compared to commercial profitability.

23. Rural Development and Population Control

The very big size of surplus manpower seeking employment in the rural and urban areas and its unhindered growth from year to year suggests that people particularly those in the rural areas should be encouraged to adopt family planning so that around 1990 the number of entrants per year to the labour market start falling.

24. Compulsory Primary Education and Rural Development

Empirical investigations elsewhere have shown that literacy and economic development are closely related. Unless a war is waged against illiteracy and the curse of ignorance is removed, neither modernisation of farming nor development of rural industries, neither promotion of rural trade nor adoption of family planning to regulate the growth of labour force can be done properly and effectively. Unfortunately in this country we have been assigning priority to higher education enjoyed largely by those who are able to pay compared to primary education enjoyed by those who are least able to pay.

Labour Absorption in Bangladesh Manufacturing : Performance and Potentials

by

RIZWANUL ISLAM*

I. INTRODUCTION

Judged by the standard of the growth rate of GNP, the performance of the less developed countries (LDCs) over the last two or three decades has been quite impressive.¹ Despite this achievement, the general atmosphere in these countries is, however, more of disappointment than of satisfaction. This may partly be due to the fact that the process of development in these countries has not been able to bring forth its expected fruits. If the purpose of economic development is to raise the standard of living of the low income earners, to alleviate the masses of the population from hunger, malnutrition, diseases, illiteracy, squalid housing, and to move towards greater equality of opportunities, then the LDCs cannot be said to have achieved anything spectacular.

A recent study² in India shows that nearly half the total population has a per capita income below the official poverty line where malnutrition begins. And what is more pertinent, the per capita income of this group has declined over the last two decades while

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¹For evidence, see Mouly and Costa (1974).

²See the paper prepared by the Perspective Planning Division, Planning Commission, in Bardhan and Srinivasan (1974).

the average per capita income went up. In Pakistan, which experienced high growth rate during the 1960s, unemployment increased, real wages in the industrial sector declined substantially, per capita income disparity between its two regions increased, and concentration of industrial wealth became an explosive economic and political issue. And towards the late sixties, while the industrial world was still applauding Pakistan as a model of development, the system exploded—not only for political reasons but also because of economic unrest. Brazil has recently achieved a growth rate close to 7 per cent but persisting maldistribution of income continues to threaten the fabric of its society.

Without multiplying these examples, it can be emphasized that a high growth rate has been and is, no guarantee against worsening poverty and economic explosions. The neglect of poverty and inequality has been the result of a single-minded pursuit of growth in the narrow sense of maximizing the GNP. Till mid-sixties, the concern among most of the development economists has been with the growth in aggregate output. The poor would be better off, they argued, if they continued to receive a constant share of a rapidly growing cake than if they received a larger share of a slower growing one. Measures to actively redistribute income in favour of the poor were to be postponed until the GNP was larger. Employment often assumed a place of secondary importance in the national economy. In fact, most of the developments which affected the employment situation favourably, such as the rural works programme or the green revolution, were planned primarily for higher output, and their employment-generating potential was accidental and not planned. The result has been the increase in unemployment, mass poverty, income inequality, hunger, malnutrition, and appalling living conditions for a large segment of the population.

Fortunately, however, the recent years have noticed a shift in attitude towards development. The priorities have also been reversed to some extent. Disillusioned with the inequitable results of fast growth of GNP in countries like Brazil and Pakistan, development economists have begun to look for a new perspective on development.³

³Compare, for example, between Haq (1963) and Haq (1970).

And here, employment is beginning to assume a place of significant importance.⁴

Apart from distributional considerations, the policy of employment-creation may be justified on other grounds as well. Work may be taken to be intrinsically valued; and giving an unemployed person a job has value to the individual beyond the income it provides.⁵ Overcoming the despair, demoralization, the loss of human dignity and self-respect that accompanies unemployment may be of sufficiently large value to compensate for any output sacrifice that may result. Even if humanitarian considerations are ignored, it seems possible to argue rather convincingly that measures enhancing the inequality of income distribution are likely to be inefficient instruments for promoting growth; what might be gained for growth through larger savings and investment (if any) by people at the top end of the income scale may be lost or more than lost through impaired productivity of ill-fed, ill-housed, malnourished workers at the low end of the scale.

It is, therefore, important to know the magnitude of the lag between the growth of output and employment, and to see how much scope there is for the creation of employment and the absorption of the unemployed labour force. The purpose of the present paper is precisely this, although attention is mostly concentrated on a single sector, viz., the manufacturing industry. This sector is singled out for analysis because of the fact that despite rapid growth of output in this sector, it is said to have failed to absorb labour at a rate comparable to that of the growth of output; and the potential of this sector for labour absorption is suspected. Although we do not expect that the manufacturing sector in an LDC can absorb the entire increase in its labour force, it is possible that some of the ways in which labour-capital substitution could work and more labour could be absorbed are being neglected. The main purpose of the present study is to provide a brief review of the potentials of the various means of factor substitution (more specifically, substitution between capital and labour) with special reference to a

⁴See, for example, Lefebvre (1969), Chomchai (1969).

⁵For an excellent treatment of the various aspects of employment, see Sen (1975), Chapter 1.

typical LDC, viz., Bangladesh. We start, however, with an examination of the performance of the manufacturing sector in this country in absorbing labour. This is done in Section II. In Section III we discuss the various ways in which capital-labour substitution can work. Section IV reviews the potentials of these means for absorbing labour in the manufacturing industries of Bangladesh.

TABLE I
PERCENTAGE COMPOSITION OF GDP IN BANGLADESH,
1949/50 to 1969/70

Sectors	1949/50	1954/55	1959/60	1964/65	1969/70
Agriculture	65.43	63.43	60.35	55.80	53.33
Manufacturing	3.00	4.21	5.99	7.45	7.78
(a) Large-scale	0.61	1.54	2.84	3.87	3.64
(b) Small-scale	2.39	2.66	3.12	3.59	4.13
All others	28.57	28.16	27.67	29.29	31.12

Source : Alamgir and Berlage (1974)., Appendix C, Table V.

II. GROWTH OF OUTPUT AND EMPLOYMENT IN THE MANUFACTURING INDUSTRIES OF BANGLADESH

Although Bangladesh is one of the least industrially developed nations in the world, manufacturing industry has been in the forefront of whatever economic development she achieved over the two decades of her partnership with Pakistan. In 1949/50, the manufacturing sector accounted for about 3 per cent of GDP in Bangladesh. The largest share by far was that of 200,000 or so cottage industry establishments (units employing mainly household labour) producing handloom textiles, salt, processed food and beverages, wood products, etc. Second in importance came some three thousand small-scale industry units (employing less than 10 workers). Less than 1 per cent of GDP was accounted for by the handful of large-scale industrial units. These mainly produced cotton textiles.

Although no significant structural change took place in the economy during the next two decades, and although the agricultural sector continued to contribute more than half of the GDP, the share of value added originating in manufacturing in total GDP more than doubled. And if we concentrate on the large-scale sector, its share increased nearly six times (see Table).

TABLE II
ANNUAL COMPOUND RATE OF GROWTH OF GDP IN BANGLADESH,
1949/50 to 1969/70

Sectors	1949/50 to 1954/55	1954/55 to 1959/60	1959/60 to 1964/65	1964/65 to 1969/70	1949/50 to 1969/70
Agriculture	2.2	0.8	3.4	2.6	2.2
Manufacturing	10.0	9.3	9.7	4.4	8.3
(a) Large-scale	23.5	15.3	11.5	2.3	12.9
(b) Small-scale	5.0	5.1	7.9	6.5	6.1
Total GDP	2.8	1.9	5.0	3.5	3.3

Source: Alamgir and Berlage (1974), Tables I and II.

Looking at growth rates, we see that between 1949/50 and 1969/70, the large-scale manufacturing sector grew at nearly 13 per cent per annum. During the same period, total GDP grew at an annual compound rate of 3.3 per cent (see Table II). The extent to which large-scale manufacturing has boosted growth in the economy can be seen from these estimates. Even if the concept of the 'leading sector' is considered to be an elusive one, the estimates shown in Tables I and II record the stimulus which has come from the large-scale manufacturing sector.

TABLE III
ANNUAL COMPOUND RATE OF GROWTH OF LABOUR FORCE IN
BANGLADESH, 1960/61 to 1969/70 (in percentage)

Category	1960/61 to 1964/65	1964/65 to 1969/70	1960/61 to 1969/70
Total labour force	4.2	2.4	3.2
Urban labour force	12.4	7.9	10.2

Source: Calculated from data in Alamgir and Berlage (1974), Appendix C, Table VII.

The performance of the manufacturing sector with respect to labour absorption has, however, been poor. Even towards the late sixties, the large-scale manufacturing employed a mere 1 per cent of the labour force. The growth of employment in this sector has also been disappointing. Between 1949/50 and 1969/70, employment in factories under the Payment of Wages Act, 1936, grew at a rate of 6.6 per cent,⁶ while the output in large-scale manufacturing sector grew at nearly double that rate. When compared with the growth of urban labour force (see Table III), it is seen that the large-scale manufacturing sector has not been able to generate sufficient employment so as to be able to absorb the increase in this labour force. This has meant rising urban unemployment and underemployment.

Now, it remains to be seen which are the industries characterized by this lag between the growth of output and the growth of employment. Is this phenomenon noticeable only in the more sophisticated industries like chemicals, metal products, machinery, etc., or also in the traditional industries like food processing, textiles, etc.? This can be seen from Tables IV (A) and IV (B), where we compare the growth rates of output in various industries with that of employment.⁷ It is obvious that between 1955 and 1965/66 the growth of employment lagged behind that of output in all the sectors, irrespective of what they produce. The extent of the employment lag may also be interesting. In many industries the rate of growth of employment was substantially less than half the rate of growth of output. In two sectors employment even declined when output increased substantially. The comparison for the years between 1965/66 and 1968/69 reveals broadly the same results, except in two cases where employment grew more rapidly than output. The broad conclusion which emerges from these comparisons is this : The employment lag is noticeable not only in the relatively more sophisticated industries but also in industries like food processing, textiles, leather, etc. No

⁶Calculated from data provided by the Central Statistical Office, Government of Pakistan, *Twenty five Years of Pakistan in Statistics*, Karachi, 1972.

⁷In order to make the comparison meaningful, we have deflated the value of output by the price index,

particular industry or group of industries can be singled out as being responsible for the slow growth of employment compared to that of output.

TABLE IV (A)
GROWTH OF OUTPUT AND EMPLOYMENT IN THE MANUFACTURING
INDUSTRIES* OF BANGLADESH, 1955 to 1965/66

Sectors	Annual Compound Rate of Growth of Output	Annual Compound Rate of Growth of Employment
Food manufacturing	26.00	9.91
Beverages	23.00	3.68
Tobacco manufactures	35.87 ^a	33.86 ^a
Textiles	12.76	9.10
Footwear, wearing apparel, etc,	13.65	10.59
Wood and cork	19.18	11.33
Furniture and fixtures	21.76 ^a	22.43 ^a
Paper and paper board	20.98	4.79
Printing and publishing	6.07	0.67
Leather and leather products	11.70	8.50
Rubber and rubber products	-1.91	-4.63
Chemicals	19.43	10.53
Non-metallic minerals	9.70	6.13
Basic metal	43.55	29.84
Metal products	13.74	7.74
Machinery, except electrical	13.19	10.29
Electrical machinery	29.36	12.91
Transport equipment	10.46	-0.76
Miscellaneous manufacturing	2.51	-13.06

Notes : * ... 2 (j) category

a ... between 1959/60 and 1965/66.

Sources : Calculated from the Census of Manufacturing Industries, 1955, and 1965/66,

TABLE IV (B)

GROWTH OF OUTPUT AND EMPLOYMENT IN THE MANUFACTURING INDUSTRIES* OF BANGLADESH, 1965/66 to 1968/69

Sectors	Annual Compound Rate of Growth	
	Output	Employment
Food manufacturing	7.97	4.23
Beverages	1.46	-0.26
Tobacco manufactures	16.95	13.85
Textiles	14.85	10.11
Footwear, wearing apparel, etc.	-6.98	-11.98
Wood and cork	-5.42	10.55
Furnitures and fixtures	0.25	-4.26
Paper and paper board	-29.29	-15.90
Printing and publishing	19.82	-5.73
Leather and leather products	20.81	-6.64
Rubber and rubber products	5.10	3.32
Chemicals	-3.42	-3.42
Coal and petroleum products	6.17	48.87
Non-metallic minerals	3.56	-3.71
Basic metals	40.35	7.40
Metal products	-7.25	-10.92
Machinery, except electrical	5.95	0.77
Electrical machinery	16.96	4.44
Transport equipment	-5.14	-2.86
Miscellaneous manufacturing	-11.98	-1.01

Note: *... 2 (j) and 5 (1) categories combined.

Sources: Calculated from the Census of Manufacturing Industries, 1965/66 and 1968/69.

III. CAPITAL-LABOUR SUBSTITUTION

Now we come to the more important question of how capital-labour substitution can work during the process of industrialization. Once we identify the various means of capital-labour substitution, it will become easier for us to see what has gone wrong in the case of Bangladesh and to find out the potentials of the manufacturing sector in absorbing unemployed labour.

One can discover at least three important ways in which capital can be substituted for labour in the process of industrialization. These three mechanisms are: (1) *ex ante* choice of a product-mix (including the choice between products within a particular industry) to achieve the desired factor proportions; (2) *ex ante* choice of the type of the blueprint which can be used to make any particular product; and (3) *ex post* decision about the period of time over which the plant will be operated.

Let us now discuss the *a priori* arguments in support of these ways of factor substitution.

The Choice of Product-mix. If different products are typically made with processes that have different capital-labour relationships, the question of what things an economy make should be a matter of choice, the choice being determined, among other things, by the relative requirement of capital and labour. The problem, of choosing an optimum product-mix is, however, closely related to the social framework within which the economy is operating, the income distribution and effective demand generated by it, the opportunity for changing the product-mix via international trade, and such other factors. In countries pursuing import substitution industrialization programme, government policies (e. g., tariffs, subsidies, trade restrictions, etc.) may lead to serious price distortions in the product market, favouring the production of capital-intensive industries, although they may be socially inefficient.⁸ It is obvious that although the question of any change in the product-mix involves some fundamental problems, this can be an important source of substitution between capital and labour once right policies are pursued in the economy.

The source of substitution discussed above is concerned exclusively with a choice between different products at the two-digit level. But products are very interchangeable—for example, there are many more ways of travelling than in an automobile. And technological alternatives are associated with variations in the product itself. If one single need can be fulfilled by a variety of products, the 'appropriateness' of any one of them for a country should be considered

⁸Pakistan provides a typical example of such phenomenon. For a discussion of this problem, see Khan (1972).

in the light of her factor endowments. It is often said that better quality products possessing a larger variety of characteristics are produced by more capital-intensive techniques than products of a lower quality. If this is so, and an industry produces entirely for domestic consumption, then a removal of 'excess' characteristics (that is, a reduction in quality) can be an important source of substitution of labour for capital.⁹

The Choice of Blueprint. After the decision to produce a commodity is taken one may find that there are different ways of producing it. In other words, a choice may be made from among the available blueprints which can produce the same commodity. It is true that in the case of some commodities, specially in the chemical process continuous flow-type of industries (e.g., cement, fertilizers, paper, etc.), the number of alternative blueprints available may not be very large. There are, however, a number of technically flexible industries which allow for considerable substitution between capital and labour, and which are, therefore, amenable to the use of labour-intensive techniques in the manufacturing phase.

In weaving cloth, for example, there is a spectrum of techniques involving different combinations of labour and capital ranging from primitive throwshuttle hand-looms through flyshuttle hand-looms, semi-automatic hand-looms, cottage power looms to automatic power looms. Cotton spinning, clothing, foodstuffs, leather, rubber products, bricks, roofing tiles, certain chemicals, brass utensils, etc. are some other examples of technologically flexible industries. Manufacture of a number of goods such as radios, television sets, bicycles, agricultural equipments, etc., involves the production and assembly of components. They also provide examples of tecnologically flexible industries because it is possible to organise production of their components in accordance with the specifications of the assembly plants by means of labour-intensive techniques under subcontracting arrangements. This method of using labour-intensive techniques has been extensively employed in Japan.

Capital Utilization and Capital-labour Substitution. Even after a blueprint is selected from among the available alternatives the opportunities

⁹Examples can be found in Baron (1975) and Hewavitharana (1970).

for capital-labour substitution are not exhausted; there is still at least one important way in which capital-labour ratio can be varied. There is always the opportunity for substitution by changing the daily duration of production, i. e., by changing the rate of capital utilization. The greater the time a plant is put into operation, the more will it produce (the lower will be the capital-output ratio) and the more man-hours it will use (the lower will be the capital-labour ratio). In order to have a clear understanding of the relationship between the level of capital utilization and capital-labour ratios, one must have a precise knowledge of the various ways in which the terms labour and capital are often used.¹⁰ Let us start with labour.

(1) 'Crew size' (I): It describes the number of workers who provide labour services to the production process at any single moment of time.

(2) Daily man-hours (\bar{L}): It measures the total accumulated flow of man-hours of labour services used in production in a day. This is related to the crew size (I) by the simple relationship where 'u' is the

$$\bar{L} = uI \quad \dots (1)$$

rate of utilization expressed in hours.

We are, however, often concerned with the total number of workers employed during a day which is quite different from (1) or (2). The crew members get tired during the production period and they are replaced by others. So, two or more workers may be used to fill the same position if production is extended over a sufficiently long period, i. e., if u is large. This is what is normally called shiftworking. So, we must define a third concept:

(3) Employment (L): It describes the whole set of individuals who provide a labour service to the production process at any time during the day.

If we assume that each of the L workers work 'h' hours a day, we have the following relationship between the three concepts.

$$hL = uI = \bar{L} \quad \dots (2)$$

$$\therefore L = uI/h = \bar{L}/h \quad \dots (3)$$

For capital, we shall define two concepts.

¹⁰This clarification is originally due to Winston (1973).

(1) Stock of capital (K) : This is the number of machines used in the production during a period of production. This can be thought to be analogous to the crew size of labour. There is, however, one important difference. In the case of labourers, one labourer to be replaced by another if the production process has to be extended over a long period. In the case of capital, the machines do not need replacement during a day. A machine can work continuously throughout a day, thus providing a flow of capital services.

(2) Accumulated flow of capital services (K') : This is the daily flow of machine-hours of capital services, and is related to the capital stock (K) by the relationship

$$K' = uK \quad \dots (4)$$

Clearly, the accumulated flow of capital services (K') can be varied by changing either the size of the capital stock or the rate of its utilization.

The impact of increased utilization of capital on the relationship between capital stock and employment should now be clear. From (3) it is obvious that if we assume that each worker works a fixed number of hours per day, an increase in the rate of utilization will lead to an increase in the number of labourers used to provide the accumulated flow of labour services in a day. On the other hand, an increase in utilization will increase K', the accumulated flow of capital services, even if K is fixed. Thus we see that a larger number of workers can now work on a given capital stock. Thus the ratio of the capital stock to the number of workers (K/L) decrease with an increase in the utilization of capital.

The above result can be shown more clearly in the following manner. Assuming a fixed relationship (z) between the number of machines in the capital stocks (K) and the crew that must be used to operate it at any time (I), we can write :

$$z = K/I = K/L(h/u)$$

$$[\text{From (2), } I = hL/u]$$

$$\text{or, } K/L = zh/u$$

$$\therefore \frac{d(K/L)}{du} = -zh < 0.$$

Thus we see that the trade-off between capital stock and employment can work through variations in the level of capital utilization.

IV. A SUMMARY OF SOME FINDINGS

The purpose of this section is to provide a brief review of the potentials of the various means discussed in the last section for absorbing labour in the manufacturing sector of Bangladesh. We start with the choice of product-mix.

The composition of output is determined to a large extent by the structure of aggregate demand, that is, by the demands of private domestic consumers, foreigners, the government, and private investors. Here we shall concentrate our attention only on the first factor.¹¹ Since the pattern of consumption in a society is governed, among other factors, by the pattern of income distribution, we tried to examine the impact of a redistribution of income on factor requirements via a change in the consumption pattern. This was done through the use of a simple model¹² constructed for the purpose.

The basic procedure is this. First, we have a given pattern of income distribution prevailing in the economy, the resulting pattern of private consumption demand and the gross outputs of various sectors that are produced. We calculated the amounts of labour and capital required for producing this output vector.

Then we introduced a hypothetical redistribution of income and got a new pattern of income distribution. We assumed that 10 per cent of total personal income is redistributed from the top decile to the lowest four deciles. This would increase the income of the lowest 40 per cent of the population by about 50 per cent. By using this new pattern of distribution and consumption functions for a large number of commodities (or groups of commodities) we worked out a new structure of consumers' demand that could be generated by the new distribution of income. We also found out the vector of outputs corresponding to the new demand structure and the factor requirements for this new vector of output.¹³ A comparison of these

¹¹For a justification of doing this, see Islam (1976).

¹²An outline of the model is given in Islam (1977).

¹³It should be mentioned that while calculating the amounts of labour and capital required for producing any output vector, we took into account both direct and indirect requirements. The input-output technique was used for this purpose.

requirements with the original amounts required yielded the change in employment and the savings in investment funds that could be obtained from a redistribution of income.

The results, however, are not very encouraging. It is seen that our hypothetical redistribution of income increases the labour requirements by only 1.7 per cent. This increase is mostly contributed by the agricultural sector where labour requirements increase by 2.4 per cent. If we concentrate on the industrial sector only, we find that there would not be any appreciable change in labour requirements following the redistribution we considered. In this case, however, some savings in capital requirements (nearly 2 per cent) could be achieved.

Although the usual expectation is that a redistribution of income in favour of the poorer people will increase the demand for labour-intensive goods and hence labour requirements, our results for Bangladesh come as a corrective of that expectation. It is seen that the redistribution of income may not be able to generate the demand for a product-mix whose labour requirement is substantially higher.¹⁴ There may be one further difficulty. A redistribution of income to the poorer section increases the demand for food-grains. And in a food-deficit country like Bangladesh, this may mean an increased pressure on the country's scarce foreign exchange.

The results are more promising in the second case, viz., the choice of blueprints. Using cross-country data made available by the UNIDO (1967), we constructed unit isoquants for producing seven commodities (sugar, cotton textiles, paper, cement, leather, chemical fertilizers, and matches).¹⁵ In six out of the seven commodities we considered, we have been able to identify more than one efficient technique; and in all such cases, there is at least one technique at the labour-intensive end of the spectrum. Only in the

¹⁴It should be mentioned that this type of result is not entirely new in the literature. While Weisskoff comes to the same type of conclusion for Puerto Rico, the results obtained by Soligo for Pakistan and by Jimenez for Colombia are not conclusive. For a summary of all these results, see Morawetz (1974).

¹⁵The details of the procedure and the results can be found in Islam (1976).

case of cotton textiles, our sample has failed to demonstrate the scope of using efficient labour-intensive techniques. Others,¹⁶ however, have produced evidences which show that such techniques for the cotton textile industry are not non-existent.

The interesting point is that despite the existence of labour-intensive techniques for producing many commodities, the technology adopted by most of the industries in Bangladesh are seen to be highly capital-intensive. Hence, the scope for increasing employment through the choice of appropriate blueprint seems bright.

The prospect for increasing labour absorption by increasing the rate of capital utilization also seems bright in view of the fact that most of the industries are operating at much below full capacity. On an average, the manufacturing capital of Bangladesh was utilized only 40 per cent of the available time in 1968/69.¹⁷ The situation is even worse in the post liberation period.¹⁸

In Table V, we assemble information on the level of capital utilization, observed capital-labour ratios and capital-labour ratios at full utilization for 15 manufacturing industries.¹⁹ It is obvious from the table that some industries, where actual utilization is considerably lower than full capacity, can reduce their capital-labour ratios substantially if they operate at full capacity. This can be seen from column (4) of Table V. The highest reduction (nearly 36 per cent) can be achieved by three industries, viz., iron and steel, matches, and printing and publishing. These figures can also be said to reflect the loss of employment caused by the inability of the entrepreneurs to utilize their capital stock fully.

Although these facts are quite disturbing in view of the scarcity of capital in this country, they point to the considerable scope of capital-labour substitution through increased utilization. Hence, our analysis of the employment implications of increased capital utilization is not merely of academic interest. Since the level of uti-

¹⁶See for example, Bhalla (1964).

¹⁷See Islam (1976).

¹⁸Planning Commission. Government of Bangladesh, *The First Five Year Plan*.

¹⁹The methods of calculating these variables are described in Islam (1976).

lization is in fact very low, a substantial amount of employment can be generated and output can be increased by utilizing the existing capital stock which has remained idle for most of the time.²⁰

TABLE V
CAPITAL UTILIZATION AND FULL-CAPACITY CAPITAL-LABOUR
RATIOS IN SELECTED MANUFACTURING INDUSTRIES
OF BANGLADESH, 1968/69

Sectors	Rate of Capital Utilization (percentages)	Observed Capital-labour Ratios ('000' taka per worker)	Full-capacity Capital-labour Ratios	(3) as % of (2)
	(1)	(2)	(3)	(4)
Sugar	31.33	52.90	39.20	74.10
Edible oils	45.55	13.04	9.23	70.78
Tea	34.44	18.77	12.45	66.55
Cigarettes	60.00	22.71	17.78	78.29
Cotton textiles	98.44	15.48	15.31	98.90
Jute textiles	71.88	15.12	12.05	79.70
Rayon	100.00	100.70	100.70	100.00
Paper	74.44	177.67	152.77	85.99
Printing & publishing	34.66	8.28	5.46	64.02
Leather	31.55	10.84	6.94	64.02
Fertilizers	47.55	199.58	154.12	77.32
Matches	39.00	4.74	3.03	63.92
Cement	100.00	30.06	30.06	100.00
Iron and steel	28.33	42.36	27.36	64.59
Shipbuilding	37.89	19.83	133.33	67.22

Source : Islam (1976).

²⁰It should be pointed out that the full potential for employment expansion induced by better utilization cannot be captured by the type of results we have presented here. For, the employment-creating effect of multiple shifting in a particular industry may not remain confined to that industry alone. For example, a round-the-clock operation in metal working industry may result in a higher demand for iron and steel and thus induce the basic metal industry to utilize its idle capacity and thereby produce more and expand employment. Hence, it seems that the employment implications of multiple shift-work can be better shown in a more general input-output type framework.

V. SUMMARY AND CONCLUSIONS

The Paper started by examining the performance of the manufacturing sector of Bangladesh in absorbing labour. A substantial lag between the growth of output and that of employment was discovered. Moreover, this lag is not confined to any particular industry or group of industries. We discussed three possible means of capital-labour substitution: (1) choice of the product-mix, (2) choice of blueprint, and (3) variation in the rate of capital utilization. Of these, the last two showed considerable potential for absorbing unemployed labour in Bangladesh. The possibility of increasing employment through a change in product-mix, however, seems limited.

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অর্থনৈতিক দ্বৈতবাদ ও বেকার সমস্যা

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আলোচ্য প্রবন্ধে আমরা প্রথমে দ্বৈতবাদের বৈশিষ্ট্য ও স্বরূপ সম্পর্কে আলোচনা করবো এবং পরবর্তি পর্যায়ে অর্থনৈতিক দ্বৈতবাদ কি করে বেকার সমস্যার সৃষ্টি করে তার ওপর কিছুটা আলোকপাত করা হবে।

দ্বৈতবাদের বৈশিষ্ট্য চারটি : (১) কোন নির্দিষ্ট সময়ে বিভিন্ন প্রকার অর্থনৈতিক পরিস্থিতির সহ-অবস্থান, (২) সহ-অবস্থানটি দীর্ঘকালীন, (৩) অপেক্ষাকৃত উন্নত ও অনুন্নত সেক্টরগুলোর মধ্যে বিরাজমান পার্থক্য দূরীভূত হওয়ার কোন লক্ষণের অনুপস্থিতি, (৪) উন্নত ও অনুন্নতের মধ্যে পারস্পরিক সম্পর্কের অভাবে কিংবা সম্পর্ক এমন যে উন্নত সেক্টর অনুন্নত সেক্টরকে উন্নতির দিকে টেনে আনবার পরিবর্তে অবনতির দিকে ঠেলে দিচ্ছে।

দ্বৈতবাদ দু'রকম হ'তে পারে—আন্তর্জাতিক ও আভ্যন্তরীণ।

আন্তর্জাতিক দ্বৈতবাদের অবস্থিতি অনেকটা সুস্পষ্ট, কারণ

(১) বিভিন্ন দেশ, মহাদেশ, জাতি কিংবা ভৌগলিক অবস্থানগুলোর মধ্যে মাথাপিছু আয় কিংবা জীবনমানের বিরাট ব্যবধান বিরাজমান ;

(২) বিরাজমান ব্যবধান দীর্ঘকালীন। পাক-ভারত-বাংলাদেশের সংগে পশ্চিম ইউরোপের অর্থনৈতিক ব্যবধান প্রায় এক শতাব্দীর ওপর বিরাজ করছে, আফ্রিকার সংগে এই ব্যবধান প্রায় তিন শতাব্দী ধরে বিরাজমান।

(৩) ব্যবধান দিন দিন বাড়ছে, কমেছে না। ১৯৫৪ সালের এক সমীক্ষায় দেখা যায় পৃথিবীর বিভিন্ন দেশে জনসংখ্যা ও আয়ের ব্যবধান ছিল নিম্নরূপ :

* লেখক ঢাকা বিশ্ববিদ্যালয়ের অর্থনীতি বিভাগের একজন সহকারী অধ্যাপক।

বিভিন্ন অঞ্চলের জনসংখ্যা ও আয়, ১৯৫৪

এলাকা	মোট জনসংখ্যার শতাংশ	মোট আয়ের শতাংশ
যুক্তরাষ্ট্র	৭.০%	৪৪.০%
ইউরোপ	১৬.২%	২৬.৯%
সোভিয়েত ইউনিয়ন	৯.০%	১০.৫%
এশিয়া	৫২.৪%	১০.২%
দক্ষিণ ও মধ্য আমেরিকা	৬.৯%	৪.৮%
আফ্রিকা	৮.৩%	২.৩%
ওসেনিয়া	০.২%	১.৩%
	১০০.০০	১০০.০০

সূত্র : ইন্ডিয়ান ইন্টারন্যাশনাল একয়ার্স—১৯৬৮

অর্থনৈতিক এই ব্যবধান দিন দিন বেড়েই চলেছে, ব্যবধান হ্রাস পাওয়ার কোন লক্ষণই দেখা যাচ্ছেনা। উদাহরণ স্বরূপ বলা যায় ১৯৩৮ সালে মার্কিন যুক্তরাষ্ট্রের জাতীয় আয় ছিল পৃথিবীর সামগ্রিক আয়ের মাত্র ২৮%, ১৯৫৪ সালে তা বৃদ্ধি পেয়ে দাঁড়িয়েছে ৪৪%। এশিয়ার সামগ্রিক আয় ছিল ১৯৩৮ সালে পৃথিবীর সামগ্রিক আয়ের ১২.৬%, ১৯৫৪ সালে তা হ্রাস পেয়ে দাঁড়ায় ১০.২%। উল্লেখ্য যে অর্থনৈতিক এই ব্যবধান শুধু জনসংখ্যা বৃদ্ধির জন্য হয়নি। ১৯৩৭ সাল থেকে ১৯৫০ সাল পর্যন্ত এশিয়ার জনসংখ্যা বৃদ্ধি পেয়েছে ১২% কিন্তু যুক্তরাষ্ট্রের জনসংখ্যা বৃদ্ধি পেয়েছে ১৯%। এশিয়ার বহিত জনসংখ্যা এই এলাকায় বহিত বেকার সমস্যার রূপ নিয়েছে। অপর দিকে যুক্তরাষ্ট্রের বহিত জনসংখ্যা তাঁদের অর্থনৈতিক অগ্রগতিকে স্বরান্নিত করতে সাহায্য করেছে।

(৪) ধনী ও দরিদ্র দেশের মধ্যে বর্তমান সম্পর্ক দরিদ্র দেশগুলোর কতটুকু সহায়ক কিংবা আদৌ সহায়ক কিনা সে বিষয়ে অনেকেই সন্দেহ। অবশ্য অনেক অর্থনীতিবিদ রয়েছেন যারা একথা মনে করেন যে আধুনিক বিশ্বে দরিদ্র দেশসমূহ উন্নত দেশসমূহের কাছ থেকে যথেষ্ট সাহায্য ও উপকার পাচ্ছে এবং বৈদেশিক সাহায্যের ওপর নির্ভর করে কিছু সংখ্যক অনুন্নত দেশ তাঁদের দুদিন কাটিয়ে উঠতে সক্ষম হয়েছে। কিন্তু একথা অনস্বীকার্য যে উন্নত দেশে আবিস্কৃত

ও প্রতিষ্ঠানক পুঁজি-বহুল ও কলা-বহুল অত্যাধুনিক প্রকৌশল এবং সেই সংগে অনুরূপ দেশে সংগঠিত জনসংখ্যা বিপ্লব, শেষোক্ত দেশসমূহের বেকার সমস্যাকে বহুগুণে বৃদ্ধি করে তুলেছে।

প্রকৌশলগত আন্তর্জাতিক দ্বৈতবাদ

(১) বৈজ্ঞানিক ও প্রকৌশলগত গবেষণা ও উন্নয়নের বেশীর ভাগই হচ্ছে উন্নত দেশে। ১৯৬৯ সালের এক সমীক্ষার দেখা যায় যে গবেষণা ও প্রকৌশলগত উন্নয়ন খাতে সারা পৃথিবীর মোট ব্যয়ের ৭০% ব্যয় হয়েছে যুক্তরাষ্ট্রে, ২৫% ইউরোপে এবং মাত্র ২% অনুরূপ দেশে। উন্নত দেশে গবেষণা ব্যয়ের ৯৮% নিয়োজিত ছিল তাঁদের নিজস্ব অগ্রাধিকার ও উৎপাদন উপাদানের উন্নয়নকল্পে।

(২) গবেষণা ক্ষেত্রে উন্নত দেশের এই একাধিকার থাকার ফলে জ্ঞানের পরিমীমা নির্ধারণেও উন্নত দেশসমূহই সর্বসর্বা। ফলে অনুরূপ দেশে কি জাতীয় সমস্যা নিয়ে গবেষণা করা হবে এবং সেই গবেষণার পদ্ধতি কি হবে তাও নির্ধারণ করেন উন্নত দেশসমূহ। আমাদের মত অনুরূপ দেশের গবেষকগণও গবেষণার পদ্ধতি সম্পর্কে জ্ঞান লাভ করেছেন উন্নত দেশে। ফলে উন্নত দেশের তুলনায় পারিপার্শ্বিক ও অর্থনৈতিক দিক দিয়ে অনেক নীচুতে অবস্থান করেও আমরা একই জাতীয় সমস্যা, এমন কি বিভিন্ন জাতীয় সমস্যা একই পদ্ধতিতে সমাধান করার অপপ্রয়াস পাচ্ছি।

প্রসংগত: বলা যেতে পারে আমাদের টেকনিক্যাল স্কুল ও কলেজগুলোর কথা। বেকার সমস্যা সমাধানই এ জাতীয় শিক্ষারতন প্রতিষ্ঠার প্রধান লক্ষ্য। কিন্তু সেখানে যে সব মেশিন ও পদ্ধতি সম্পর্কে শিক্ষা দেয়া হয় বাইরে তার প্রয়োগ একেবারেই সীমিত। কাজেই টেকনিক্যাল ডিপ্লোমা থাকা সত্ত্বেও অনেককে বেকার থাকতে দেখা গেছে। এ সব বেকার টেকনিশীয়নদের মধ্যে অনেককেই গ্লানি থেকে সাময়িক মুক্তি পাওয়ার জন্য আবার সাধারণ শিক্ষা নিকেতনে ভর্তি হতে দেখা গেছে, যেখানে বেকারত্বের হার অনেক বেশী। অধ্যাপক সিংগারের মতে অনুরূপ দেশে স্থানীয় বৈজ্ঞানিক ও কারিগরী জ্ঞান এত নিম্নমানের যে তাঁরা নিজেদের সমস্যার স্বরূপ নির্ণয়েও অসমর্থ।

(৩) উন্নত দেশের প্রচুর ঐশ্বর্য ও বৈভব এবং আধুনিক সুযোগ সুবিধা অনুরূপ দেশের প্রতিভাবানদের আকর্ষণ করে, ফলে এসব দেশের উন্নয়ন কর্মসূচী সুযোগ্য লোকের অভাবে ব্যাহত হয়। একে বলা হয় মস্তিকের আন্তর্জাতিক অপচয়। এ ছাড়া উন্নত দেশের অনুকরণে অবাস্তব কর্মসূচী গ্রহণ করে এবং তাতে দেশের প্রতিভাবান সন্তানদের নিয়োগ করে মস্তিকের যে অপচয় ঘটানো হয় তাকে বলা যেতে পারে আত্যন্তরীণ অপচয়।

আন্তর্জাতিক দ্বৈতবাদ আভ্যন্তরীণ দ্বৈতবাদ সৃষ্টি করে

যেহেতু অনুরূপ দেশের সমস্যাবলী নিয়ে গবেষনার পরিমাণ নিতান্তই নগণ্য, এ সব দেশের যে সেক্টরসমূহ উন্নত দেশের কার্যকলাপের সংগে সামঞ্জস্যপূর্ণ সে সব সেক্টরসমূহে প্রকৌশল অত্যধুনিক। অন্য দিকে ক্ষুদ্র শিল্প, কৃষি কিংবা গ্রামীণ উৎপাদন ক্ষেত্রে প্রকৌশলগত কোন উন্নতিই লক্ষ্য করা যাচ্ছে না।

শিল্প ক্ষেত্রে যে সব প্রকৌশল বিদেশ থেকে আমদানী করা হয়, তার অধিকাংশই ভিন্ন পরিবেশে আমাদের অর্থনীতিতে শিকড় গজাতে পারে না। ফলে সমুখ ও পশ্চাত সংযোগ হয় অত্যন্ত নগণ্য। অধ্যাপক সিটগলার বলেন, “অনুরূপ অর্থনীতিসমূহ আমরা এবছর আমাদের কাজ করার কি ভাবে করছি, তা হয়ত বা অনুকরণ করতে পারে কিন্তু আগামী বছর কি ভাবে আমরা তা বদলাবো, তা তাঁদের পক্ষে অনুকরণ করা সম্ভব নয়, সুতরাং এসব অর্থনীতি স্থবির হতে বাধ্য।”

সরাসরি পুঁজি বিনিয়োগের মাধ্যমে বৈদেশিক মুদ্রা ও প্রকৌশল হস্তান্তরগত অসুবিধা অনেকটা দূর হতে পারে, কিন্তু মুনাফা ও লভ্যাংশ বিপুল হারে বিদেশে পাঠানোর ফলে অনুরূপ দেশসমূহ পুনঃ বিনিয়োগ ক্ষমতা হারিয়ে ফেলে। অন্যদিকে বিদেশী শিল্প প্রতিষ্ঠান শ্রম বহুল প্রকৌশলে কিংবা বেকার সমস্যা সমাধানে আগ্রহী না হওয়াটাই স্বাভাবিক।

বিদেশী প্রতিষ্ঠান সাধারণতঃ অধিকতর মজুরী দিয়ে থাকে, ফলে শ্রম বহুল প্রকৌশলের প্রতি কম আগ্রহী হওয়ারই কথা। কিন্তু অধিকতর মজুরী আদায়ের প্রবণতা দেশী শিল্পেও ধীরে ধীরে বিস্তার লাভ করবে, ফলে দেশীয় পদ্ধতিতে শ্রমের অধিকতর ব্যবহারের পথ হয়ে পড়ে একান্তই গৌনিত।

এক দিকে জনসংখ্যা প্লাবন এবং অন্য দিকে পুঁজি বহুল বিনিয়োগের ফলে দক্ষতার বিরাট ফাঁক, এই দুইয়ের সমন্বয়ে আমাদের মত অনুরূপ দেশে বেকার সমস্যা সকল সমস্যাকে ছাড়িয়ে গেছে।

পঞ্চাশ দশকের দিকে অর্থনৈতিক দ্বৈতবাদের ওপর ভিত্তি করে বেশ কিছু উন্নয়ন মডেল তৈরী হয়েছে। এ সব মডেলের সার কথা হচ্ছে আধুনিক সেক্টর বা শিল্প সেক্টরকে অগ্রাধিকারের ভিত্তিতে সমপ্রসারিত করে সনাতন সেক্টরকে ক্রমাগত গ্রাস করা। এসব মডেলের প্রবক্তারা মনে করেন এক মাত্র আধুনিক সেক্টরই সঞ্চয় করতে পারে এবং আধুনিক প্রকৌশলের প্রতি অধিকতর সাড়া দেয় এবং সনাতন সেক্টর আধুনিক প্রকৌশলের ডাকে সাড়া দেয় না। কাজেই উন্নয়ন কর্মসূচীতে আধুনিক সেক্টরকে অগ্রাধিকার দিতে হবে, কারণ এদের মতে এই সেক্টরের উন্নতির মাধ্যমেই গোটা অর্থনীতির উন্নয়ন তথা সমস্যার সমাধান করা যাবে।

বেকার সমস্যায় জর্জরিত বিভিন্ন অনুন্নত দেশের কাছে উক্ত মডেলসমূহ স্বভাবতঃই খুব হৃদয়গ্রাহী মনে হয়েছে। কারণ মডেলসমূহের একটা বিশেষ আকর্ষণ ছিল অতিরিক্ত জনশক্তি, যার ফলে শিল্প সেক্টর অতি দ্রুত এবং খুব কম খরচে সম্প্রসারিত হতে পারবে। কাজেই পঞ্চাশ দশকের কলকো প্লানের অন্তর্ভুক্ত দেশের পাঁচ সাল পরিকল্পনাসমূহে দ্রুত শিল্পায়ন অধিকতর গুরুত্ব পেয়েছে এবং কৃষি ও গ্রামীণ সেক্টরসমূহের প্রতি অনেকটা সহানুভূতির কথাবার্তা বলা হলেও উন্নয়ন বরাদ্দের মাত্রা ছিল অত্যন্ত নগণ্য। আমাদের অতি পরিচিত পাকিস্তানের প্রথম, দ্বিতীয় ও তৃতীয় পাঁচসাল পরিকল্পনার দিকে নজর দিলেও এই সত্যটি পরিষ্কৃত হয়ে উঠে। এসব পরিকল্পনার সময়ে পাকিস্তানের মোট জাতীয় আয়ের প্রায় ৭০% আসতো কৃষি থেকে আর শিল্প থেকে আসতো ১০% এরও কম। অথচ কৃষি উন্নয়নে বরাদ্দ ছিল ১ম, ২য় ও ৩য় পরিকল্পনায় যথাক্রমে ১১%, ১৩% এবং ১৫%। অন্যদিকে সর্বাধিক অগ্রাধিকার পেয়েছিল শিল্প, মোট উন্নয়ন ব্যয়ের প্রায় ২৬/২৭%। কিন্তু শিল্প ক্ষেত্রে উন্নয়নের হার ১০%-১১% হওয়া সত্ত্বেও বেকার সমস্যা সমাধানে তা সম্পূর্ণ ব্যর্থ হয়েছে। যদিও Dualistic Model-এর প্রবক্তাগণ দাবী করেছেন যে (Jorgenson-এর ভাষায়) “the rate of growth in the manufacturing employment is, of course, equal to the rate of growth of the manufacturing output” কিন্তু ইতিহাসের দৃষ্টিতে সে তথ্য ভুল প্রমাণিত হয়েছে। অপর পৃষ্ঠার তালিকাটি স্বয়ং ব্যাখ্যাকারী।

উক্ত সময়ে কিছু সংখ্যক দেশে শিল্প শ্রমিকের আনুপাতিক হারই শুধু কমেই absolute levelও কমেছে। ইতিহাস এও প্রমাণ করেছে যে কোন কোন দেশে শিল্প সেক্টরে আশানুরূপ উৎপাদন বৃদ্ধি পাওয়া সত্ত্বেও আনুপাতিক হারে সফর কিংবা বিনিয়োগ বৃদ্ধি পায়নি। প্রসংগতঃ উল্লেখযোগ্য যে কলম্বিয়ায় ১৯৫৩—১৯৬৫ সময়ে শিল্প দ্রব্যের উৎপাদন বেড়েছে জাতীয় আয়ের ১৫.৫% থেকে ১৯% কিন্তু উক্ত সময়ে বিনিয়োগের হার ১৬.৫% থেকে নেমে ১৬% দাঁড়িয়েছে। ব্রাজিলে ১৯৪৬—৪৮ থেকে ১৯৫৮—৬০ পর্বত সময়ে শিল্পোৎপাদন জাতীয় আয়ের ২১% থেকে বৃদ্ধি পেয়ে ৩৪% উন্নীত হয়েছে কিন্তু উক্ত সময়ে মোট জাতীয় সফর জাতীয় আয়ের ১৬.৪% থেকে নেমে ১৬% এ দাঁড়িয়েছে। তুরস্কে ১৯৫৪ সালে শিল্পোৎপাদন ছিল জাতীয় আয়ের ১৩%। ১৯৬৫ সালে তা বৃদ্ধি পেয়ে ১৫% এ দাঁড়ায়। কিন্তু উক্ত সময়ে মোট বিনিয়োগ জাতীয় আয়ের ১৪.৫% থেকে ১৩% এ নেমেছে।

অন্যদিকে সনাতন সেক্টর বলে যেসব অর্থনৈতিক কার্যক্রমকে উপেক্ষা করা হয়েছিল, সাম্প্রতিক কিছু সংখ্যক সনীক্ষা প্রমাণ করেছে যে এসব সেক্টরে সফরের

হার কিংবা আধুনিক পদ্ধতির প্রতি তাঁদের গাড়া মর্ডান সেক্টরের তুলনায় কোন অংশে কম নয় বরং কোন কোন ক্ষেত্রে অনেক বেশী। সুত্বব্য যে আধুনিক পদ্ধতি বলতে শুধু পুঁজি বহুল পদ্ধতিকেই বুঝায় না। শ্রম বহুল পদ্ধতি ও আধুনিক

বিভিন্নদেশে শিল্পক্ষেত্রে নিয়োজিত শ্রমিক সংখ্যার শতকরা হার*

দেশ	১৯৫০	১৯৬০	১৯৭০/৭১
নিকারাগুয়া	১৫	১৬	১৬
তুরস্ক	৯	১০	—
পাকিস্তান	৮	১০	১৮
মালয়েশীয়া	১১	১৩	৯
মিশর	১২	১২	১৫
পানামা	১২	১২	১৪
প্যারাগুয়ে	১৯	১৯	১৭
চিলি	৩১	৩০	২৫
ইকুয়েডোর	২৩	১৮	১৬
পেরু	২১	২০	১৮
সাইপ্রাস	৩৩	২৭	—

উৎস : ইন্টারন্যাশনাল লেবার রিভিউ, জানু-ফেব্রু—১৯৬৭ এবং ILO Statistical Year Book 1973-77.

*বাংলাদেশ ১৯৬০ ১৯৭০
৬ ৬

Ref : Mohiuddin Alamgir, 2nd Annual Conference of Bangladesh Economic Association, "Which Way We are Moving?", page 49.

হতে পারে। প্রফেসর Mynt-এর মতে বড় আকারের কার্যক্রম এবং পুঁজি বহুল প্রকৌশলের সাথে আধুনিকতার ভুল সনাক্তকরণ এবং উন্নত ও ধ্বংসাত্মক দেশসমূহের পুঁজিবহুল প্রকৌশলের প্রতি পক্ষপাতিত্বই অর্থনৈতিক বৈতবাদের কারণ।

শিল্পোৎপাদন ও শিল্পে কর্মসংস্থানের পারস্পরিক সম্পর্ক আধুনিক বিশ্বে কিরূপ তা অপর পৃষ্ঠার তালিকাটি থেকে পরিকার বুঝা যাচ্ছে।

শিল্পোৎপাদন ও শিল্পে কর্মসংস্থান

১৯৭০=১০০

ভৌগোলিক অবস্থান	শিল্পোৎপাদন			কর্মসংস্থান		
	১৯৬২	১৯৭৪	বৃদ্ধির হার	১৯৬২	১৯৭৪	বৃদ্ধির হার
পৃথিবী	৬৫	১২৭	৫.৭%	৮৩	১০৮	২.৪%
কেন্দ্রীয় পরিকল্পনাধীন						
দেশ সমূহ	৫১	১৪০	৮.৮%	৭৮	১০৮	২.৮%
বাজার-নির্ভর অর্থনীতি	৬২	১২২	৫.৮%	৮৫	১০৯	২.৩%

Source : UN Year Book of Industrial Statistics, 1974, page 636-661.

স্পষ্টই দেখা যাচ্ছে শিল্পোৎপাদনের তুলনায় নিরোগ বৃদ্ধির হার অনেক কম। কিন্তু শ্রমিক বৃদ্ধির হার যদি হিসাবে নেয়া হয় তাহলে দেখা যাবে বেকার সমস্যা সাধারণত শিল্পায়নের ভূমিকা আরও নগন্য। কাজেই আমাদের মত শ্রমিক উদ্বৃত্তের দেশে বেকার সমস্যা সমাধানের পথ দেশের বৃহত্তর সেক্টর কৃষি ও গ্রামীণ অর্থনীতিকে চাংখা করে তোলা। একমাত্র গ্রামীণ উন্নয়নের মাধ্যমেই দেশের অতিরিক্ত জনশক্তিকে কাজে লাগানো সম্ভব। তথা কথিত সনাতন সেক্টরে উন্নয়ন কর্মসূচীর অভাবে এবং আধুনিক সেক্টরে fixed factor co-efficient-এর প্রেক্ষিতে বেকার সমস্যা ক্রমবর্ধমান হারে প্রকট হওয়াই স্বাভাবিক। এই মর্মান্তিক দুরবস্থা নিরসনের জন্য প্রয়োজন, প্রেক্ষিতোপযোগী সক্রিয় পদক্ষেপ।

ইদানিং এ কথা সবাই স্বীকার করছেন যে কোন দেশের শিল্প সমৃদ্ধির মূলে রয়েছে দেশের কৃষি উদ্বৃত্ত। সর্বাধিক পরিমাণে এই উদ্বৃত্ত সৃষ্টি করতে হলে এই সেক্টরের উন্নয়ন খাতে শুল্ক বরাদ্দের পরিমাণ বাড়ালেই চলবে। (সুতরাং যে আমাদের দেশে সম্প্রতি কৃষি উন্নয়ন খাতে বরাদ্দের হার বেড়েছে), শিল্পজাত দ্রব্যের সংগে Terms of Tradeও কৃষি দ্রব্যের অনুকূলে হতে হবে। আমাদের অর্থনীতিতে সম্প্রতি এই দিকটি উপেক্ষিত হচ্ছে।

প্রসংগত উল্লেখ্য, বাংলাদেশের প্রথম পাঁচসালী পরিকল্পনায় যদিও উন্নয়ন ব্যয়ের ৮৯% বরাদ্দ করা হয়েছে সরকারী সেক্টরে, কিন্তু নতুন কর্মসংস্থান সৃষ্টির ক্ষেত্রে আশা করা হয়েছে যে বেসরকারী সেক্টর ৮৫% নতুন নিয়োগ সৃষ্টি করবে। কর্মসংস্থান সৃষ্টির প্রান্তিক ব্যয় ও মোট ব্যয়ের দৃষ্টিকোণ থেকে বিচার করলে উপরোক্ত আশাবাদ অসম্ভব বলে মনে হবে।

প্রফেসর টার্নার ১৪টি অনুরূত দেশের সমীক্ষা নিয়ে দেখেছেন যে বেকারত্ব বৃদ্ধির হার প্রতি বছর ৮'৫%। প্রফেসর সিংগারের ধারণা মতে অনুরূত দেশে বর্তমান বেকারত্বের হার ২৫%। এই তথ্যের ওপর ভিত্তি করে তিনি অনুমান করেছেন যে অনুরূত দেশে ১৯৮০ সালে বেকারত্বের হার দাঁড়াবে ৪৩% এবং ১৯৯০ সালে তা বৃদ্ধি পেয়ে ৭৩% এ পৌঁছবে। প্রফেসর টার্নারের তথ্য সঠিক হলে বাংলাদেশের বর্তমান আনুমানিক বেকারের সংখ্যা ৮৪ লক্ষ ১৯৮৭ সালে বৃদ্ধি পেয়ে দাঁড়াবে ১৫৫ লক্ষে। বেকারত্বের এই ভয়াবহ বিশালত্বের সাথে সাথে শিক্ষিত বেকারের সংখ্যাও বৃদ্ধি পাচ্ছে। ১৯৭৪ সালের এক সমীক্ষায় দেখা যায় বাংলাদেশের শিক্ষিত বেকারের হার ৪৪%। আমাদের সামাজিক জীবনে ভয়াবহতার দিক থেকে এ এক নতুন চ্যালেঞ্জ। তথা কথিত গণমুখী শিক্ষার মাধ্যমে এই চ্যালেঞ্জের মোকাবেলা করা সম্ভব নয়। এর জন্য চাই উৎপাদনমুখী শিক্ষা।

বেকারত্ব নিরসনের প্রচলিত পন্থা হচ্ছে অধিক বিনিয়োগের মাধ্যমে অধিক কর্মসংস্থান সৃষ্টি করা। অনেকের মতে এই পন্থায় বেকারত্বের পরিমাণ আরও বৃদ্ধি পাবে। কারণ ভবিষ্যৎ চাকুরীর কাল্পনিক স্মরণ এমন অনেককে গ্রাম থেকে শহরের দিকে টেনে আনবে, যাদের জন্য প্রকৃতপক্ষে কোন চাকুরী সৃষ্টি সম্ভব নয়। যেহেতু কাল্পনিক চাকুরীর নেশায় অনেকে তাঁদের বর্তমান প্রাস্তিক কর্মসংস্থানও ছেড়ে আসবে, সুতরাং সামগ্রিক বেকারত্ব বাড়বে।

বৈতবাদের আরেকটি অভিপায় হচ্ছে শ্রমিক বৃদ্ধির সাথে সাথে মজুরী বৃদ্ধি পাওয়া। ডঃ জলি তাঁর “ইন্টারন্যাশনাল অসপেক্ট অব এডুকেশনাল প্ল্যানিং” নামক বইতে লিখেছেন “When salaries and qualifications are linked directly, increasing the supply may actually raise average remuneration” অর্থাৎ যখন কোন কাজের স্বরূপ ও প্রয়োজনীয়তা দ্বারা বেতন নির্ধারিত না হয়ে কিংবা চাহিদা ও সরবরাহের স্বাভাবিক পদ্ধতিতে বেতন নির্ধারিত না হয়ে, বেতনভূকের প্রাতিষ্ঠানিক যোগ্যতা দ্বারা বেতন নির্ধারিত হয়, তখন এসব প্রাতিষ্ঠানিক যোগ্যতা প্রয়োজনের অতিরিক্ত কিংবা কাজের সংগে সম্পূর্ণ সম্পর্কহীন হওয়াও অস্বাভাবিক নয়। এমতাবস্থায় যে কাজ অপেক্ষাকৃত কম যোগ্যতা সম্পন্ন লোক দ্বারা অপেক্ষাকৃত কম বেতনে মহছেই হতে পারতো, তার জন্য অপ্রয়োজনীয় ডিগ্রীধারী লোক অধিক বেতনে নিয়োগ করতে হয়। ফলে খোঁটা মজুরী তহবিল গুটি কতক লোকের বেতন বাবতই শেষ হয়ে যাবে, অতিরিক্ত লোক নিয়োগের পথ হবে রুদ্ধ।

যে দেশে বেকারত্ব যত বেশী, অপ্রয়োজনীয় ডিগ্রী লাভের প্রবণতা সেখানে তত বেশী। ফলে বিভিন্ন শ্রেণীর শ্রমিকের মধ্যে মজুরীর পার্থক্যও দিন দিন বৃদ্ধি পেতে

থাকে। এই সব কারণে Dualistic model-এর প্রধান আকর্ষণ Constant wage level-এর কোন অস্তিত্বই খুঁজে পাওয়া যায় না। সুতরাং শিল্পোন্নয়নের মাধ্যমে যে হারে কর্মসংস্থান সৃষ্টির ধারণা এসব মডেলে করা হয়েছিল, তাও সম্ভব হয়নি। অন্যদিকে শিল্প শ্রমিকের বেতন বৃদ্ধি পেলেও বেকারত্বের হার বৃদ্ধি পাওয়ার ফলে এসব শ্রমিকের পোষ্যও বৃদ্ধি পেয়েছে। সুতরাং বেতন বৃদ্ধির কোন অর্থনৈতিক সুফল এসব অর্থনীতিতে ঘটা সম্ভব হয়নি।

‘অধিক বিনিয়োগ মানে অধিক উন্নয়ন’ এই ভ্রান্ত ধারণার ফলে আমাদের মত বহু গরীব দেশে একদিকে অব্যবহৃত উৎপাদন ক্ষমতার হার বৃদ্ধি পেয়েছে, অন্য দিকে মূল্যবান বৈদেশিক মুদ্রার বিনিময়ে নতুন বিনিয়োগের সৃষ্টি হয়েছে। ফলে কাণ্ডজে কলমে উন্নয়নের হার বৃদ্ধি পেলেও তা বেকারত্ব দূরীকরণে কিংবা দেশকে Take off পর্যায়ে আনতে ব্যর্থ হয়েছে।

দেশে বিদ্যমান উৎপাদন ক্ষমতার সম্পূর্ণ সহাবহার এবং শ্রমিক উদ্বৃত্ত অর্থনীতির উপযুক্ত প্রকৌশলের মাধ্যমেই আমরা বেকারত্বের অভিণাণ থেকে মুক্তি পেতে পারি। অন্য কোন উপায়ে নয়।

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Comments And Observations On Some Aspects Of Manpower Situation In Bangladesh

by

M. M. R. CHOWDHURY*

I. Development

The emerging concepts of need-oriented manpower development and basic-needs oriented growth are exerting increasing influence on and providing changing complexion to the strategies of development of human resources and economic development within the framework of over all socio-economic development. Manpower development instead of being a pursuit for the free development of man according to his natural inclination, implies that such development will produce the quality and quantity of human resources required for the economy's growth. The emerging concept of growth has brought the issue of human resources development from the periphery to the centre of development planning. Skilled manpower are no more mere "products" of development, they are essential "factors" of development activities.

II. Manpower for Development

The usual expectation from the human resources development system is that it will produce the right quality and quantity of human resources required for the growth of the economy and that the economy will in fact make good use of these resources. But

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it may very well happen that the human resources development system turns out the wrong-mix of manpower. This is exactly what seems to be happening today in many countries, more commonly in the developing ones. On the one hand, there is serious lack of activities towards precise determination of manpower requirements by skills and categories, while on the other, the human resources development system is falling far short of turning out the right numbers and combinations of manpower needed for optimum development. As a result, while their economies suffer shortage of skills, the employment market is burdened with too many generalists looking for white collar employment. For correcting such imbalances, it is necessary to identify, at least approximately, the major areas where the match between the manpower and the economy is conspicuously poor, or is likely to be so in the future both in terms of quantity and quality. What is thus identified can then serve as a basis for planning the course of human resources development in order to enhance the future contribution of manpower to national development.

III. Manpower Development in Bangladesh

In the light of the above observations, we will now examine the process of human resources development in Bangladesh. Manpower development in Bangladesh has clearly moved along wrong paths. No conscious attempts have been made so far to co-ordinate the activities of human resources development with manpower requirement of the economy. The result has been a number of anomalies and serious disjunction between the country's manpower development system and employment opportunities provided by the economy. This can be discerned from the fact that while the economy is suffering from the shortage of strategic skills, we have a vast cohort of unemployed educated youngmen mainly looking for white collar employment.

IV. The Problem of Educated Unemployment

In order to further elaborate this phenomenon of educated unemployment, we shall now use certain indicative estimates arrived at by

a recent Planning Commission study in this regard. According to this study about 44% of the educated job-seekers (defined as matriculates and above) were unemployed at the eve of the First Five Year Plan. Of the total number of 10.88 lakhs educated job seekers, 4.21 lakhs were absorbed in occupations appropriate to their educational background, 1.89 lakhs were inappropriately placed and 4.78 lakhs were clearly unemployed. Out of this study entitled—“Employment Market for the Educated in Bangladesh” the following detailed picture of surplus and deficit of various categories of educated manpower emerge as bench-mark estimates as in June, 1973. (Tables I and II)

TABLE I
SURPLUS CATEGORIES OF EDUCATED MANPOWER*
(As on 30th June 1973)

Type	Number of Job-seeking Degree Holders	Number of Posts demanding this Qualifications	The Balance Unemployment/Inappropriate Placement
1. Generalists	9,60,330	3,04,608	6,55,722
2. Master's degree holders in Humanities	6,441	3,919	2,522
3. Master's degree holders in Social Sciences	7,703	3,145	4,558
4. Master's degree holders in Economic Sciences	6,360	4,459	1,901
5. Miscellaneous other professionals	6,275	3,801	2,474
Total	9,87,109	3,19,932	6,67,177

*The actual volume of unemployment is, however, not that big as shown in the above table because, as under-qualified and imperfect substitutes, they are absorbed in occupations for which persons with the requisite qualifications are short of the demanded number.

TABLE II
DEFICIT CATEGORIES OF EDUCATED MANPOWER*
(As on 30th June, 1973)

Type	Number of Job-seeking Degree Holders	Number of Posts demanding this Qualification	The Balance Unemployment/Inappropriate Placement
1. Masters' degree holders in Natural Sciences	6,492	6,096	+ 396
2. Engineering Graduates	4,456	4,887	- 431
3. Engineering Technicians	11,182	11,416	- 234
4. Post-Graduate Medical Specialists	263	304	- 41
5. Mid-level Doctors	4,640	4,881	- 241
6. Medical Technicians	5,655	70,617	- 4,962
7. Agricultural Professional	3,569	4,897	- 1,328
8. Trained Teaching Professionals	3,897	2,43,214	- 1,79,317
9. Fibre Technologists	871	4,134	- 3,263
Total	1,01,025	2,90,446	- 1,89,421

*Master's Degree holders in Natural Sciences, inspite of a positive balance were listed in the deficit table. This is because much more than 396 Natural Scientists are employed in (a) bureaucracy where Master's Degree in Natural Science is not the prescribed qualification and in (b) Defence Science Organisations and other military establishment.

V. Unemployment of the Educated

Some recent investigations have also brought out certain indications regarding the employment market for the educated in the country during the initial years of the First Five Year Plan. It appears that although imbalance in the employment market for the educated was widely talked about, educational expansion took place during the period somewhat on the same traditional pattern and pace with the result that interaction of demand for and supply of additional educated manpower during the period created further imbalance in the employment market and overall manpower situation appears

to have registered deterioration as against the position in June, 1973. Expansions took place during the initial years of the Plan without virtually any reference to their employment market in certain types of education for which substantial surplus already existed upto June, 1973. Since the number of additional jobs created for them during the early years of the Plan was less than the number of their outturn during the period overall surplus further increased. Indications regarding a second phenomenon is that, in certain categories, in which deficit existed in June, 1973 the number of additional outturn fell short of the number additionally demanded during the initial years of the Plan and as a result the absolute deficit further widened. Indications are there regarding yet a third type of situation in respect of certain categories of educated manpower where the deficit existing in June, 1973 were more than offset during the early years of the Plan and the deficit turned into an overall surplus. In respect of employment performance of the economy during the initial years of the Plan, available indications suggest that recovery of the post-war economy was initially slow due to the combination of a number of economic factors and the various sectors did not get sufficiently activated to generate sizeable additional employment.

VI. Activities on the Education Front

On the education front, although specific indications were available as to the imbalance of the education system in the context of the employment market for the educated, no worthwhile planned efforts were made to bring about desirable structural changes in the educational system in line with the economic requirements for education. Towards correcting the imbalance, while no comprehensive attempts were made to identify the nature and the major areas of the mismatch, both in terms of quantity and quality, the available findings of the actual studies (Manpower Section's Bench Mark Study on the Employment Market for the Educated in Bangladesh as in June 1973, for example) although supplies us with pieces of information cannot serve as the basis for efforts for bringing about gradual changes in the pattern of education. Such findings were neither debated and deliberated upon effectively in the concerned quarters nor any positive

remedial action programmes are known to have emerged out of them. The problems of educated unemployment, need for more Vocational/Technical education as against general education for solving the problems etc. were discussed in many a learned forums but the question of the *modus operandi* as to exactly how it is to be solved with actual reference to the supply and demand for various types of skills within the economy was never raised with any degree of clarity with the result that the education system expanded in an adhoc pattern and pace and the imbalance persisted and increased.

VII. The Issue of Quality of Manpower

Planning an action programme on human resources development is never complete without reference to the issue of quality. In Bangladesh, as in most countries of the Third World, the proper balance between quantity and quality of manpower of all categories and levels posed a serious problems as both could not be increased at the same time. Qualitative deficiencies of the educated manpower created serious difficulties in the employment market in our case as well. This takes us to various aspects of organised human resources development efforts such as the questions of curriculum development, analysis of course contents in relation to the job requirements, quality of teaching/training, standard of teaching/training materials and perhaps many other related ones, where there have been least systematic efforts for methodical improvements. The issues are, however, all dovetailed to the question of our capability of resource deployment.

It is becoming more and more evident that the use of means as adopted in the past and practised at present would not meet the needs of our human resources development. Clearly manpower development system of the country must be remodelled so that its clientele fits well into the country's socio-economic complex.

VIII. The Issue of Finance for Human Resources Development

As regards finance for human resources development, bringing about improvement and changes in the system presupposes increasing expenditure as a basic premise. However, judicious distribution of funds

on different components of human resources development is as important as the size of total investment. This is probably more important in countries like ours where resources are scarce in relation to the needs and many alternative demands are competing with each other for this resource stock. Undoubtedly, the human resources development programmes, in the face of pressing problems such as food deficits, needs for agricultural and industrial development, physical infra-structural development, etc., could not be provided with adequate funds. Attempts have, nevertheless been made to provide increasingly larger funds in successive development plans and successive years within the plans. I would venture to say that in respect of expenditure, the managers of our human resources development system did not try to achieve the best bargain. This had serious adverse effects on the quality of our manpower. Financial constraints may not permit us to expand allocations for human resources development to a very large extent in the immediate future. As such our prime consideration for quite sometime to come, will have to be how well the fund is spent. The impact of prudent outlays may not show up immediately but if adequate doses of resource flow to pre-set priority is assured in the human resource development sector, the eventual cumulative effects are bound to have far reaching impact on the quality of our national life.

IX. Development Planning and Manpower Planning

Development is the outcome of effective usage of two types of resources—man and material. In order to render material investments worthwhile, it is necessary to synchronize human resources development planning with overall economic planning. And again, it is necessary to do this on a regular and continuous basis to deal with such important issues as manpower requirements for the implementation of planned investment programmes, output of the existing and planned educational/training facilities, identification of gap between supply of and demand for skills of various categories and levels, methods of meeting the gaps and of avoiding bottlenecks and finally, organisation of a system of manpower budgeting in the context of the national development commitments.

X. Manpower Development Planning and Research

Bangladesh at the moment does not have a proper manpower planning machinery to objectively look into the various manpower issues. Before the problems get further complicated it is time that serious thoughts are given towards formation of a permanent manpower planning machinery. There is need for a broad-based organisational arrangement with the task of co-ordination of efforts by various organisations and agencies, through assessment of the existing situation, effective co-ordination with the national planning agency for formulation of policies/strategies, functional co-ordination with various organisations/agencies in respect of preparation of action programmes and finally, co-ordination and liaison with various executing organisations/agencies towards effective monitoring of implementation of various programmes. Manpower planning is not a matter of one short assessment and policy suggestions of ad-hoc nature; it presupposes a fair amount of research activities with an accent on continuity. It may be worthwhile to consider whether a permanent Manpower Research Institute could carry out continuous research on various aspects of human resources development to provide necessary information to the proposed National Manpower Organisation and also the National Planning Agency.

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Capital Formation and Employment Promotion : Some Observations

by

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I. INTRODUCTION

Capital formation plays a vital role in the process of growth and development. It performs the dual role of generating income and providing employment. However, for many years, the role of capital formation has been stressed for the growth objective without paying much heed to the employment objective. Explicit consideration of the employment objective has not been stressed because it was thought that sufficient jobs would be created in the course of capital formation and economic growth and in the final analysis the production process would absorb all people willing to work so that there would not be any unemployment [4]. This theory could not pass the test of reality in a number of underdeveloped countries. Despite high rate of growth of output, employment in many underdeveloped countries have grown slowly aggravating unemployment problem. Data shows that in the developing countries the number of unemployed rose from 166 million to 248 million and their share in the total labour force went up from 24.7 to 29.5 per cent during the decade from 1960 to 1970 [4].

In this paper we have tried to confront the above theory with the facts of the manufacturing sector of Bangladesh. Numerous issues of employment/unemployment are involved but we have limited our study to the employment generating aspect of capital formation. This question is of increasing interest because the nature of capital

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formation determines some basic parameters of the economy and as such answers the important question of whether we are pursuing a policy consistent with the resource endowment of the country.

II. THE DATA AND MEHODOLOGY

Three variables—output, capital and labour have been examined in this study. Value-added concept has been used to represent output. The unit is in thousand Takas. Man-years represent employment. This data contains some error because by definition the labour force is assumed homogeneous which is hardly the case. Also the data does not take into account the quality of the input. "Gross-fixed capital-in-place" concept has been used to measure capital input. It includes value of land and buildings, plants and machinery, furniture and fixtures, transport equipments and other fixed assets. This data also contains some error because improvement of land, and not value of land, is a part of capital. Also, the value of capital used is the book value which underestimates the replacement cost.

We have calculated growth rates of these variables—output, capital and employment. Growth rates have been calculated on the basis of sample arithmetic mean of the annual growth rates.

III. EMPRICAL RESULTS AND THEIR INTERPRETATION

Results of our calculations are placed in Table I. This Table shows that (a) Output is growing at a rate faster than the growth of capital and labour and (b) Capital is growing at a faster rate than labour.

TABLE I
GROWTH RATES OF OUTPUT, CAPITAL AND EMPLOYMENT, 1954-1965.

Industries	Growth Rates of		
	Output	Capital	Labour
Food	41.07	28.05	14.93
Textile	17.31	14.81	13.37
Leather	31.54	26.24	22.65
Printing	8.61	-2.73	3.58
Chemical	31.33	42.37	28.44
Non-metallic minerals	26.09	16.95	15.27
Transport	39.20	69.64	19.55
Miscellaneous	26.16	5.51	-2.45
Total Manufacturing	19.60	13.52	9.92

Source ; Calculated from the data of the Census of Manufacturing Industries,

Our problem now is to explain these results. The faster rate of growth of output may be due to (i) economies of scale or (ii) the combined effect of these two factors. It has been demonstrated elsewhere [3] that the manufacturing production function is linear and homogeneous. Therefore, the higher rate of growth of output may be attributed to the technological progress. The question arises as to the type of technological progress that may have taken place. The Cobb-Douglas production function was estimated [2] introducing a trend coefficient. The value of the trend coefficient indicates that there has been some shift of the production function in the Bangladesh manufacturing. The value of the coefficient ranges from .08 to .22 in the different industries. If the shift of the production function had been only neutral, then capital and labour would have grown at the same rate. A relatively faster rate of growth of capital means that, either there exists excess capacity in the industries, or there has taken place technological change of capital intensive type or both. Coming to the first item, there is considerable under utilisation of various industries of Bangladesh [1]. Underutilization of capacity in industries is, therefore, a source of the slower growth rate of employment. On the second question of non-neutral technological change, a study with cross-section data indicates that capital intensive techniques are being used in the Bangladesh manufacturing industries [5]. But this does not imply that capital-intensity would be increasing. If the level of excess capacity remains the same over time then building up of identical capital-intensive machines would lead to the same capital intensity. We need further investigation. Table II will throw some light on this.

Growth rates of capital in relation to the growth rates of labour show a rising trend implying increase in capital-intensity. From this observation alone we can not conclusively infer that capital biased type of technological change is taking place unless we know whether the degree of excess capacity is changing over time. But we have no information on this. We did not pursue a rigorous investigation on this point because it is possible to form some intuitive idea about the cause of increasing capital intensity. About ninety per cent of the machinery and transport equipment of the Bangladesh manufacturing industries is imported from highly developed

TABLE II
GROWTH RATES OF CAPITAL AND LABOUR
(Total Manufacturing Sector)

Year	Growth Rates of Capital over time	Growth Rates of Labour over time
1956	10.5	9.84
1957	9.56	8.96
1958	37.69	18.53
1959	0.49	15.49
1960	18.77	8.81
1961	31.19	3.87
1962	35.51	-0.34
1963	25.38	0.13
1964	2.91	1.45
1965	0.80	-0.83
Average growth rate	13.52	9.92

Source : Calculated from the data of the Census of Manufacturing Industries.

industrialised countries where capital-biased technological change is taking place significantly [6]. This would lead one to suggest that similar things are happening in Bangladesh too.

There is some illusion in the statistical findings of the technological change in the Bangladesh manufacturing. These technologies do not represent the technical frontier of the economy. These are a set of foreign techniques possessed by the economy through the importation of machinery and equipment.

To sum up the analysis, there exists considerable excess capacity due to which employment is growing at a slower rate; capital intensive technology is being used and there has been technological change of both types—the net effect of which is also contributing to the slow growth rate of employment.

IV. CONCLUSION

The findings we have are necessary for suggesting policy measures. But these findings, as they are, are not sufficient to enable us to do so. Further investigation is required to bring out the forces

behind these factors. However, some general suggestions can be made and this is briefly done in this section.

The possibility of stretching the existing capacities through greater capacity utilization has to be explored. It is found that paucity of foreign exchange, limited market, imbalance of machinery, failure of power supply etc. are the general causes of underutilization of capacity and these have to be removed [1]. The possibility of multiple shift-work has also to be explored. Regarding the technological aspect, there should be a shift of preference in favour of labour intensive technique. This is easier said than done. As domestic saving is meagre and technological colonialism is at work, for some time to come Bangladesh has to depend on imported capital through tied aid and loan. What we stress is that we must have to have our own alternatives, To achieve this, it is required to review, adjust and supplement the indigenous methods. In this respect there is a tremendous task ahead for applied research.

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Approaches to The Problem of Rural Unemployment

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I. INTRODUCTION

A shift in the attitude towards the problem of rural employment and unemployment has already occurred. It is no longer viewed as a part of the problem underlying the process of labour supply to the modern industrial sector. [6, 9]. Attention is directed to the fact that in the rural sector of an underdeveloped country there exists a large and growing section of people who are unable to maintain an adequate level of living on the basis of the available employment opportunities [14, 15]. This favourable shift in attitude has led to the redefining of concepts of unemployment and reformulating the methods of measuring the phenomenon [10, 11, 12, 15]. But now it is time to change the attitude once again and to become aware of the problems and inadequacies associated with such measures and to try to locate the real problem of a heterogeneous group.

In this paper attempts will be made to investigate the inadequacies of the existing methods of measuring rural unemployment. Also, the point will be made that the structure of the labour market should be taken into account before the measures of unemployment are applied. In this paper, the information and data obtained from the study of a village in Barisal, namely Char Shamraj, will be extensively used to illustrate the nature of the problems.

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II. THE MEASURES OF UNEMPLOYMENT

To measure rural unemployment, census methods are rejected due to their extreme simplistic approach to the issue. Just the fact whether one seeks a job (Willingness criterion) or whether he is gainfully employed for so many days a year (time criterion) is not enough to ensure listing of all unemployed when the presence of disguised unemployment or under-employment is recognised. In view of the existence of such problems, different measures have been suggested to estimate rural unemployment. The following measures are examined here :

- a. Surplus labour approach
- b. Productivity approach
- c. Recognition approach
- d. Income approach
- e. Income—time combination.

Surplus Labour¹

This is measured as the difference between the total labour supply and the total labour that is required or can be utilized at the given level of technology and efficiency.

Problems arise in the estimation of each side. To estimate the supply what participation rate and intensity of work is to be assumed for a given labour force? At the demand side what are the sectors to be included? What level of efficiency is to be assumed? Usually the surplus is estimated for agricultural sector only at the existing level of efficiency. Such measure can help to show the amount of surplus labour that can be drawn from agriculture and not the absolute level of rural unemployment that has to be removed. Also, this approach can be used to estimate the increase in labour absorption resulting from any change in technology by calculating the surplus labour at the two levels of efficiency [13].

¹Actually this term is a bit misleading, since all the measures aim at estimating the surplus labour. Conventional literature uses this term. So it is kept unaltered here. A more appropriate term would be demand-supply approach.

Productivity Approach

Disguised unemployment is looked at as a situation where labourers are working with a marginal product of zero, or in other version some of the workers can be withdrawn without affecting the total output [5, 7, 10]. But it has been pointed out recently [10] that zero marginal product is neither necessary nor sufficient for the existence of surplus labour. In view of the disutility associated with work, what is necessary is the constancy of MRS^2 between income and work.

Direct estimation of disguised unemployment by observing the effect of withdrawal of some labour is almost impossible. So it is tested with the help of a suitable model, whether workers are engaged even after their marginal product is equated to zero (Sen has cast doubts on this approach). The problem of choosing the appropriate production function and the harsh criticism against such neo-classical frame remains. Also, such measures may not help in policy formulations, since unless the reasons for the works haring is known, (this may be done by applying some other criterion as will be discussed) it is not possible to ascertain how or whether they can be removed. Moreover the fact remains that, to measure the extent of unemployment, in addition to the disguised unemployment, the amount of open unemployment has to be added.

Recognition Criterion

This may help to identify the cases when a disguised unemployed person needs to be provided with job. 'Unemployment is a state of being without fruitful work and the perception of fruitfulness of work is, to a large extent, a result of social conditioning'. So, as regards policy formulation, Sen's [10] criterion regarding whether a person recognises himself as unemployed or not is useful, in addition to the marginal productivity criterion.

Income Approach

To some people unemployment is not a problem in itself, but is viewed as a problem, when it results in poverty and low income.

²Marginal Rate of Substitution.

So a measure of unemployment is suggested in terms of income. Persons unable to earn an income above the poverty line are categorised as unemployed [3]. (Of course, the problem of identifying poverty level which depends not only on income but also on size of family remains). Poverty, obviously being a problem of great concern, should not be identified with unemployment. Unemployment, as one of the causes of poverty deserves due attention but poverty is a function of other factors like technology, productivity, ownership of means of production etc. as well. But this approach may be a good first approximation of the area where the unemployed persons abound. But as we can easily conceive, the persons above this poverty line may also *seek more work* and *recognize* himself as unemployed. It may not be possible to overlook these unemployed above poverty line, since there may be a threat of social unrest. Measurement of unemployment by below poverty level income has obvious policy implication. It suggests how the present income distribution may be changed through the provision of more jobs to the unemployed. Even in this aim this measure falls short, if the below poverty level persons do not view themselves as unemployed, and work for the whole year in a low productivity job yielding a low income. Counting them as unemployed and providing them with job will not help.

Combination Criterion

Sometimes a combination of a time criterion and income criterion is used to suggest a measure of unemployment [3]. Accordingly, one is unemployed if he either works less than so many days or works more than the days thus suggested but earns an income below poverty level. But this definition is useless even to suggest employment provision as a redistributing mechanism, since there is no room to increase their working days.

Thus none of these approaches are adequate to measure the extent of rural unemployment, though each may help in a specific situation.

III. MEASURES OF UNEMPLOYMENT AND STRUCTURE OF THE LABOUR FORCE

So far we have criticized the different measurements on grounds of consistency, usefulness and practicability. Here, we propose to bring out certain structural characteristics of our labour market which render the application of the above methods more unsatisfactory and indicates that viewing problems like unemployment in this given structure and in aggregate terms which assume a homogenous labour force, should be looked at with suspicion. The real issue is not one of magnitude, but of the nature or character of the problem.

Two basic structural factor that we want to consider here are seasonality and modes of labour employment. The data of village Char Shamraj will be used to illustrate them.

Seasonality

Seasonality in demand for labour is a prominent characteristic of agricultural employment in Bangladesh. This is also revealed by village Char Shamraj data.

In the surplus labour method a simple co-efficient of total labour required per acre is used. But it is obvious that one man-day applied in the slack season is not a substitute for one man-day in peak season. This fact is responsible for the two answers to the same problem, 34.4% rural unemployment on the aggregate but -1% at the peak season [8]. Therefore to retain the usefulness of the surplus measurement approach, it has to be extended using the labour requirement index for each month and calculating the surplus seperately.

In Char Shamraj the number of working persons is 272. If we assume a 25 day man-month, then 6590 mandays can be worked in a month. From a look at Table I we find that, during 'Ashar' maximum days are worked—6692 (more than 25 days per worker). It may be pointed out that, the possibility of work-sharing or low intensity of work is unlikely in this month, since on the average 10 hours are worked daily. Otherwise a shorter day would have been chosen. Taking this 6692 days to be the total supply, unemployment over other months are calculated,

Table I has taken all occupations into consideration. The situation of seasonality will be much more worse if we consider agriculture alone. Table II gives this picture.

TABLE I
SEASONAL EMPLOYMENT PATTERN IN CHAR SHAMRAJ

Months	Total Days Worked	Total Days not Worked (Ashar days being maximum days that could be worked)	
		Days	% (of 6692 days)
Baisakh*	5462	1230	18.38
Jaistha	5316	1376	20.56
Ashar	6692	0	0
Sraban	6611	81	1.21
Bhadra	4785	1907	28.49
Aswin	2973	3119	46.60
Kartik	5044	1648	24.62
Agrahyan	6256	438	6.54
Poush	5769	923	13.79
Magh	5799	893	13.34
Falgun	4774	2918	43.60
Chaitra	4200	2492	37.23

* Baisakh = 16th April to 15th May approximately
Jaistha = 16th May to 15th June approximately etc.

TABLE II
SEASONALITY OF EMPLOYMENT OF AGRICULTURE
IN CHAR SHAMRAJ

Months	Days worked (X ₁) in Agriculture	Days not Worked*	Days not worked as a percentage of total supply of a month $= \frac{X_1}{6573} \times 100$
Baishak	1872	4701	71.52
Jaistha	2496	4077	62.03
Ashar	4804	1769	26.99
Sraban	4786	1787	27.19
Bhadra	2665	3908	59.45
Ashwin	526	6047	91.99
Kartik	3181	3392	51.60
Agrahyan	4667	1906	28.99
Poush	3239	3334	50.72
Magh	2811	3762	57.23
Falgun	1791	4782	72.75
Chaitra	1243	5330	81.00

* Assuming a supply of 272 workers and 290 working days in a year, i.e. assuming total supply of 78880 mandays in a year, or 6573 mandays in a month.

Source: Fieldwork by Village Study Group in Char Shamraj in 1974.

Thus if only agriculture is considered there is 26% unemployment even at the peak season. Seasonality will be more pronounced if we consider the fact that off-season mandays are not full-days, when only small hours are worked. At this micro level, it has been possible to collect monthly data on days worked ; but this is not possible at the aggregative level. At that level surplus measuring method can be employed, for each month, once the exact nature of seasonality is suggested by such micro studies.

These measurements suggest a need to overcome the seasonality aspect of unemployment. The necessity of providing complementary alternative occupation in the slack seasons emerges as a logical strategy. Table III shows how alternative occupations work to offset the seasonality in agriculture. Construction³ and fishing are next in importance to agriculture in terms of employment. Also, as seen from the table the peaks of working days in these two activities coincide with the two slack periods of agriculture. This suggests the suitability of these, as alternative sources of employment. Indeed, suitably selected construction or irrigation projects through works programme may help a lot.

Types of employment arrangements

The arrangements under which a person works, influence much of his motivation, attitude to employment, income and occupation. We may broadly classify the workers into three types on the basis of arrangements in which they work :

(a) Self employed : this group includes the family members working in the family farm, sharing the family income and receiving no wages.

(b) Purely wage labour : They work only for wage, given by the employer.

(c) The third group consists of persons who are self employed for a part of the year and work for wages during other times.

³Construction : Large number of people from this village work in the construction of the coastal embankment.

TABLE III
SEASONAL PATTERN OF THE DAYS WORKED IN DIFFERENT OCCUPATION IN CHAR SHAMRAJ

Months	Cultivation	Fishing	Construction	Cottage Indus.	Transport	Light Mfg.
Baishak	1872	410	1482	0	600	290
Jaistha	2496	718	588	20	414	240
Ashar	4804	669	127	20	306	150
Shravan	4786	765	30	20	274	211
Bhadra	2665	726	30	0	360	190
Aswin	526	841	30	0	305	220
Kartik	3181	240	40	30	152	150
Agrahayan	4667	239	0	83	206	294
Poush	3239	572	44	254	468	399
Magh	2811	532	382	280	431	399
Falgun	1791	707	671	127	456	333
Chaitra	1243	238	1099	70	457	365

Source : Fieldwork by Village Study Group in Char Shamraj in 1974.

Employment problem of these groups should be treated separately. We shall take up one by one.

Wage workers : They are employed on a daily basis at wages fixed for the day. Such wages do vary with seasonal peaks and slacks and with the hours worked. In the village we found a number of workers employed as 'permanent kamla' employed for the whole year or a season. But their number is small, and they are free to choose a new contract (of course, unwritten) after the year or season.

For these daily labourers, we can compute the number of days worked and the number of days unemployed from direct query. These unemployed days may be viewed as available for alternative employment. Table IV shows the number of days worked by 62 wage labourers of this village.

TABLE IV
DAYS WORKED BY WORKERS UNDER DIFFERENT ARRANGEMENTS

Days Worked	Number of self employed	Number of wage labour	Number of persons doing both self and wage work (S+W)
01-50	2	2	1
51-100	3	2	2
101-150	9	4	10
151-200	19	11	18
201-250	22	11	30
251-300	12	17	29
301-360	30	15	23

Source : Fieldwork by Village Study Group in Char Shamraj in 1974.

It is seen that only 15 persons work more than 300 days. Accepting the time criterion (of 290 days a year) as many as 44 out of 62 (70.96%) persons have some labour time unutilized. 28.27% of their total days are idle. If we take the whole labour force, they work 238 days on the average and 77.95% of their time are unutilized. In absolute terms, to employ the workers of this village fully, 3324 mandays of more work needs to be provided. This deals with wage wrorkers as a whole on the basis of time criterion.

TABLE V
INCOME RECEIVED BY TYPES OF WORKERS

Income group	Number of self employed	Number of wage labour	Number of worker doing both type
1-699	2	1	2
700-1499	2	15	13
1500-2499	18	24	26
2500-3499	22	9	40
3500-4999	11	8	12
5000-6499	12	3	12
6500-9499	17	2	7
9500-12999	6	X	1
12000+	7	X	X

Source: Fieldwork by Village Study Group in Char Shamraj in 1974.

TABLE VI
INCOME AND EMPLOYMENT POSITION OF TYPES OF WORKERS

	S	W	S+W
Average Income	5125	2469	3249
Average days worked	236	238	241

Source: Fieldwork by Village Study Group in Char Shamraj in 1974.

Now let us look at their income position. Table VI gives the comparative income position of the three types of workers. Table VIII summarises the income and working days position of these groups, and provides an easy basis of comparison. One striking feature that comes out is the fact that even though the average days worked are almost same, the average income received by the self employed is more than twice that of wage workers. Table VI shows that 18 workers who work 250-360 days, earn less than TK. 2500 per year. This shows that the problem of low income is not only one of unemployment, but also of other factors, may be wage, etc. Wage labourers however hard they work, even 360 days of the year, are not able to pass the level of yearly income of 5000 Taka. The three cases of wage labourers above this level arise due to our methodology of combining the income of earners of a household together. They are members of families which have other sources of income and other earning members. It should also be mentioned that no wage labour, working less than 150 days (except one case mentioned just now) get income above Tk. 2500 per year.

TABLE VII
RELATION BETWEEN WORKING DAYS AND INCOME FOR THE WAGE LABOURERS

Income group	Employment groups Mandays	Working Days								
		1-50	51-100	101-150	151-200	201-250	251-300	300+		
1-699	1									
700-1499			2	3	4	3	1			2
1500-2499	1				4	4	13			2
2500-3499					1	3	3			2
3500-4999					2	1				2
5000-6499				1						2
6500-9499										2
9500-11999										2
12000+										2

Source : Fieldwork by Village Study Group in Char Shamraj in 1974.

This analysis may be summarized by saying that the wage workers fall into two groups—one facing the problem of both low income and less work, other facing the problem of income alone. These problems cannot be subsumed within a single measure of unemployed.

Self Employed

The concept of disguised unemployment was developed for this group. The productivity measure gives a percentage which can be shifted from agriculture, without affecting total output. But the fact that they are self-employed, has the institutional implication, that it may not be possible to attract them to other sector.

Among the self-employed persons, a survey conducted to apply the recognition approach may identify the section which requires attention in the sense of requiring employment.

Also, we can apply the income approach to identify the problem group among the self employed. Then we have to investigate the causes underlying the poverty of the below poverty level population. This may be due to low productivity, in which case, large volume of work will produce small output.

We shall do this exercise for our village. Number of self-employed is 113. They enjoy varying levels of income and work for varying ranges of the year. The distressed group is composed of two types of people. The first type is found to work for most of the days in a year, but since they are engaged in low productivity jobs, the income generated is inadequate. They are engaged in occupations like petty trading, processing activities like paddy processing, net weaving etc. What is required for them is to increase their productivity in present activities or to provide them with alternative high productivity jobs.

The other distressed group is characterized by low incomes resulting from non-involvement in any work. They are the group of invalid, old and widows. They are unable to participate in any economic activities. Widows at best work a few days, collecting abandoned paddy or *nara* in the field. Others may be engaged in begging. Thus, their problem, though identified by the income approach to rural unemployment as one of unemployment, is not exactly so. It is a

TABLE VIII
RELATION BETWEEN WORKING DAYS AND INCOME FOR THE SELF-EMPLOYED PERSONS

Income group	Employment group Mandays									
	1-50	51-100	101-150	151-200	201-250	251-300	300+			
0	—	—	—	—	—	—	—			
1-699	—	—	—	—	—	1	1			
700-1499	1	—	—	—	1	—	—			
1500-2499	—	—	3	3	5	2	5			
2500-3499	1	1	1	6	3	2	8			
3500-4999	1	—	3	2	2	2	1			
5000-6499	—	—	1	2	4	1	4			
6500-9499	—	—	1	2	4	1	9			
9500-11999	—	2	—	2	—	2	—			
12000+	—	—	—	2	3	—	2			

Source : Fieldwork by Village Study Group, Dacca in Char Shamraj, 1974.

problem of low or zero participation rate. So this group should be helped through employment policy. Some other measure have to be found. Table VIII shows that three persons in this group receive less than 700 taka per year.

The third group works, on the average, greater number of days than the other two groups and enjoys an average income less than the self-employed group, but more than wage-labour group (Tables V & VI). This group should have been sub-divided to two groups—those whose major part of employment is supplied by other employers and those whose major work is self-supplied. This may make a lot of difference about the causes of their unemployment and/or low income. At this moment, lack of information on these aspects, does not allow us to carry on our analysis further.

IV. SUMMARY AND CONCLUSIONS

Each method of measuring unemployment has its inadequacies. We should be alert in recognizing them while using any of such measures. Each method is suitable under special circumstances and for special purposes and the measures should be properly selected to serve the purpose.

The methods of measuring unemployment are not mutually exclusive and absolute—they are rather complementary to one another—more than one can be used simultaneously to give an appropriate measure.

The measures of unemployment are not independent of the structure of the labour market. The methods should not be applied as aggregative numerical measures of unemployment which is a resultant of different type of reasons among different groups. These measures should be applied to different groups separately, so that they throw light on the causes of the problem. The structure of the labour market has great significance and the numerical measures of unemployment should not overshadow this importance.

We did not give any policy recommendations, but the discussion, in appropriate places has thrown light on the policy implication,

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Effects of Devaluation on Bangladesh Trade Balance: An Empirical Study

by

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I. INTRODUCTION

Exchange rate adjustment has traditionally been looked upon as a last resort to remedy a country's adverse balance of payments. It has been fashionable to regard a country's currency as overvalued in the foreign exchange market whenever it experiences chronic balance of payments difficulties. Devaluation is then regarded as the quickest way to improve trade balance by making exports cheaper and imports more expensive. The textbook example that a 20% devaluation of a country's currency is equivalent to a 20% duty on its imports and an equivalent rate of subsidy on its exports [8] is the main consideration that guides the policy-makers. Ignoring the conditions under which alone devaluation of a country's currency is justified (e. g., (i) export and import price elasticities should roughly add up to unity; (ii) the import and export volumes should, to start with, be of the same magnitude; (iii) export supply should be reasonably elastic) [7], the principle is almost mechanically applied to all underdeveloped countries. Whether there are better alternatives to devaluation available to remove balance of payments deficits or whether devaluation will necessarily be beneficial to the overall economy receives scant attention.

Bangladesh was suffering from acute balance of payments difficulties since 1972. This was read as an indication that her currency was seriously over-valued. The situation demanded an urgent adjustment

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of the exchange rate downward. In particular, the devaluation of the Taka was vigorously urged upon by the World Bank and the IMF which considered the overvaluation of the Taka as the main factor responsible for Bangladesh's economic ills.¹ Consequently on May 17, 1975, the Government devalued the Taka by about 37% from Taka 18.9 to Taka 30.0 to the pound. In this paper it is intended to examine the impact of this devaluation primarily on the country's trade balance.

The plan of the paper is as follows: Section I outlines the problem of balance of trade deficits experienced by Bangladesh since her inception. In Section II import trends are discussed and by using empirical evidence we examine if devaluation would be effective in reducing the volume of imports. Section III analyses the possible effects of devaluation on the country's exports. Some other effects of devaluation such as those on domestic price structure and resource allocation are presented in Section IV. This is followed by a summary and main conclusions of the study. It is worth mentioning however, that it takes time before the full effects on exchange rate adjustment work their way through the economy, for while import payments are immediately recorded at the new higher price, exports take time to flow out. In fact, the time that elapsed after the devaluation of the Taka is too short for its effects to have been fully reflected in the post-devaluation export and import figures. Our analysis may therefore be considered as only a rough indication of the direction of changes rather than the exact magnitude of the effects of the devaluation.

II. BALANCE OF TRADE

As seen in Table I, Bangladesh's performance in the foreign sector presents a distressingly gloomy picture. While exports since 1972/73 remained more or less stagnant around 3 billion taka, her imports increased from 5.41 billion taka in 1972/73 to 9.63 billion taka in 1974/75. The balance of trade deficit rose from Taka 2.6 billion in 1972/73 to Taka 6.2 billion in 1974/75. This deficit accounts for about a fifth of the country's GDP. Nearly 80% of the trade deficit of 1973/74 and the whole of the deficit of 1974/75 was met by foreign loans and grants. The nation's imports rose by about 200 per cent in course of the two years between 1972/73 and 1974/75 while its exports fared no better than the pre-1971 level.

¹See *International Currency Review*, Sept.-Oct., 1974.

TABLE I
BANGLADESH'S TRADE BALANCE
(in millions of Takas)

Period	Total Exports	Imports under		Trade Balance
		Cash and Barter	Loans and Grants	
1972/73	2856.03	3468.14	1949.11	-2561.22
1973/74	2521.45	3674.63	3712.56	-4865.74
1974/75	3423.31	3022.51	6610.46	-6209.66
1975/76	4806.30	6939.62	11785.44	-13918.66

Source : Bangladesh Bank, *Import Payments*, Annual 1975/76 ; *Idem*, *Export Receipts*, Annual 1974/75 ; *Monthly Bulletin*, September 1976.

In order to evaluate the effectiveness of devaluation in reducing the volume of imports it is necessary to understand the nature of the major items of imports and then examine the responsiveness of these imports to a rise in prices that devaluation leads to. The break-down of imports into Bangladesh according to various commodity categories in the pre and post-devaluation years is given in Table II. Only imports under cash and barter are shown in the table. Imports financed by loans and grants can be treated to be virtually independent of prices and have therefore been excluded from our analysis.

TABLE II
IMPORTS INTO BANGLADESH UNDER SITC
CATEGORIES (% of total)*

Categories	1972/73	1973/74	1974/75	1975/76
0+1. Food, Beverages and Tobacco	31.5	19.7	30.9	20.0
2. Crude materials.	6.5	8.8	5.1	9.1
3. Fuel and Lubricants	4.7	18.8	25.3	31.5
4. Animal & Veg. oils	1.3	1.8	2.6	7.6
5. Chemicals	16.1	9.0	10.5	9.4
6+8. Manufactures	22.5	27.3	16.0	12.8
7. Machinery & Tr. Eq.	13.0	10.8	9.4	7.5
9. Commodities unclassified.	3.9	3.6	0.2	0.5
	100.0	100.0	100.0	100.0

* Totals may not agree due to rounding. Imports under cash and barter only are taken into consideration.

Source : Computed from Bangladesh Bank, *Import Payments*, Annual 1975/76.

Table II shows that imports of basic necessities like food, fuel and capital equipments constitute over three-fourths of Bangladesh's total imports. The relative share of the different categories in total import changed somewhat between 1973/74 and 1974/75 when payments for the increased imports of food and the rise in fuel costs had to be met by cutting down mainly the imports of consumption manufactures and to some extent those of raw materials and capital goods. This suggests that there is a preponderance of basic necessities like food and development imports in the total imports to Bangladesh as has always been the case with most of the developing countries.

III. EFFECT OF DEVALUATION ON IMPORTS

Having outlined the structure of imports of Bangladesh it is worthwhile to present some empirical evidence on the behaviour of its imports under various categories. As mentioned earlier, imports into most of the less developed countries like Bangladesh are characterised by a heavy concentration on raw materials, semi-finished products and capital goods (and of course on food if the country has a shortage in its food supply). *A priori* considerations suggest that demand for these types of imports is not very sensitive to relative price change [5]. Empirical evidence also strongly demonstrates that import price elasticities for most under-developed countries are well below unity [3 ; 4]. In separate studies these authors have found imports into Bangladesh generally insensitive to prices and highly sensitive to income.

As for the important import categories of Bangladesh one of these studies [3] has found price elasticities well below unity for all types except manufactures as shown below :

Categories	Price Elasticities
SITC O+1. Food, Beverages and Tobacco	-0.59
„ 3. Fuels	-0.80
„ 7. Capital Goods	-0.75

All this suggest that devaluation may have very little or no effect on the volume of Bangladesh's imports. It is easy to realise that not having any significant domestic production of capital goods, the country cannot lower its imports without jeopardizing her development efforts. Raw materials imports cannot be reduced either without aggravating the problem of idle capacity in the domestic industries that are

TABLE III
IMPORTS INTO BANGLADESH (Under Cash and Barter)

SITC Categories	(in Million Takas)			
	1972/73	1973/74	1974/75	1975/76
0. Food & Live Animals	981.84	671.13	904.29	1412.63
Cereals	833.29	609.90	806.79	1288.13
1. Beverages & Tobacco	112.28	50.56	19.54	41.61
2. Crude Materials	227.26	323.72	151.93	633.35
3. Mineral Fuels & Lubricants	163.76	684.11	758.29	2187.61
4. Animal & Vegetable Fats and oils	44.64	66.99	81.90	530.02
5. Chemicals	559.80	337.66	314.57	654.39
6. Manufactures classified by materials	611.74	835.22	433.10	711.50
7. Machinery & Transport Equipment	451.68	398.63	281.58	550.20
Mach. non-electrical	196.07	177.01	157.06	225.43
" electrical	80.20	63.33	68.61	70.85
Tr. Equipment	175.33	119.11	53.83	253.92
8. Misc. Manufactures	178.24	123.09	52.63	183.45
9. Commodities & Transactions not classified	136.90	133.54	24.69	34.88
Sub-Total :	3468.14	3674.63	3022.51	6939.62
Imports under Loans, Grants and Credits :	1949.11	3712.56	6610.46	11785.44
Grand Total :	5417.25	7387.19	9632.97	18725.06

Source : Bangladesh Bank, *Import Payments*, Annual 1975/76.

dependent upon imported inputs. Likewise, the import of foodgrains is unlikely to be curtailed as long as the country continues to be dependent on foodgrain supplies from outside. In fact, import figures of the pre and post-devaluation period show a large increase

in Bangladesh's imports after devaluation. As seen in Table III, 1975/76 i. e., the year immediately after devaluation, registers a 100 per cent increase in imports over 1974/75, i. e., the year immediately preceding the devaluation. This may lead one to conclude that devaluation of Bangladesh Taka has definitely not been successful in improving the payments situation of the country.

Effects on Exports

Bangladesh's exports are characterised by a heavy concentration on a few items. As shown in Table IV, jute goods, raw jute, tea, hides and skin, fish, shrimps and prawn, and leather account for over 90% of the country's total exports. Of these, jute goods and

TABLE IV
EXPORTS OF BANGLADESH BY MAJOR ITEMS
(Figures in parentheses indicate percentage of total)

Items	(in Million Takas)			
	1973/74	1974/75	1975/76	July-Dec. 1976
Jute Goods	1268.6 (50.3)	1884.8 (55.0)	2569.0 (53.5)	1424.7
Raw Jute	837.6 (33.2)	985.4 (28.8)	1242.0 (25.8)	719.7
Tea	98.2 (3.8)	204.0 (5.9)	213.4 (4.4)	243.1
Leather	72.4 (2.9)	44.8 (1.3)	72.6 (1.5)	59.2
Fish	52.5 (2.1)	35.1 (1.0)	75.1 (1.6)	54.9
Shrimps & Prawn	39.4 (1.6)	31.6 (0.9)	100.0 (2.1)	129.3
Petroleum Products	—	—	—	112.2
All others	152.8 (6.0)	237.6 (6.9)	534.2 (11.1)	397.5
Grand Total :	2521.5 (100.0)	3422.3 (100.0)	4806.3 (100.0)	3140.3

Sources : Bangladesh Bank, *Export Receipts*, Annual 1974/75 ; Bangladesh Bank, *Bulletin*, September 1976.

raw jute alone account for three-fourths of the country's total export earnings. The stimulus provided by devaluation on exports will vary from commodity to commodity depending upon a number of factors, viz., (i) the share of the country in world export of the particular commodity, (ii) elasticity of foreign demand for the exportables, (iii) elasticity of domestic supply of exportables, and also (iv) the elasticity of export supply in rival exporting countries when such export faces competition from the latter.

In order to examine the impact of devaluation, exports of Bangladesh may be classified into two broad groups. The first includes those items in which Bangladesh is a major exporter. Included in this category are raw jute and jute goods. The second includes all other commodities in which Bangladesh is only a marginal exporter, such as tea, hides and skin, leather, fish, prawns and shrimps, newsprint and spices. In the first category, since bulk of the domestic production is meant for export, elasticity of foreign demand for these products will be the all-important factor in influencing export earnings. The consideration of the elasticity of export supply becomes important only when demand abroad is buoyant and calls for an expanded supply of exportables. Based on this criterion, some conclusions can be arrived at about the effects of devaluation on our exports. In the case of raw jute, devaluation is unlikely to increase Bangladesh's exports to any appreciable degree. All available evidence points to a very low price elasticity of demand for raw jute [3; 6; 11] and hence devaluation is likely to reduce rather than increase the export earnings from raw jute. Devaluation may however be warranted as a defensive measure against the threats provided by synthetic substitutes.

Jute goods, however, present a different picture in a number of ways. Unlike raw jute, empirical findings point towards an appreciably higher price-elasticity of demand for jute goods, and in some studies the magnitude of price elasticity was found to be considerably larger than unity [3; 6]. A cheapening of her export in terms of foreign currency by devaluation is therefore expected to lead to a large increase in export earnings. The main determinant of export earnings in this case is then the elasticity of export supply. At present

substantial excess capacity in the jute manufacturing industry is known to exist² and subject to the larger domestic availability of raw jute, supply of jute goods may be increased without much difficulty.

Devaluation is likely to influence Bangladesh's export earnings in another way. India has traditionally been a dominant supplier of jute goods in world market and Bangladesh is only a new-comer in this field. India has decidedly a cost advantage over Bangladesh in view of her earlier start even though the latter has cheaper supply of raw jute than India. Devaluation in such a situation will certainly neutralise the cost disadvantage of Bangladesh vis-a-vis India, and as long as her export prices are no higher than India's she may hope to capture as much of the world market as her production capacity permits. As a rival producer and exporter, however, it is possible that India may resort to a price-cut of her own to neutralize the post-devaluation price-advantage enjoyed by Bangladesh. Such an event is however unlikely in view of the fact that jute goods constitutes the largest single source of India's export earnings and that because of the short-run inelasticity of demand for India's jute goods a price-cut will lead to a fall in her export earnings. It is thus unlikely that Bangladesh's attempt to increase her exports will be frustrated by retaliatory action by India.

In respect of commodities under the second group in which Bangladesh is only a marginal exporter, she is not in a position to affect world prices. Export prices in terms of foreign currency are beyond her control and in such cases the main determinant of the export of a certain product is the availability of the export surplus, provided of course that the domestic prices do not exceed the world price. In view of Bangladesh's small role in the world trade foreign elasticity of demand is likely to be very high for all these goods. Even in respect of tea which is known to be a notoriously low elasticity commodity Bangladesh has little to worry about because in view of her insignificant position as a world supplier she can sell as much as she wants provided that her export price as well as the quality offered is competitive relative to India's and Sri Lanka's.

²See Bangladesh Bureau of Statistics, *Economic Indicators of Bangladesh*, Vol. IV (2), February 1977.

The main impediment to an expansion of this kind of exports is however the relative inelasticity of domestic supply. In such a situation, for devaluation to succeed in increasing export earnings it must accompany a certain amount of reduction in domestic absorption of exportables [1; 9]. Bangladesh's supplies of this types of exportables are supposedly inelastic and in the short run their exports may be increased only if domestic consumption can be restrained. The desirability of imposing such deliberate restraints may however be questioned in view of the social implications that such action may involve. In the long run, this type of availability constraint may be removed depending upon the success of the agricultural development programmes when production may respond favourably to price incentive provided by devaluation.

As for the effects that devaluation of taka might have actually had on Bangladesh's exports it is very difficult to reach many definitive conclusion. Export figures show that between 1974/75 and 1975/76 there was a 40% increase in export earnings. In terms of foreign currency, however, export earnings have in fact gone down. Information on export volume is not available, but available statistics on domestic production in both agricultural and industrial sectors suggest that there has been little or no increase in domestic production of major exportables³. Devaluation has therefore not been effective in generating the desired export surplus. The increase in export earnings in home currency immediately after the devaluation may be ascribed to a sudden rise in prices of these exportables rather than by the inducement offered by devaluation.

Effect on Trade Balance

From the preceding discussion the total effect of devaluation on the country's trade balance from the side of both exports and imports may be derived. As already shown in Table I, imports in the post-devaluation year rose by about 100% over the pre-devaluation year, while exports rose by only 40% in the same period. The value of imports having been much larger than the value of exports at the time of devaluation, the deficit in the trade balance widened

³See Bangladesh Bureau of Statistics, *ibid.*

considerably after the devaluation. Table I shows that trade deficit in 1975/76 increased by more than 125 per cent in the year immediately after the devaluation.

This worsening of the trade balance is also reflected in the movement of the terms of trade accompanying the devaluation. Table V presents the unit value indices of the country's imports and exports and the terms of trade between 1973/74 and 1975/76. It demonstrates that export price indices registered a sharp and uniform fall in respect of all major items. Import price indices on the other hand did not fall as much as the export price indices. Consequently, the terms of trade moved against the country. This is not anything

TABLE V
UNIT VALUE INDICES OF IMPORTS AND EXPORTS AND TERMS
OF TRADE (1972/73=100)

	1973/74	1974/75	1975/76
A. Unit Value Indices of Imports :			
Foodgrains	160.9	207.0	216.5
Edible oil	149.1	157.8	139.3
Petroleum Products	215.9	286.4	286.4
Crude Petroleum	358.3	504.2	370.8
Raw Cotton	76.0	189.1	139.4
Cotton Yarn	178.6	258.9	323.6
Fertilizer	161.5	319.7	210.3
Cement	204.5	340.9	213.6
Capital Goods	115.0	130.0	146.8
Others	197.5	232.3	193.2
Weighted Average	156.9	215.4	195.8
B. Unit Value Indices of Exports :			
Raw Jute	104.7	124.7	116.9
Jute Goods	101.0	128.4	95.3
Tea	128.6	200.0	171.4
Others	122.2	158.9	132.1
Weighted Average	104.6	132.9	108.7
C. Terms of Trade			
	66.7	61.7	55.5

Notes: The weights used are respective years' value in 1972/73 prices. The data has been supplied by the Planning Commission and the IBRD.

beyond expectation either.⁴ But what is important is that for trade balance to improve while the terms of trade deteriorates, the ratio of export to import volume indices must improve. But in the case of Bangladesh there is not even a scant evidence to substantiate this.

Devaluation and the Domestic Price Level

In examining the implications of devaluation for the domestic price structure in Bangladesh we are confronted with some sort of a paradox that is rather an uncommon phenomenon in the analysis of all devaluations. The success of devaluation may be evaluated by relating the changes in the domestic purchasing power of the devalued currency to the rate of the currency depreciation. The device is a very crude one and involves a comparison between the actual change in the domestic price level and the rate of change implied by the currency depreciation. An arithmetic illustration will make the point clear. Before the devaluation the taka-sterling exchange rate was 18.9 taka to the pound. Devaluation brought this rate down to 30.0 taka to the pound. The devaluation, to use the Ploak-Chang formula [10], implies a 59 per cent rise in the domestic price of traded goods. Now, according to the Ploak-Chang criterion, if after devaluation the domestic price level rises by around 59 per cent, the chances of success of the devaluation is nil. If the price level does not rise at all, the chances of success of devaluation is absolute. A rise in price level to 30 per cent will imply an approximately 50 per cent chance of success of the devaluation.

Let us now see what comes up when this criterion is applied to the case of Bangladesh. The consumer price index for the middle class in Dacca and for industrial workers in Narayangonj, Chittagong and Khulna is presented in Table VI. It shows half-yearly variations in the cost-of-living indices between some pre and post-devaluation periods. The table unambiguously demonstrates a declining trend in the consumer price indices in all periods subsequent to the devaluation.

⁴Economists do generally agree that devaluation leads to a deterioration of terms of trade. See Joan Robinson [12], Thomas Balogh [2], Sydney Alexander [1], James Made [8].

Information on wholesale price indices (obtained from the same source as in Table VI) also evidences the same trend.

To what extent the declining trend of the prices have been related to devaluation of the currency is difficult to say, however. The most likely causes have undoubtedly been (1) a greater availability of those goods which claim a disproportionately large share of the consumer total outlay (e. g., rice, wheat and other foodgrains) and (2) a reduction in the level of aggregate excess demand. The first resulted from better harvests and a greatly improved distribution and control including an effective check on smuggling activities on the border. The second was the effect of the return to monetary and financial discipline in the public sector following the imposition of Martial Law in August 1975. The effect of devaluation on these indices can therefore be said to be at best uncertain.

TABLE VI
CONSUMER PRICE INDEX (GENERAL): BASE 1969-70=100

Period	Middle Class	Industrial Worker		
	Dacca	N. Ganj	Chittagong	Khulna
1974: Jan-June	273.7	309.8	290.8	276.7
Jul-Dec	387.8	457.1	436.3	399.1
1975: Jan-June	428.1	480.9	487.9	423.3
Jul-Dec	393.9	402.9	393.3	370.7
1976: Jan-June	366.3	356.7	341.4	324.8
Jul-Dec	376.9	360.6	348.8	335.3
1977: January	373.1	350.0	333.7	331.6

Source: Bangladesh Bureau of Statistics, *Economic Indicators of Bangladesh*, IV (2), February 1977.

Effect on Resource Allocation

Before summarising the main findings of the study, a brief note on the implications of devaluation for resource allocation will not be out of context. In fact, this is the most important potential benefit that devaluation may bring to the economy. Our analysis has

crystallised the fact that Bangladesh devaluation has not succeeded in diminishing the internal demand for foreign currency of which it has almost an inelastic supply. Nor has devaluation succeeded in adding to this supply by stimulating exports. But one clear advantage that can be claimed for devaluation is its potential salutary effect on resource allocation. The cheapening of the taka in terms of foreign currency may lead to a fuller utilization of unemployed resources—especially of the imported machinery. Imported capital being more expensive, existing equipment can now be expected to be more intensively worked upon. It may also induce a reshuffling of productive factors between import replacement and export industries in a manner that will increase the size of the real national product.

IV. SUMMARY AND CONCLUSION

Bangladesh's devaluation is thus seen to have not achieved the degree of desired objective of improving the trade balance that might have been anticipated. Visibly, imports have increased because of a very inelastic demand at home. Exports did not increase either, partly because of inelastic foreign demand for our major exportables and partly because of their inelastic export supply. Terms of trade deteriorated for the country while there has been no evidence of improvement in the ratio of the volume of exports to the volume of imports.

Devaluation has however potential advantages relating to resource allocation. We however find it difficult to make a thorough enquiry in the matter in view of the very short time period that has passed after devaluation.

One thing that emerges from our study is that the objective of achieving a quick improvement in balance of payments does not seem to have much applicability in the case of the primary producing countries like Bangladesh, especially those whose (1) import demand is elastic with respect to income, and inelastic with respect to price and (2) whose export demand and supply are both inelastic with respect to price. These particular features of our export and import sectors are the resultant of structural rigidities in our economy which can be loosened only through development along the route of large scale import substitution on the basis of comparative cost advantage. This calls for

an early development of manufacturing industry in the country along desirable lines alter the fundamental determinants of supply and demand conditions at home.

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Capacity for Absorption of Foreign Capital in Bangladesh

by

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The inflow of foreign capital plays a great role in financing the investment [3, p. 38] and for that matter the economic development of Bangladesh. Even after liberation in 1971 its importance has not diminished. One of the important decisions whether Bangladesh should borrow foreign capital depends upon her ability to absorb foreign capital in productive and efficient manner. In this paper we will show that the economy of Bangladesh has got very high capacity for absorption of foreign capital due to supply of cooperant factors associated with it.

In section I, the definition of absorption capacity and the method of its measurement are discussed. Then in section II the capacity for absorption of foreign capital by the economy of Bangladesh is analyzed.

I. DEFINITION AND MEASUREMENT OF ABSORPTION CAPACITY

The term 'Absorption Capacity' (AC) appears frequently in current discussion on allocation of resources in different sectors of a developing economy and on allocation of foreign aid to different developing countries. It may refer to the total amount of capital or the amount of foreign capital or the amount of foreign aid (capital plus technical assistance) that a developing country can use

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productively. The works of Leibenstein [12, p. 178], Meier [15, p. 93], Rodenstein Rodan [18, pp. 107-09], Meier [16, pp. 90-92], Benham [5, pp. 115-17] on economic development and foreign aid are full of reference to AC. They defined AC as the limit to the amount of investment that can be made efficiently in the short-run. But their definition does not clear up the concept, because they did not say anything about 'what should be the limit', i. e., how one can determine the limit corresponding to which AC is determined.

Although the literature on AC pertains to the view that there is an absolute limit to the amount of capital that can be used efficiently, most of the economists explicitly or implicitly agree that the measurement of AC should be related to the 'productivity' of capital. As Adler [1, p. 2] says "at the first glance this (i. e., AC) is nothing other than Keynes's marginal efficiency of capital". Thus AC becomes a schedule relating an amount of capital to be invested to the expected rate of return. But the expected rate of return on capital for productive purposes will be low, as Meier [16, p. 90] pointed out, when there are inadequate public overhead facilities, administrative and organisational bottlenecks, deficient qualities of entrepreneurship, shortages of complementary natural resources, scarcities of trained manpower, low geographic and occupational mobility of labour and narrow localised markets. So Adler [1, p. 5] defined "absorptive capacity as that amount of investment or that rate of gross domestic investment expressed as proportion of GNP, that can be made at an acceptable rate of return with the supply of cooperating factors considered as given". This acceptable rate of return is called 'socially acceptable discount rate' by Mason [17].

This definition of AC does not specify the acceptable rate of return and does not distinguish between the rate of return on domestic capital and foreign capital. There may exist two rates of return—one for domestic capital and the other for foreign capital. For the domestic capital the investment will be carried up to the level at which the expected rate of return equals the cost of borrowing i.e., the domestic rate of interest. For the inflow of foreign capital it is necessary that the expected rate of return in the capital-receiving country should be higher than the expected rate of return in the capital-lending country. So the acceptable rate

of return for foreign capital may be less than the acceptable rate of return for the domestic capital. It should be noted that the possibilities for increasing the supply of the cooperant factors which will eventually increase the expected rate of return on foreign capital in the capital receiving country may be an adequate reason for accepting a lower rate of return initially.

How can one measure the expected rate of return on domestic capital and on foreign capital? Since the purpose of this note is to measure the AC of the economy for foreign capital, we will concentrate on measuring the expected rate of return on foreign capital.

Ideally AC can be read off as a schedule relating the scale of investment to the marginal rate of return [8, p. 250]. But there are some difficulties in measuring the marginal rate of return on foreign capital :

i) The marginal unit of investment of foreign capital is difficult to define without resorting to arbitrary conventions. Projects have certain minimum size beyond which these cannot be divided and this indivisibility appears at different times in various parts of the economy.

ii) Many projects financed by foreign capital may be closely inter-related through forward and backward linkages and so it is not possible to measure accurately the externalities of the projects and hence the marginal rate of return may be overestimated or underestimated.

iii) If foreign capital finances education, health, etc. one cannot have a direct and accurate estimate of the marginal rate of return on foreign capital.

Therefore, one should use an alternative method of measuring the marginal rate of return which avoids these difficulties. This alternative method suggested is called Incremental Capital Income Ratio (ICIR). ICIR as the measure of the marginal rate of return on foreign capital may be defined as :

$$\text{ICIR} = \frac{\text{Amount of foreign capital received}}{\text{Change in GNP between two successive periods}}$$

In defining ICIR in the context of foreign capital the full amount of foreign capital received in a particular time period is considered as the marginal unit of investment. If foreign capital and foreign

aid are considered in strict national accounting terms as supplementing domestic resources available for investment the limit of AC is determined by inflow of foreign capital since it represents the marginal amount of total capital [1, pp. 24-25] in the economy. Thus ICOR relates the marginal unit of investment (the full amount of foreign capital) to the change in Gross National Product (G. N. P.) between two successive periods.

ICIR thus calculated for the economy is not simply a measure of productivity of foreign capital, it also expresses the relationship between total foreign investment and total output, taking into account of changes in the supply of other factors of production—labour skills, technology, management, etc. associated with foreign capital. Thus ICIR may be low for the projects with long gestation period and long serviceable life but this does not necessarily imply that foreign capital is less productive. A bias in either direction in ICIR may exist depending on the short or long gestation period and serviceable life of the projects but this implicit bias will tend to cancel out at the aggregative level of analysis because the economy usually has various projects with short as well as long gestation periods and short as well as long productive lives.

II. CAPACITY FOR ABSORPTION OF FOREIGN CAPITAL BY THE ECONOMY OF BANGLADESH

ICIR may be used to measure the rate of return on foreign capital, and also the AC of the economy for foreign capital. Assuming one year lag between the amount of foreign capital inflow and income, the Incremental Capital Income Ratios (ICIR) are estimated for two periods, 1960/61 to 1968/69 and 1973/74 to 1975/76. ICIR for the period 1969/70 to 1972/73 are not available due to lack of data regarding the amount of foreign capital disbursed and income. ICIR are shown in Table I. As expected, ICIR reflect a high degree of instability when annual data are used. Fluctuations in ICIR are reduced when one uses three yearly moving averages [Table II] and their movement appears more reasonable if five yearly moving averages [Table III] are used.

TABLE I

BANGLADESH : INCREMENTAL CAPITAL INCOME RATIO
AND AVERAGE CAPITAL INCOME RATIO
(Yearly)

Period	ICIR	ACIR
1960/61	0.055	0.066
1961/62	0.439	0.069
1962/63	3.547	0.090
1963/64	1.937	0.083
1964/65	0.516	0.102
1965/66	0.632	0.114
1966/67	0.481	0.086
1967/68	0.260	0.096
1968/69	0.927	0.108
1973/74	1.636	
1974/75	2.427	
1975/76	3.727	

- Sources : 1) Net Capital-inflow (1959/60 — 1968/69) obtained from Alamgir and Berlage, [3, Appendix. p. A-11, Table-4]
- 2) Capital Inflow (1971/72 — 1973/74) obtained from *Statistical Year Book of Bangladesh* 1975 [10, p. 291] assuming US \$ 1 = Tk. 13.00 in 1972/73.
- 3) G. N. P. (1959/60 — 1968/69) at constant market prices of 1959/60 obtained from Alamgir and Berlage [3, Appendix p. A-7, Table-2].
- 4) G. N. P. (1972/73 — 1975/76) at constant market price of 1972/73 obtained from *Statistical Year Book of Bangladesh* 1975 [10, p. 292, Table 14.2].
- 5) Gross Fixed Investment figures (1959/60 — 1968/69) at constant market price of 1959/60 obtained from Alamgir and Berlage [3, p. 27, Table-3].

TABLE II
 BANGLADESH : INCREMENTAL CAPITAL INCOME RATIO
 (Three Yearly Moving Averages)

Period	ICIR
1960/61 — 1962/63	1.347
1961/62 — 1963/64	1.974
1962/63 — 1964/65	2.000
1963/64 — 1965/66	1.028
1964/65 — 1966/67	0.543
1965/66 — 1967/68	0.458
1966/67 — 1968/69	0.556
1973/74 — 1975/76	2.597

TABLE III
 BANGLADESH : INCREMENTAL CAPITAL INCOME RATIO
 (Five Yearly Moving Averages)

Period	ICIR
1960/61 — 1964/65	1.299
1961/62 — 1965/66	1.414
1962/63 — 1966/67	1.423
1963/64 — 1967/68	0.765
1964/65 — 1968/69	0.563

The five yearly moving average indicate that ICIR for foreign capital is 1,299 for Second Five Year Plan (1960/61-1964/65) and 0.563 for Third Five Year Plan (1964/65-1968/69) whereas the Incremental Fixed Investment Income Ratio during the same plan periods is 1.93 and 2.45 [3, p. 29].

This comparison shows that ICIR for foreign capital is much lower than incremental fixed investment income ratio i. e., the foreign capital is more productive in Bangladesh than the domestic capital and hence AC of the economy for foreign capital is higher.

The high productivity of foreign capital may be due to the cooperant factors such as skilled manpower from abroad, foreign technology and management, imports of industrial raw materials, etc.

associated with foreign capital. This high productivity may also be due to the fact that Bangladesh supplements her domestic capital formation through foreign capital and foreign assistance [1, p. 24].

In the agricultural sector usually the labour-intensive technique of production is used ; foreign assistance is used to finance agricultural inputs such as low-lift-pumps, tube wells, fertilizer, pesticides, etc. Thus foreign assistance in agricultural sector increases the agricultural productivity which may contribute to the lower value for ICIR. Moreover, in the industrial sector growth was very rapid in the consumption goods industries, which have short gestation period. Although investment and related goods industries have used capital-intensive technology, the average capital output ratio for these industries is not very high as expected. Akhlakur Rahman [4] found that average capital output ratio for Metal Based Industries in East Pakistan was 0.85 and the average productivity of capital was 1.18 [4, p. 10]. So due to low capital-intensity of industrial sector and short-gestation period of consumer goods industries, ICIR for foreign capital is found to be below.

Let us now look into the trend of ICIR over time. From 1960/61, ICIR has been increasing gradually, the peak being reached with the start of the Third Five Year Plan period. After that there is a decline in ICIR. This may be explained by the fact that after initial period of large investment in infrastructure was over, investment in other sectors become relatively more profitable implying that a unit increase in G. N. P. could now be obtained through significantly less investment than before. However, since the figures of foreign capital disbursed and GNP for years 1969/70, 1970/71, are not available, it is not possible to say whether this trend in ICIR was maintained or not upto the occupation period of Pakistan Army in Bangladesh.

In Table I, Average Capital Income Ratios (ACIR) are shown. These are estimates using gross fixed investment at constant prices of 1959/60 assuming one year lag. These ACIR show expected pattern i. e., ACIR are less than ICIR.

After liberation ICIR has been showing increasing trend and on average, ICIR for foreign capital is 2,597 which is higher than that

of the Second Five Year Plan and much more than that of the Third Five Year Plan. This high value for ICIR may be due to damage of the infrastructure during the liberation struggle, low level of production in the industrial sector, low level of production in the agricultural sector caused by floods, draughts and other natural calamities. Due to low level of agricultural production, in 1972/73, 1973/74, 1974/75 about 29%, 40%, and 34% respectively [10, pp. 289-91] of the total foreign capital received in Bangladesh was food aid which is unlikely to increase the productive capacity of the economy.

If the food aid is deducted from the total foreign capital disbursed, the resulting ICIR (Table IV) are found to be lower than the ICIR for the corresponding years when food aid is included. On average such ICIR (excluding food aid) is 1.174.

TABLE IV

BANGLADESH : INCREMENTAL CAPITAL INCOME RATIO
(Excluding food aid from total foreign capital)

Period	ICIR
1973-74	0.707
1974-75	1.022
1975-76	1.792

It is seen that ICIR after liberation period is greater than that of the previous periods. Is the difference between the two ICIR statistically significant? Using Chow-test it is found that ICIR for the period 1973/74-1975/76 is not significantly different from ICIR for the period 1960/61-1968/69. Hence the productivity of foreign capital is more or less the same for the two periods.

CONCLUSION

Although ICIR has upward trend from 1972/73 onward, it is expected that ICIR will come down shortly. But this increasing trend of ICIR leaves some warning for the policy makers. There is divergence between the market price and shadow price of capital. The market rate of interest does not reflect the scarcity value of

foreign capital. Consequently the economy may embark on capital-intensive technique of production in certain sectors. Moreover, since capital is subsidised in the industrial sector, the investment and other related goods industries are discouraged in comparison with the production of consumer goods due to distortions created by such subsidisation of capital [6, p. 303]. As a result, industrialization of the country for self-sustained growth may not be successful in the future.

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Some Aspects of the Tax Structure in Bangladesh

by

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I. INTRODUCTION

The design and implementation of an equitable and revenue maximising system of taxation remains a serious problem in many less-developed countries of the world. The problem seems to be more acute in Bangladesh compared with a number of other less-developed countries. While the need for accelerating development has resulted in ever increasing government expenditure, the command over resources through the taxation machinery has hardly been sufficient to meet this requirement. Massive inflow of foreign loans, supplemented by frequent resort to the printing press, have become the more important sources of financing governments development expenditure. Insufficiency of funds apart, there is much to be desired of our tax structure in terms of equity and flexibility. In Bangladesh where the extent of income inequality is quite serious, excessive dependence on indirect taxes gives a feeling that the tax structure is inequitable. Reduction of this dependence on indirect taxes and greater reliance on taxes of personal income and wealth with a progressive rate structure would cause marked improvement in the existing tax structure in terms of revenue yield as well as equity.

The present paper seeks to throw some light on the nature and magnitude of the problem of taxation in Bangladesh. In Section II

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a brief comparison of some features of our tax-structure with a selected number of 'developed' and less-developed countries will be undertaken. Section III will present some data on composition of tax revenue in Bangladesh. In the last section a number of suggestion pertaining to fiscal policy in Bangladesh will be made.

II. SOME ASPECTS OF TAX STRUCTURE OF A NUMBER OF COUNTRIES¹

Table I presents two aspects of the tax-structure of a few selected countries including Bangladesh. These features are (i) direct taxes (Td) as a proportion of total tax revenue (T), (ii) total tax revenue as a proportion of gross domestic product (GDP). These two features are important indicators of the soundness of a tax system.

TABLE I
SOME FEATURES OF THE TAX-STRUCTURE OF A
NUMBER OF SELECTED COUNTRIES

Country	Years	Yearly Average Td/T	Yearly Average T/GDP
Bangladesh	1973-76	0.1256	0.0485
	(1975-77)	0.1391	0.0534
Brazil	1968-72	0.2567	0.1078
Burma	1967-71	0.4950	0.1311
India	1969-73	0.2208	0.0585
Indonesia	1970-74	0.4585	0.0851
Kenya	1968-73	0.4280	0.1365
Pakistan	1972-75	0.1628	0.0980
Canada	1969-73	0.6652	0.1508
Sweden	1970-75	0.4450	0.2185
U.S.A.	1970-75	0.6394	0.1839

¹Bangladesh data on revenue budget is obtained from (i) *Demand for Grants and Appropriations*, Ministry of Finance, Bangladesh Government, various years, (ii) *Detailed Estimates of Revenue and Receipts*, Ministry of Finance, Bangladesh Government, various years. Data on GDP is obtained from *Statistical Year Book 1975*, Bangladesh Bureau of Statistics. Data for other countries is collected from *Statistical Year Book 1974*, United Nations.

A high ratio of direct taxes to total tax revenue is considered to be a desirable property of the tax system because, (a) direct taxes tend to be more progressive compared with indirect taxes and hence are likely to be more equitable than indirect taxes, particularly in countries with glaring income inequality, and (b) direct taxes tend to have greater flexibility than indirect taxes in terms of revenue yield. The ratio of tax revenue to GDP is an indicator of the government's performance in generating resources at its disposal through the taxation machinery. The higher this ratio, the higher the effectiveness of the tax-system in terms of revenue yield.

The most striking thing, as can be seen from Table I, is the fact that in terms of both the indicators Bangladesh is at the most disadvantageous position. The ratio of direct taxes to total tax revenue is about 13 per cent only in Bangladesh as compared with 67 per cent in Canada, 50 per cent in Burma and 46 per cent in Indonesia. The closest to Bangladesh situation is in Pakistan where the ratio is 0.16. In terms of revenue yield, Sweden is at the top of the table with an yield of about 22 per cent of GDP. Amongst the less-developed countries Kenya shows the highest ratio of about 0.14, compared with Bangladesh's 5 per cent which is an important achievement.

III. CHARACTERISTICS OF THE BANGLADESH TAXATION PROBLEM

Direct tax in Bangladesh is comprised of three types ; (i) personal income and corporation income tax², (ii) agricultural income tax and (iii) land revenue. In Table II we have brought out the composition of total direct-tax revenue in terms of its three components. Income and Corporation income tax on an average account for 85.78 per cent of the total direct-tax revenue in Bangladesh. Land revenue

²Though reported together corporation income tax is an insignificant component of the total.

TABLE II
COMPOSITION OF DIRECT-TAX REVENUE IN BANGLADESH*
(Figures in Million Taka/current price)

Components	1972/73	1973/74	1974/75	1975/76	Average %
1. Income and Corporation tax	138.93 (83.56)	330.84 (85.44)	675.76 (88.46)	700.00 (86.67)	— (85.78)
2. Agricultural Income tax	1.93 (1.16)	1.33 (0.34)	0.97 (0.13)	1.50 (0.18)	(0.45)
3. Land Revenue	25.40 (15.28)	55.04 (14.22)	87.19 (11.41)	115.60 (14.15)	(13.77)

* Bracketed terms represent percentage contribution.

accounts for an average of 13.77 per cent of total direct-tax revenue. Agricultural income tax is clearly negligible (only 0.45 per cent).

Table III presents composition of indirect taxes classified as (i) Custom's duty, (ii) Excise tax, (iii) Sales tax and (iv) Others. Customs duty occupies the most important position amongst indirect taxes in respect of revenue yield. On an average it accounts for 42.9 per cent of the total revenue from indirect taxes. Excise tax comes next,

TABLE III
COMPOSITION OF INDIRECT-TAX REVENUE IN BANGLADESH*
(Figures in Million Taka/current price)

Components	1972/73	1973/74	1974/75	1975/76	Average %
1. Customs	697.45 (44.46)	1186.97 (46.12)	1516.83 (34.62)	2602.50 (46.38)	— (42.9)
2. Excise	549.60 (35.03)	817.16 (31.76)	1503.53 (34.32)	1780.00 (31.72)	— (33.21)
3. Sales	213.86 (13.63)	434.00 (16.86)	618.79 (14.12)	1105.00 (19.69)	— (16.08)
4. Others	107.87 (6.88)	135.22 (5.26)	742.33 (16.94)	124.00 (2.21)	— (7.82)

* Bracketed terms represent percentage contribution.

accounting for an average of 33.21 per cent of total indirect-tax revenue. The average yield from sales tax is 16.08 per cent of the total.

The preponderance of indirect taxes can be brought out more clearly by considering a number of select taxes (both direct and indirect) in terms of their percentage contribution to total tax revenue. This is done in Table IV. Customs duty is the most important source of tax revenue in Bangladesh with an average contribution of 37.56 per cent of the total tax revenue. Excise tax stands second in respect of revenue yield accounting, on an average, for 29.05 per cent of the total tax revenue of the country. The average revenue yield of sales tax is 14.05 per cent, while income tax accounts for

TABLE IV
SELECT TAXES AS A PERCENTAGE OF TOTAL TAX REVENUE

Components	1972/73	1973/74	1974/75	1975/76	Average
1. Customs	40.20	40.09	29.48	40.48	37.56
2. Excise	31.68	27.60	29.22	27.69	29.05
3. Sales	12.32	14.66	12.03	17.19	14.05
4. Income	8.01	11.17	14.85	12.71	11.68
5. Land Revenue	1.46	1.86	1.69	1.79	1.70

only 11.68 per cent of the total. Contribution of land revenue to the total is only 1.7 per cent.

The results presented above are rather disturbing. In Bangladesh while the average contribution of agriculture to GDP is 62.62 per cent, its direct contribution to total tax revenue is about 2 per cent only. The reason for this state of affair is admirably summed up by Nicholas Kaldor³. "The general tendency in most under developed countries is to throw a disproportionate share of the burden of taxation on the market sector, and an insufficient amount on subsistence agriculture. The reasons for this are partly administrative and partly political: taxes levied on the agricultural community are far more

³"Taxation for Economic Development" in *Economic Development in Africa*, edited by E. F. Jackson, Basil Blackwed, Oxford, 1962, p. 159.

difficult to assess and collect, and are socially and politically unpopular because they appear unjust; the people in the subsistence sector are, individually, so much poorer than the people in the market sector. Yet it is the taxation of the agricultural sector that has a vital role to play in accelerating economic development".

Additional insights on the problem of taxation in Bangladesh can be obtained if we give some attention to the expenditure side of the government's budget. In Table V government expenditure on the revenue account is placed against revenue earnings. The table shows that there is a surplus in the revenue budget for all the

TABLE V
BANGLADESH GOVERNMENT REVENUE BUDGET (SUMMARY)
(in Million Taka/current price)

Account	1972/73	1973/74	1974/75	1975/76 (R*)
Income	2235.29	3920.28	6840.66	8626.49
Expenditure	2067.89	3462.05	5655.10	6835.99
Surplus	167.40	458.23	1185.56	1790.50

*R = Revised estimate.

years. This is also reflected by the income elasticity of government revenue (1.12) which is greater than the income elasticity of government expenditure on the current account (1.01). A surplus on the revenue account, though very much desirable, is not, however, a

TABLE VI
DEFICIT FINANCE IN BANGLADESH
(Million Taka)

Item	1972-73	1973-74	1974-75	1975-76
Net Borrowings	3327.8	3372.5	4276.7	4915.9
Deficit Finance		44.7	904.2	639.2

conclusive evidence that government's fiscal problem is solved. What is more important is whether this surplus mitigates the need for deficit financing. Given our dependence on foreign loans and

aids for financing economic development, it is at least essential that enough surplus be generated in the government's revenue account so that resort to money printing (govt. borrowing from Bangladesh Bank) is not necessary. Unfortunately, as Table VI shows, extent of deficit financing, defined as net government borrowing from Bangladesh Bank, is not negligible⁴.

IV. OBSERVATIONS PERTAINING TO FISCAL POLICY

The main defects of the taxation structure in Bangladesh, as discussed above, are the following :

- (1) Insufficient revenue yield.
- (2) Excessive dependence on indirect taxes.
- (3) Negligible direct contribution of the agricultural sector to tax revenue.
- (4) Poor performance of income tax.

Solution of these problems, admittedly, is not an easy task. The direction in which fiscal policy has to be geared up, though, is clear. Note also that, the features being interrelated, the basic task is to increase the dependence on direct taxes with progressive rate structure.

Direct taxation of agricultural sector normally takes two forms : land tax and tax on agricultural income. Land tax has a number of important advantages over agricultural income tax. First, being assessed on land it has no disincentive effect in terms of production. Second, it is less easy to evade since land holding is a directly observable phenomenon. Third, it discourages speculative investment in agricultural land. And lastly, it would discourage concentration of land ownership particularly if the rate structure is highly progressive. The problems with land revenue are (a) it may be regressive

⁴Figures reported in this table are taken from the author's, "A Note on the Proximate Determinants of Money Supply in Bangladesh", Bangladesh Development Studies, Number 1, January 1977. Note also that the amount of deficit financing would be considerably higher if we include government loans from nationalised banks.

and (b) since it is not related to actual output it would turn out to be harsh in periods of crop failure or bad harvests. Of course, these disadvantages can be overcome by (i) making land tax progressive, providing exemption to poor farmers and (ii) introducing a system of deferred payments or tax relief in periods of agricultural crisis.

A number of suggestions for increasing the land revenue was made by I. M. D. Little⁵ in the context of India's Third Five Year Plan. Those include :

- (i) Introduction of a system of surcharges based on the existing amount of land revenue collected.
- (ii) From the long term point of view, land revenue should be made progressive according to the value of family holdings.
- (iii) All holdings over which the 'family' (carefully defined) has hereditary right be included in family holdings. Appropriate legislative measures be undertaken so that persons involved in bogus transactions run the risk of losing ownership rights.
- (iv) The poorest farmers be exempt from the tax.
- (v) The marginal tax rate be devised in such a way that large holdings of land is discouraged but it is nevertheless possible to make some profit even on the marginal holding.

There is a strong case for introducing an 'urban tax'. Such a tax would be levied on properties which appreciate in value owing to the process of urbanisation. The tax has the following merits (i) it would bring into the jurisdiction of taxation system small and medium traders and discriminating monopolistic professionals like doctors and lawyers, who have accumulated properties but more often than not, are free from payment of income taxes due to tax evasion practices aided by administrative and legislative loopholes in the taxation system and (ii) it would discourage speculative investments in real estates which is a wide spread practice in many less developed countries including Bangladesh. The rate structure should be progressive and exemptions should be minimal.

⁵"Tax Policy and the Third Plan", in *Pricing and Fiscal Policies* edited by P. N. Rodenstein-Rodan, George Allen and Unwin Ltd.

Contribution of income tax, depends in a large way upon reduction of malpractices and other administrative flaws associated with the taxation machinery. Corruption is a deep-rooted long term problem and is a function of not only the social structure, of the law enforcing authorities, but also of the incentive structure. Suggested remedies include (i) simplification of tax laws, (ii) ensuring a minimum standard of living to those responsible for tax assessment and collection, (iii) severe penal measures for both parties involved in any illegal deals, (iv) strict policing over the activities of tax assessors and collectors, (v) a system of rechecking of tax assessment by another officer different from the initial assessor and (vi) close observation over asset accumulation (financial or real) of the tax officials.

The great merit of indirect taxes is that they are easy to collect and almost impossible to evade on the whole. The defect is that they are generally regressive. This need not necessarily be so. Progressive rate structure is also possible for indirect taxes. Progressivity in indirect taxes can be introduced through classification of items as 'luxuries' and 'necessities' depending upon the income elasticity of consumption of the items. Since luxuries count mostly in the consumption bundle of the rich there is almost an universally accepted case for severely taxing luxury items. On the other hand there is an equally strong case for eliminating taxes on necessities such as kerosene, coarse clothings, washing soaps etc., which matter more significantly in the consumption bundle of the poor.

Inflation tax (deficit financing) is easy to collect, but apart from the defects that it 'has welfare costs' and it is regressive, it is also dangerous. The relative painlessness with which the government can command resources at its disposal may make her prone to fall back upon this convenient device at every opportune instance. Miseries of hyper-inflation in numerous countries of the world in the past should be a sufficient deterrent in this regard.

Let us now recapitulate the discussion made in this concluding section. We have suggested the following measures for solving the problem of taxation in Bangladesh.

- (1) Generating more revenue from land tax.
- (2) Introducing an 'urban-tax' with progressive rate structure.
- (3) Improving the income tax administering machinery.
- (4) Making indirect taxes progressive with exemption of necessity items of consumption from taxation.
- (5) Minimum reliance (if possible no reliance at all) on government borrowing from the Bangladesh Bank.

Economic Cooperation Among Third World Countries

by

M. S. MANDAL*

INTRODUCTION

Many developing countries have been experiencing unprecedented economic problems since 1974. The most important of these problems has been the balance of payment deficit. The year 1973 had been a good one for the non-oil developing countries when their current deficit declined to around \$ 9 billion. The situation changed dramatically in 1975 when the current account deficit of the non-oil developing countries amounted to the vicinity of \$ 39 billion. Approximately one-third of this increase (\$ 29.8 billion) has been attributed directly to the increased cost of oil imports and roughly one-half of it to worldwide recession and inflation owing largely to the effect of high energy prices (E. R. Fried and C. L. Schultze, *Higher Oil Prices and the World Economy*, Brooking Institution, 1975). The \$ 39 billion current account deficit, however, understates the deterioration in the trade accounts of developing countries. This is because these countries had to allow nearly 15 to 30 per cent reduction in development imports leading to a 1.7 per cent decrease in the average growth rate. An additional \$ 6-16 billion imports would have been necessary in 1975 in order to attain the level of imports required to maintain the growth rate of the early 1970's. The trade deficit of oil-importing countries amounted to about 3 per cent of their GNP in 1974 compared with 1.5 per cent in the late 1960's.

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While industrial countries are sympathetic to the needs of the less developed countries, they are also concerned with recessionary difficulties of their slack economics and dangers of renewed inflation. Traditional donors feel that oil exporters were not sufficiently offsetting the increased burden on developing countries; and that many developing nations, while demanding transfer of resources from traditional donors are vocal in their support to oil consortium policies.

Recently, there has been some resistance to the expansion of aid from traditional sources on the ground that Governments of aid receiving countries are not doing enough to promote their own internal development, particularly for their poorer citizens. The persistent issues are: increasing food production, reducing population growth, increasing savings, promoting economic efficiency and removing barriers to advancement of the poorer classes in the society. Future aid thus incorporate more conditions for self-help such as land reform and equitable distribution of income so that aid can benefit primarily poor people, not just poor nations.

It would appear from the foregoing discussion that the flow of resources from developed countries is likely to be more conditional and that cooperation and self-help must constitute the main force behind the tremendous push required to keep stagnating economies of the Third World moving towards progress.

Areas of Economic Cooperation

Now the question is: In what ways and to what extent can the Third World Countries engage in economic cooperation for balanced development of their economies. The question is closely related to (i) terms-of-trade and earning stabilization, (ii) trade creation between developed and developing countries, (iii) trade creation among developing countries of the Third World and (iv) flow of resources among developing countries.

I. COOPERATIVE ACTION FOR TERMS-OF-TRADE AND EXCHANGE-EARNING STABILIZATION

As regards the terms-of-trade and export-earning stabilization, the issue is closely related to concentration of exports and fluctuation

in export prices. Third World countries export mainly primary commodities. On the other hand, most manufactured goods, especially capital goods, have to be imported. This legacy of the colonial era has given rise to excessive concentration of exports of the Third World countries in a small number of primary products. Primary commodities account for nearly 70% of the value of total exports of developing countries compared with the corresponding figure of 25% for developed countries. Half of the developing countries earn more than 50% of their total earnings from a single commodity and three-quarters of them earn more than 60% from one to three primary products. Given such concentration of exports and dependence upon primary products as principal sources of exchange earning, the terms-of-trade and exchange earning instability have imposed serious limitations upon economic progress in Third World countries.

The problem of instability has already grown serious enough to draw attention of several national and international agencies. The Third World countries would do well to ensure that raw materials are given the same importance as energy has managed to command. It would be impossible to attain this objective without active cooperation among the Third World countries.

II. COOPERATIVE ACTION FOR TRADE CREATION BETWEEN DEVELOPED AND DEVELOPING COUNTRIES

Turning now to the problem of trade creation, one can hardly lose sight of a declining share of the developing countries in the volume of world trade. The share of these countries in the volume of world trade declined over the decades between 1950 and 1970. The developing countries accounted for about 32% of the world exports in 1950 but only 17% in 1969. (IBRD-IDA-IFC, *Trends in Developing countries*, Washington D. C. 1970). True, export earnings of the developing countries increased by almost 100% during the period, but those of the industrial countries expanded to the extent of 420% (*ibid*).

A wide variety of factors account for the declining share of the developing countries in the volume of world trade. These factors operate on the supply side as well as on the demand side. On the

supply side, most developing countries have a rather rigid and inelastic production structure. As a result, the traditional instruments of monetary-fiscal policy fail to bring about any significant supply response to market incentives. On the other hand, the supply of most commodities can be readily increased in the industrial countries. For some commodities the supply response reflects basic resource endowment—climate, land, water, forests and minerals. More generally, however, the state of economic and technological development has been the dominant force working for favourable supply elasticities in the industrial countries, where high rates of investment in farms and mines have resulted in a remarkable rise in productivity. As regards exports of manufacture, the developing countries face immense difficulties resulting from lack of knowledge of foreign markets, lack of contact with foreign businessmen and lack of familiarity with quick-changing tastes of foreign consumers. Inability to finance places exporters of developing countries at serious disadvantage in competition with exporters of developed countries. Banking institutions in European and North American countries provide medium and long term credit to exporters for periods extending from 3 to 5 years and covering 70 to 85 per cent of the value of exports. Governments also provide guarantees to exporters against certain types of losses (Inter-American Development Bank, *“Financing of Exports in Latin America”* U. N. document DED/62/70, Rev. 17 July 1962).

Economic and commercial policies also played a role in holding down the commodity trade of the primary exporting regions. Notwithstanding their high productivity, many of the primary producing activities in the industrial countries have been sustained behind protective walls and by price support policies designed to keep incomes in the agricultural and mining sectors more or less in lines with those in other sectors. The resulting accumulation of surplus products was instrumental in expanding the primary exports of the industrial countries.

On the demand side of the picture, three factors—income, taste and technology—have tended to keep down the income elasticity of demand for primary commodities. The per capita consumption of food in some high income countries has been reacting negatively to increases in income. The per capita consumption of cereals has already gone

down in several industrial countries. Technological progress continued to increase the efficiency of material use hence decrease the input-output ratio for a number of commodities like wood, metals and fuels. The chemical industry, which has been the most dominant since the post-war period, continued to produce synthetic raw materials that tended to replace many traditional commodities (shellac, leather, tinsed oil, wood, metal, fibre, etc.).

As regards the demand for manufactures, the major obstacles that the exports of the developing countries have to face in the markets of the developed countries are tariffs (including overvaluation of imports for tariff purposes), quota restrictions, internal duties, etc. The most striking disincentives to exports of manufactures from developing to developed countries is to be found in the tariff structure of the latter countries. All industrial countries maintain a clear progression in their tariff rates according to the degree of processing. The tariff policy is thus detrimental to industrialization of the developing countries.

It would appear from the foregoing discussion that trade creation between developed and developing countries calls for national and interantional measures. Such measures need to be broad enough to cover the supply side as well as the demand side of the problem. They are indistinguishable from those necessary to bring about changes in the production and trade structures of developing countries, adjustment of supply to the demand, creation of national and multi-national institutions dealing with market research and information and export credit and credit insurance. It is also necessary for the Third World countries to enter into effective negotiation with the developed ones on issues relating to reduction of tariffs and removal of restrictions on processed and semiprocessed exports from the former to the latter.

III. COOPERATIVE ACTION FOR TRADE CREATION AMONG DEVELOPING COUNTRIES

The foreign trade of developing countries in primary commodities exhibits one paradoxical feature. On the one hand, their imports of many important primary commodities (cereals, sugar, cotton, rubber, aluminium, lead, zinc, etc.) have increased more rapidly than those

of the rest of the world. On the other, their imports of primary commodities from one another have increased much less rapidly than any other major trade flows. (See United Nations, *Commodity Survey*, and *World Economic Survey*). The significance of this fact is heightened by the fact that the developing countries are important suppliers of these important commodities and they depend heavily upon them for vital foreign exchange earnings.

The important question that naturally arises is: Why have not developing countries drawn more of their primary commodity requirements from among themselves? The answer to this question calls examination of forces that vary from country to country and from commodity to commodity. All that can be done here is to make a brief survey of the major factors that work through economic and commercial policies of the developing countries.

The rapid rise in the demand for primary imports has been more or less an outcome of the development process in the Third World countries. The development process has been associated with population explosion and diversification of the production structure. While population explosion increased the demand for food, the rise in per capita income diversified the structure of demand. The programme for diversification of the production structure involving expansion and extension of manufacturing processes and application of industrial techniques to the agricultural sector considerably raised the intake of fuels and raw materials. And, with electrification of towns and villages and factories, the demand for energy increased more rapidly than the demand for raw materials. The precarious balance of payments position of most Third World countries induced them to resort to tariff, quantitative restriction and autarkic economic policy towards agriculture as well as industry. Intensive efforts have been made to maximize domestic production of fuel, food and raw materials and to conserve scarce foreign exchange for development purposes. As domestic supply failed to keep pace with the rise in demand, developing countries fell back on external supplies on the most favourable possible terms. While these countries sought to maximize their convertible currency earnings from trade with developed countries, they sought to conserve their precious foreign exchange through trade

with centrally-planned economies on barter terms and through trade with the developed countries. Thus there was an induced diversion of trade from the developing countries to the developed and centrally-planned economies.

The process of industrialization in the developing countries caused a similar diversion of trade. Industrial development has generally been related closely to the indigeneous resources base. However, choices in many cases have been difficult and sometimes projects have been selected without due consideration of overall import-content of investment. Thus, especially in the early stages of industrialization, establishment of almost every new factory automatically generated demand for imported raw materials. The intake of new industries in many instances has been available in the most convenient form—standardized in some way—in industrial countries rather than in developing ones. There is sometimes even a cost advantage in drawing materials from industrial countries.

The commercial policies of developing countries have also been responsible for reduced volume of trade among these countries. The average tariff level of these countries far exceed those of developed ones. They also enforce quota, licensing, embargo, etc., much more than the developed countries.

It follows from the foregoing discussion that trade creation among developing countries will call for economic cooperation in a number of areas ranging from development planning to commercial policies. They should slow down development activities that is not consistent with their resource endowments. Moreover, they must be prepared to implement gradual dismantling of tariffs and removal of non-tariff barriers for easy flow of trade among them. Formation of regional trade groupings has been suggested as a means of enlarging the markets for the industrial goods produced by the developing countries. While such groupings would encourage flow of goods among developing countries, they would not directly and immediately affect the demand for manufacture emanating from developed countries. However, lowering of costs and diversification of production made possible through access to larger regional markets may in the long run create

situations that will give rise to expanded trade among developing countries as well as between them and developed countries.

IV. FLOW OF RESOURCES AMONG DEVELOPING COUNTRIES

Prior to 1973, the developing world was receiving a net transfer of resources of about \$10-12 billion per year. The financing of these flows took place through (i) concessional aid flows (40%), non-concessional borrowing (35%) and (iii) foreign investment and other sources (25%). The World Bank estimated that some \$ 12 billion would be required annually to provide incremental finance for the reduced target of 2.7 per cent per capita income growth in the Third World countries.

As a group, the OPEC countries transferred resources equal to about 3 per cent of their GNP to the non-oil developing nations in 1974. The amounts contributed to 13% of the total flows to these countries. Capital flows from OPEC countries totalled about \$ 30 billion in 1974 of which only \$ 4.7 billion went to developing countries. The remainder went mainly to investment in liquid and non-liquid assets in industrial countries and to international institutions. OPEC countries committed \$ 8.6 billion (excluding IMF oil facility) for bilateral and multilateral assistance in 1974. A large part of the OPEC bilateral assistance was received by Muslim countries and less than 10% by non-Muslim ones.

CONCLUDING REMARKS

Although the developing nations as a whole grew at an average rate of 5.6% per annum over the period 1971-74 the growth was unevenly distributed. The per capita GDP of countries with per capita income below \$ 200 (accounting for two-thirds of the total developing country population) declined at an average rate of 0.8% over the period. On the other hand, the per capita GDP growth rate of non-oil exporting countries with higher per capita incomes increased at an average rate of 4.3 per cent per annum. A third group of

of developing countries, namely the oil-exporting countries, experienced a high (6.9 per cent) rate of growth over the period 1971-74. The great disparity in per capita income and development performance of the different groups of the Third World countries need to be reduced through national efforts and international cooperation. Regional groupings and multinational cooperation of developing countries can remove some of the barriers to industrial progress in the Third World. The Third World is presently a political concept and the combined power of this Third World should be judiciously used to bear upon the economic objectives of the countries concerned.

An Overview of the Performance of Nationalised Industries 1972/73 — 1974/75

by

MUZAFFER AHMAD*

In this paper we will limit ourselves to the performance of the nationalised industries in order to place its performance in some perspective and for our discussion of the problems faced by the nationalised sector. The review looks at value added, capacity utilization, sales and profitability of the nationalised industries in the post nationalisation period and attempts a comparison of production trends in this period to the pre-liberation position.

Value Added

It has been found that in 1973/74 all sectors except tanneries and oil and gas recorded significant increase in value added. The downturn in tanneries owed to serious organizational and operating problems. The trend decidedly reflect the improved organization in most cases following the problems of transition during 1972/73. Performance trends were, however, constrained by shortage of external resources in the first half of 1974 so that ambitious production targets set at the beginning of the year could not in most cases be realised.

The trend for 1974/75 should have marked a continuous improvement over 1973/74. Setbacks in jute and fertilizer was, however, there. In the case of jute the world recession severely cut into sales leading to inventory accumulation and production cut. Financial

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constraints further inhibited production and this was due to reduced cash flow from the downturn in sales, a consequential increase in bank liability and credit restriction by the banks.

In the case of BFCPC the critical variable constraining its performance was the explosion in the Ghorasal Fertilizer Factory.

Even though tanneries improved its performance, it continued to lag behind compared to 1972/73. All other sectors maintained the upward trend in value added which manifested itself in 1973/74.

The relevant data about value added yearwise are available in Table I.

TABLE I
VALUE ADDED AT CONSTANT FACTOR COST AT 1972/73
PRICES FOR NATIONALISED INDUSTRIES

	72/73	73/74	74/75
BJIC	6442 (120)	8140 (126)	7334 (114)
BTIC	3410 (100)	4067 (119)	5792 (170)
BSGMC	397 (100)	1818 (458)	2025 (510)
BSTMC	623 (100)	689 (111)	769 (123)
BESC	623 (100)	688 (111)	768 (123)
BMEDC	48 (100)	32 (171)	124 (253)
BPBC	548 (100)	615 (112)	649 (118)
BFIDC	21 (100)	163 (776)	206 (981)
BFCPC	1288 (100)	1762 (137)	1048 (81)
BFAIC	771 (100)	987 (128)	1135 (147)
BTC	4 (100)	2 (50)	3 (75)

Capacity Utilisation

Relevant data on this topic are available in Table II. While most of the listed industries showed an upward trend in capacity utilisation, over-all levels of capacity utilisation remained below their

TABLE II
CAPACITY UTILISATION OF TARGET REALISATION OF SELECTED
PUBLIC ENTERPRISES IN MANUFACTURING

Sector	Unit	Capacity	Capacity Utilisation (%)			Target Realisation (%)		
			72/73	73/74	74/75	72/73	73/74	74/75
Jute	mill.tons	7.2	61	68	61	82	82	79
Cotton								
Yarn	mill.lbs	1342	59	68	74	74	95	91
Cloth	mill.yds	1185	49	67	72	79	95	86
Sugar	th. tons	169	11.4	52.2	58.8	88	75	75
Steel								
Ingot	th. tons	250	27	30	30	65	59	58
Paper	th. tons	98	49	51	58	63	86	81
Cement	th. tons	90/90/390	35	72	36	39	72	55
Edible oil	ton	41.8/43.3/54.8	38	25	27	69	51	54
Fish	mill.lbs	125	23	25	40	113	79	148
Urea	th. tons	446	61	62	15	96	98	20
Matches	mill. gross	162	23	31	29	64	46	46
Hides & Skins	th. pieces	20592	11	16	10	46	94	61
Shipbuilding	ton steel	8000	50	57	81	58	100	118
Heavy Transport	no	3000	41	63	43	102	69	59
Wood Processing	mill. sft.	10.50	24	46	56	31	48	60

Source : Annual Reports, Annual Plans and Economic Surveys.

potential. However, the record of improvement should not distract our attention from the considerable scope for improved performance.

In jute and matches which recorded a downturn in capacity utilisation and paper which recorded an increase, demand and operational constraints leave considerable scope for improvement. In contrast, in steel, edible oil and heavy transport foreign exchange

constraints led to under-utilisation and/or decline in capacity utilisation. In case of sugar while utilisation rose it could have risen more but for problems constraining the delivery of canes to mills. Cotton textiles, shipbuilding remained the only sectors where neither demand nor supply remained a constraint in production, so that improvements in capacity use remained impressive and continuous. In case of cotton textile, however, both marketing and demand constraints had begun to have its impact by the beginning of 1975 when inventories began to pile up.

Target realisation in capacity utilisation more accurately reflect the performance record because targets presumably take demand, supply, and other relevant constraints into account though we should be cautious that this does not allow for under-fixation of targets in order to conceal failure in operational performance. Shortfalls in target realisation remain except for shipbuilding and textiles and with one exceptional year, fish, which exceeded or approximated their performance target. Urea could be added to this list but for the explosion in the Ghorasal Plant which led to big shortfall in 1974/75.

Sugar, steel, cement, edible oil and heavy transport facing input constraints consistently fell short of their targets implying perhaps a degree of optimism at the year's outset about the capacity of government resources and for policies to meet their supply expectations. In spite of consistent improvement in the backdrop of heroic target fixation in the case of wood processing, achievement of targets always remained unrealised. For jute and paper, the level of shortage appears to reflect their operational failure as their targets were, considering everything, modest. Hides and skins had a misleadingly good record in 1973/74 due to a pathetically low target but a more appropriate target of 1974/75 remained unrealised for poor operational record. The match sector's problems appear to reflect gratuitous optimism both about its demand and import environment rather than any serious reflection on its operational capability.

Sales

Sales trends are available in Table III. All figures presented are in terms of current price (hence concealing advantage of price change) show that all sectors recorded consistent and in some case, such

as for BFIDC and sugar, spectacular improvements in their revenue. The increase in sales revenue, however, conceals the real trend in sales of the product of accumulated inventories.

TABLE III
INDEX OF PROFIT AND SALES VALUE OF NATIONALISED
INDUSTRIES

	Profit			Sales		
	72/73	73/74	74/75	72/73	73/74	74/75
BJIC	(100)	(117)	(88)	100	108	156
BTIC	100	162.7	150.7	100	163	183
BSGMC	(100)	104	124	100	173	555
BSTMC	(100)	75	162	100	176	333
BPBC	(100)	(98)	(142)	100	147	203
BESC	100	546	594	100	181	198
BPCPC	100	422	(394)	100	230	243
BFAIC	100	462	198	100	170	227
BFIDC	100	564	927	100	744	1090
BTC	(100)	(68)	(22)	100	67	128

Profits

Figures related to profits are also presented in Table III. Here we see that three sectors, jute, paper and tanneries made consistent losses. Their losses reflect their poor record of production and capacity utilisation. However, again, apart from tanneries whose performance was really poor the losses incurred by jute owe to the impact of exogenous policy constraints: jute, because of the rising cost of raw jute after liberation and paper because of the rise of cost of imported inputs. Also artificially low external exchange rate prevented the jute industry from deriving a market price for its exports while domestic price controls on newsprint imposed similar constraints for paper.

For the other sectors the improvement is more impressive; all sectors showed a high and rising profitability. The one exception

to this trend is BFCPC which incurred considerable losses during 1974/75 for the explosion in the Ghorasal Plant. Textiles while continuing to earn impressive profits in 1974/75, suffered an absolute and relative decline in profits in that year compared to the last year due to mounting inventories.

Sectors such as steel and sugar which had been chronic losers, now moved into a much more profitable situation as did all other sectors. However, in such corporations as Sugar, Textiles, BFCPC, BESC and BFAIC much higher profits could have been earned but for imposed price control for textiles, sugar, fertilisers, soap, consumer durables, edible oils and flour products.

Production Performance in Perspective

We may conclude this section by looking at Table IV where we present the real value of production in the nationalised sector in relation to the pre-liberation performance. Such an exercise is not very meaningful because it is premised on the spurious notion that any relevant conclusion can be drawn by comparing figures for

TABLE IV
INDUSTRIAL PRODUCTION INDEX

Agency	69/70	72/73	73/74	74/75
BJIC	125.4	100	112.1	99.5
BTIC	123.9	100	123.1	130.6
BPBC	139.8	100	106.0	106.0
BSTMC	79.4	100	108.8	111.7
BESC	89.9	110	137.7	200.9
BPCPC	62.3	100	123.3	76.0
BSGMC	489.3	100	462.9	515.7
BFAIC	125.9	100	105.5	550.0
BTC	1932.9	100	581.4	784.3
BFIDC	82.3	100	294	370.5
Weighted Index	152.4	100	153.6	177.7

1969/70 with those for the post-liberation period. However, such a measure is attempted largely because 1969/70 has been projected as some sort of a golden period for Bangladesh industry. The figures in Table IV are derived from World Bank production trends

which have been refined by us by use of more reliable and up-to-date data from the balance sheets of the corporations. Even after the refinement the indices in the Table give us no more than crude order of magnitudes.

If we look at the weighted average for the whole sector we see that by 1973/74 production had in fact surpassed figures for 1969/70 and has gone well beyond 1969/70 benchmark in 1974/75. This trend had manifested itself inspite of the explosion at Ghorasal. Indeed if we could assume an equivalent figure for 1973/74 for BFPC then the growth over 1969/70 might have been even greater. In global terms thus the golden age of 1969/70 have been passed.

Sectorally speaking we again see that but for jute, paper and tanneries, all the sectors had by 1974/75 moved beyond production levels of 1969/70. Indeed in steel, engineering, BFCPC, BFIDC this had been achieved by 1972/73. While in most sectors this reflected capacity utilisation, for BFCPC, this was also contributed by additional capacity.

We may conclude this section with a cautionary note that the performance record of the public sector was achieved inspite of numerous environmental and policy constraints confronting the nationalised sector. This is obviously a courageous proposition but we can stick to it if jute industries performance is not to become everyone's yardstick. Actually we should look to specific problems unique to any particular branch of industry rather than make loose generalisations about the impact of liberation and nationalisation. When we examine this more fully in the remainder of this paper, one will see that real issue relating to the sector was of lost opportunities rather than any conspicuous deterioration of performance.

II

There are public enterprises and public enterprises. And there are different genre of public enterprises. The discussion on public enterprises often is oblivious to this fact.

In the classical economics individuals are at the centre of the stage. They are either producer or consumer ; even though they may play both roles. The influence of any single individual is negligible

and they are assumed not to have the urge to combine to make their influence felt. The clearing house is the market which acts perfectly and automatically through a highly responsive price system to cause a 'just' distribution of product and income. In this illusory classical system there cannot be any specific pressure group except that of the aggregative group of all individuals and a strong state in itself is a threat to the system. Hence, there is no possibility of germination of public enterprises under the pure atomistic and competitive economic system. However, one should hasten to add that such a system only existed in the text books and thus deserve no consideration.

There is another system where the state withers away and people live in an equitable system of collective responsibility for an exploitation free society. In this system also there are no pressure groups as enlightened individuals always act together to maximize the collective production and consumption. This again has remained in the utopian realm of socialistic dreams and thus this also deserves no consideration.

The reality lies somewhere else and it is necessary to grow out of the heritage of economics which was formed when technology was primitive, organization was almost absent, business firms small and production process simple and production relation not complex at all. And it is also necessary to remember that in its pursuit of positive economics, economists' neglected consideration of the exercise of economic power and thereby neglecting the sociological basis of economic system and the political manifestation of the exercise of economic power. Thus the economics of the classical genre failed to provide basic understanding of the growth and use of the economic institutions.

The economic institutions are ideally a continuum and so are the public enterprises. With the explosion of the myth of atomistic production and consumption units and the recognition of the inequality of power as well as growth of organization and development of technology, it has been recognized that the invisible hand of the market need be guided and regulated by the visible hand of the government. This control and regulation initially were all market-oriented but the power base in the market soon demonstrated that

the goals of the control may not be served through such partial intervention.

The character and quality of the public intervention, its structure and scale, its methods and results are determined by the politically and socially powerful forces that shape the socio-economic policy of the country. These social and political forces not only determine the character and composition of the public enterprises but influence their efficiency and operation as well. The state does remain subservient to the economic interest group which also dominates social and political arena. It is the dialectics of their operation that leads to the evolution or sudden changes in the character of public enterprises. It is always the interest of the economic pressure group to wield the power to the state to further and consolidate the group interest of that class.

It is in this context that one can judge the growth of public enterprises in the field of utilities. Such goods, consumed at large, could not for long be produced and distributed in a manner that prejudices the interest of the consumer at large. On the other hand, its expansion and control more than equally served the interest of the economically dominant groups. Even the competition protecting programmes or the employment and/or income protecting programmes of the government are also basic in the role of protecting the social fibre that is dominated by the economic power group who are eager to avoid social convulsions.

The automatic process to an optimum equilibrium in any private ownership economy is not to be expected as the production set for each producer is not necessarily closed and convex. When the time period is widened, a free enterprise economy cannot always work to attain the best possible composition of targets nor can it minimize the social cost due to distortions in the form of inequality of income, concentration of economic power and variability in the population. Public investment is justified to offset these distortions. But the experience of pre and post-liberation Bangladesh has shown that public investment without a policy package to institutionally offset the distortions do not help the situation much; in fact, it may intensify the distortions further.

In the context of Bangladesh, we have experienced how the party, labour, bureaucracy, rising bourgeois and trading group worked to take advantages of the public enterprises and thus worked against the efficiency of public sector. It is thus suggested that study in the garb of positive economics directed towards public enterprise serves only limited purpose. We need to study the politics of public enterprise, the sociology of public enterprise along with economics of it and finally endeavour to develop a general theory of public enterprise. Only such a general approach supported by the historical experience of the differing politico-economic systems can provide us with an understanding of the socially productive environment for the growth and efficient operation of public enterprise.

However, even in this limited survey we have seen that money, machine and material are neutral as between private and public sector. Of men, labour has fared better in public units compared to Bengali owned units in terms of real wages. It is the management that matters. The real problem of public enterprise is bureaucratic intervention and bureaucrats interest in conspicuous successes while commercial management calls for continuous and steady success. Thus we may conclude : Public Enterprise, Yes ; Bureaucratic Management, No.

Problems of Nationalised Industries in Bangladesh

by

M. HABIBULLAH*

The nationalised industries in Bangladesh are now beset with various types of problems which stand in the way of the achievement of their goals. These problems may be discussed under the following heads :

Lack of Clearly Defined Goals

The nationalised industries are being blamed on various grounds such as failure to reach the production level of 1968/69 which is used as the bench-mark year for the purpose of comparison. Reference is also made to their inability to productively use their installed capacity, failure to generate cash for the purpose of financing day to day operation and failure to show profit. Very often losses incurred by the nationalised enterprises are emphasised as indicator of the incompetence of the managers running these enterprises. Public discussions and press comments seem to judge the performance of nationalised enterprises on the basis of commercial profitability. Some of the planners and policy makers seem to be inclined to use the concept of social profitability as a criterion for measuring the performance of nationalised enterprises. There are both merits and demerits in using the criterion of commercial profitability and social profitability. However, for the guidance of management of the individual enterprises and their corporations it is necessary to lay down the weights assigned to social profitability and commercial profitability. This is because the employment policy and the fixation of selling

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price of the products produced by nationalised units are largely determined by these performance criterion. For instance, if an industry is developed in order to promote over all social interest such as improvement of public health, launching green revolution in the agriculture sector, the fact may be reflected in the pricing policy. Industries which are desired to be run on the basis of commercial profitability should have the necessary power with respect to both the personnel policy and the sales policy. As the long range goals and objectives of industries have not been clearly defined the corporations as well as the enterprises under their management cannot understand what is expected of them. They are subjected to criticism for their employment policy; they are also criticised for not being able to show profit. In the absence of clear-cut objectives, some of the managers appear to think that they are operating under the principle of social profitability and therefore do not have to undertake comprehensive plan and unified efforts for the purpose of reducing all kinds of costs. This lack of consciousness is responsible for the high overhead expenditure both in the factory and in the office.

Lack of Clear-cut Demarcation of Responsibility

One reason for this is lack of clear-cut assignment of responsibility and accountability. Decentralisation of authority and responsibility with reasonable degree of checks and balances rather than centralisation and witch hunting can promote more effective management. For this redoctrination of the top-most industrial management strata of the country is necessary so that they get fully committed to attain the set goals.

Lack of Unified Efforts

The result of not clearly defining objectives, not laying down clear business rules for guiding the day to day operations, and not framing rules for clear-cut accountability for the task assigned, is to be found in the lack of unified efforts by all the tiers involved in the management of nationalised enterprises. We have today in the nationalised sector disjoined and uncoordinated efforts of enterprises, sector corporations, controlling ministry, and the cabinet. It is absolutely essential that functions of each of these tiers are effectively

and harmoniously coordinated. Unless this is done, it is not possible to obtain serious involvement and commitment of the people working in these tiers. At the moment there is much confusion of policies which create inefficiency in all the tiers. For instance, one Ministry lays emphasis on return on investment and generation of surplus, while another Ministry exercises authority to fix prices of products having in view the interest of the consumers; one Ministry sets production target to ensure better utilisation of capacity, while another Ministry allocates foreign exchange to meet the imported input requirement.

Lack of Mutual Trust

Unified efforts depend on mutual trust and confidence among the different tiers. Trust cannot be bought, it has to be developed and earned through mutual understanding and collaboration. Unfortunately a sense of mistrust seems to permeate the whole environment because of conflicting objectives. The Ministry and the Corporations do not see eye to eye on many issues. One reason for this is the undesirable atmosphere of clash of interest for which mutual distrust between top and middle management, between middle and junior management and between management and union could be seen in many enterprises. At times, chain of management is broken with no apparent disciplinary action. There is also the inter-departmental rivalry and the cold war between the technocrats and the bureaucrats in the bigger fields.

Lack of Dynamic Approach to Decisions

Management is defined as decision-making for getting things done with the help of other. It is a social as well as an economic process. Hence, it is essential that effort is made to integrate the social objectives and economic objectives of the individuals with the social and economic objectives of the organisation. Neither individual objectives nor organisational objectives have been clearly demarcated. Sense of cooperation and sense of identification have not developed and as a result there is the tendency on the part of almost everybody to shift the burden of making decisions to somebody else. Often managers are invited to conferences or sent to training

institutes for the purpose of sharpening their decision-making capability but the participants try to pick up tools and techniques as to how the decision-making can be avoided. Often shelter is taken through the appointment of committees which are neither guided nor followed up, nor the reports, if submitted, are ever implemented seriously. As a result, the nationalised industries have failed to present a unified and comprehensive approach which can produce Synergy needed to create a situation where one can obtain more than 4 by adding 2 with 2. The General Manager of a giant enterprise recently stated that the mode of decision-making in nationalised industries creates a situation of "passing the buck". This is because his decision can be challenged from many quarters including the persons affected by the decision. Hence bold and imaginative decisions are shelved and avoided. The safest way is to take a slow, cautious and shared decision, satisfactory to many but ineffective for the firm. Hence, instead of being dynamic, decision-making is reduced to a safe, stereotyped and static process which is fundamentally designed for safety, general satisfaction and harmony.

Problems of Motivation and Commitment

In planning for the establishment of industries in Bangladesh, more attention has been given to physical planning and financial planning and less attention to the development of human capital. Training should start from top to bottom and not from bottom which unfortunately is the prevalent practice. As a result, modern machines have been installed by spending valuable foreign exchange, foreign loans and aids and magnificent factory buildings and offices have been erected, but availability of manpower was taken for granted. There has been no systematic and sustained effort to develop human resources for husbanding the scarce corporate resources. Inadequate supply of competent manpower to plan, direct, control and coordinate is seriously affecting the functional areas of management such as production, sales, finance and procurement. This is partly due to the inducting of nonprofessional managers having little experience. Indiscriminate appointment of administrators for political reasons was responsible for this. According to a manager, they are sandwiched

between non-professional administrator on the top and hostile labour force at the bottom. Labour unions influence and interfere in management affairs. There are instances when management discharged certain employees on very justified ground but they had to reinstate them on union pressure.

Unable Organisation

The duties and responsibilities associated with a particular management position also have not been appropriately described and written down. Absence of proper job description does not allow the development of appropriate specification of qualification for various category of employees. As a result, selection and training of the right man for the right job is hampered though this is needed for effective performance. Lack of job description also hampers appraisal of performance which is needed for implementing judicious employee promotion policies. The result is apathy, indifference and even sometimes callousness as to the performance of assigned duties. This reflected in the go-slow policy and delayism, perhaps best illustrated by an event—a man was suspended in 1972 but his fate remains undecided even today in June 1977. There are instances of factories remaining closed for lack of raw materials and spare parts which could have been procured in time by careful planning. There is evidence that machines are worked to the point of break down without preventive maintenance; insurance coverage is not taken on a judicious basis; proper effort is not made for settling insurance claims to the best advantage of the enterprise; budgets of the enterprises are not approved quickly; budgets are not drawn properly, budget manual for guiding the technical managers and the accountants are not being prepared and printed; budgets are not reviewed on a regular basis in order to identify the variations and the weak points; there is no serious effort for integrating functional budgets into the master budget in a coordinated manner; lack of marketing effort; inventory of finished goods pile up while the firm goes on paying interest charges on bank overdraft and rent on the godown hired for keeping the unsold goods; managers are judged for their performance on the basis of how much they have produced rather than on how much they have sold and how much cash they have generated for the firm.

Another reason for the lack of dynamism in actively pursuing the assigned duties is noticed in the lack of parallel planning. One waits for a sales plan before he starts production. This practice does not allow all the plans to move forward simultaneously. This point may be clear if one refers to the position of the planning department to the planning cell in the corporations and in the enterprises. These are neglected and are staffed by people not appropriately and adequately developed for the purpose.

An important reason for this relative apathy and indifference is to be found in the philosophical orientation of the people. Industries were nationalised with socialism as the guiding principle. It aimed at removal of capitalist system of ownership and feudal form of production relation. When the industries were taken over in 1972 under the Nationalization Order an impression was given that a cadre of socialist workers, committed to the political and ideological orientation of the government will be created. But this did not happen. People engaged in nationalised industries started thinking of themselves as government employees and developed attitudes and norms of government departments. Even the Nationalisation Order did not specifically mention that they will have to work in business-like fashion. As a result, incentive to reach the production target, to generate cash through effective sales planning and to generate surplus through effective cost control and wastage minimisation is lacking. Recent decision to promote a vigorous private sector and the talk of disinvestment has created a feeling of indecision in the minds of some managers about their fate. This tells upon the organisational health of nationalised industries.

Performance of the Jute Manufacturing Industry of Bangladesh— Some Comments

by

QAZI KHOLIQUZZAMAN AHMAD

I

Ever since Liberation the jute manufacturing industry of Bangladesh has been making heavy losses. Table I shows estimates of losses incurred by the industry in the years 1972/73 to 1975/76 and projected loss for the year 1976/77. The losses have been incurred after Liberation, inspite of much higher Taka values received for exports than before (see Table II), because of the enormous increase in costs. Hence, in seeking the reasons for the difficulties of the industry after Liberation, supply conditions should be the main focus.

In this paper an attempt is made to measure the decline, if any, in the efficiency of the industry in July-December 1976¹ relative to 1969/70. Decline in efficiency between the two periods has been measured a) by estimating the effect of changes between the two periods in factors within the control of the industry (Section II), and b) by estimating changes in factor productivities between the two periods (Section III). Section IV will propose some research projects which may help improve the performance of the industry. Certain issues in the management of the industry will be raised in Section V ; and concluding remarks will be made in Section VI.

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¹Relevant information is available for the period July-December 1976 (of the year 1976/77).

TABLE I
LOSSES INCURRED BY THE JUTE MANUFACTURING
INDUSTRY, 1972-77

Year	Loss (in Million Taka)
1972/73	387.6
1973/74	357.9
1974/75	742.8
1975/76	298.1
1976/77 (projected)	446.8

Source : BJMC

II

Factors responsible for the increase in costs in the period after Liberation may be grouped into two categories in so far as they are beyond or within the control of the industry. Increases in input prices and the loss of protection to the industry from the withdrawal of the export bonus scheme and the devaluations of Taka are in the

TABLE II
VALUE RECEIVED PER TON FOR EXPORTS, 1969/70, 1972/73-1975/76,
AND JULY-DECEMBER 1976 (in Taka)

	1969/70	1972/73	1973/74	1974/75	1975/76	July-Dec. 1976
Hessian	2,877	3,886	4,178	5,372	6,640	6,736
Sacking	1,579	2,610	2,757	4,163	5,005	4,601
Carpet backing	4,136	5,121	4,887	5,268	8,192	7,785

Source : [2] and BJMC,

category of factors beyond the control of the industry². Factors within the control of the industry are those which relate to changes in its efficiency in the use of resources.

On the assumption that the industry had remained as efficient in July-December 1976 as it had been in 1969/70, the impact on the cost (per ton) of the changes in factors outside the control of the industry, or external factors, between 1969/70 and July-December 1976 can be determined either by recalculating the costs for 1969/70 in terms of July-December 1976 input prices, or, by recalculating the costs for July-December 1976 on the basis that the same quantities of inputs per ton of jute manufactures have been used in July-December 1976 as in 1969/70 — both requiring that costs be calculated in terms of 1969/70 input quantities per ton of jute manufactures and July-December 1976 input prices. The underlying assumption is that the changes in input prices between 1969/70 and July-December 1976 reflect the effect of changes in external factors. The calculations involved may be shown symbolically as follows :

²As exports of raw jute were not entitled to any bonus until July 1970 and were allowed only a 10% bonus thereafter, exports of jute manufactures enjoyed a higher exchange rate (relative to exports of raw jute) on account of bonus earnings—the bonus rate allowed to exports of jute manufactures was 20% from January 1959 (when the scheme was introduced) to 19 March 1967, 30% from 20 March 1967 to 19 July 1970, and 35% from 20 July 1970 to 15 December 1971. The abolition of the bonus scheme after Liberation meant that the exchange rate available to both forms of jute export, raw and manufactured, became the same. This meant that the jute manufacturing industry lost the protection it had enjoyed before Liberation from the exchange rate differential in its favour, to the extent that it had applied to the raw jute component of jute manufactures, which accounted for about 40 per cent of their value. Furthermore, a devaluation meant an improvement in the exchange rate for exports of raw jute, leading to increases in the domestic prices of raw jute. The resulting higher raw jute costs of jute manufactures were equivalent to a further loss of protection to the industry.

$$C_j^* = \sum_i (a_{ij0} P_{i0}) \frac{(P_{i1})}{P_{i0}}$$

Where C_j^* = cost per ton of a jute product in terms of 1969/70 input quantities and July-December 1976 input prices;

a_{ij0} = the quantity of input i required for the production of one ton of jute product j in 1969/70 ;

P_{i0} = the price of input i in 1969/70 ;

P_{i1} = the price of input i in July-December 1976 ;

i = inputs : 1, 2, ... n ; and

j = jute products : 1, 2, ... m .

The valuation of the second term on the right hand side of the above equation involves that cost of input i per ton of jute product j for 1969/70 ($a_{ij} P_{i0}$) be multiplied by the ratio of the price of input i in July-December 1976 (P_{i1}) to its price in 1969/70 (P_{i0}), for all i . Because of shortage of time it has not been possible to make enough efforts to collect detailed data on input price changes between 1969/70 and July-December 1976, nor has it been possible to make adequate check as to the reliability of the data obtained. However, it is believed that the data obtained are good enough for a first approximation calculation. The data on costs for both 1969/70 and July-December 1976 should be quite reliable—those for 1969/70 have been taken from the sample survey of the industry conducted by the present author in 1970 and those for July-December 1976 have been supplied by BJMC.

The input price changes between 1969/70 and July-December 1976, which have been used here, are as follows :

i) Raw jute prices were, on average, 180 per cent higher in July-December 1976 than in 1969/70—i. e., from Tk. 36 to Tk. 101 per maund.

ii) The minimum wage in July-December 1976 was Tk. 240 (=Tk. 215 basic wage+Tk. 25 ration allowance) per month as against Tk. 125 in 1969/70. On this basis, and assuming that there was a proportional increase in any other allowances paid, the overall wage rate in July-December 1976 was 92 per cent higher than in 1969/70.

iii) Salaries of lower paid non-production workers also increased substantially from 1969/70 to July-December 1976, which included

the monthly ration allowance of Tk. 25 in the latter period ; but at the same time high salaries were relatively much lower in July-December 1976 than in 1969/70 as a result of the maximum salary having been fixed at Tk. 2,000 per month. Hence, on balance, the average salary rate probably increased by about 50 per cent, and this estimate has been used here.

iv) Prices for direct materials other than raw jute and for spares and stores for repairs and maintenance have increased several-fold between the two periods. It has been suggested by several knowledgeable persons we have consulted that prices of these items, on average, registered a four-fold increase in July-December 1976 relative to 1969/70. and we have used this estimate.

v) The other cost items, apart from depreciation, are fuel and power, other (production) overheads, administrative and selling expenses, which together accounted for about 20 per cent of the cost of sales (excluding depreciation) in 1969/70 and also July-December 1976. For most of the items in these cost categories precise information on prices is extremely hard to come by. Prices of some of the items in this category have increased moderately while those of other items have increased manifold. From interviews with BJMC officials and scant data available it appears that prices of these items would be about two and a half times higher in July-December 1976 than in 1969-70.

vi) Depreciation should be calculated on the basis of replacement cost of depreciable assets. Prices of machinery and equipment were more or less stable in the 1960's and depreciation allowances on the basis of historic costs were adequate for replacement purposes in 1969/70. But the prices of depreciable assets have now increased many times, about 3 times relative to 1969/70 according to BJMC sources.

Total amount of annual depreciation allowance for the industry calculated on the basis of historic costs should be less in 1976/77 than in 1969/70 as a substantial proportion of assets should have been depreciated between the two years ; and not much additional investment has been made in recent years. Hence, if efficiency of the industry in July-December 1976 was the same as in 1969/70, then

per ton depreciation allowance on the basis of historic cost in July-December 1976 should be less than in 1969/70. As a first approximation we may assume that per ton historic cost based depreciation allowance in July-December 1976 would be the same as in 1969/70 if the efficiency of the industry remained unchanged between the two periods. It would then be raised three fold on replacement considerations.

Results of our calculations are shown in Table III. They show that in July-December 1976, on average, the cost of sales (excluding depreciation) was about 17 per cent and the cost of sales

TABLE III
COSTS OF JUTE MANUFACTURES*

(Taka per Ton)

Actual Cost of Sales in						
July-December 1976 = $C \sum_i^M (a_{ij} P_{io}) \cdot \frac{(P_{i2})}{P_{io}} = C^*$						
	C - C*					
(1)	Excluding depreciation (2)	Including depreciation (3)	Excluding depreciation (4)	Including depreciation (5)	Excluding depreciation (6)	Including depreciation (7)
Hessian	7,510	7,860	6,118	6,673	1,392 (18.5)	1,187 (15.1)
Sacking	5,010	5,178	4,201	4,465	809 (16.1)	713 (13.8)
Carpet backing	8,680	9,286	7,346	7,997	1,334 (15.4)	1,289 (13.9)
Weighted average	6,497	6,800	5,394	5,825	1,103 (17.0)	976 (14.4)

Source : [2] ; BJMC ; and explanations and information in the text.

Note : Depreciation allowance included is on the basis of replacement cost as explained in the text.

*Excess of actual costs of jute manufactures in July-December 1976 over costs calculated on the basis of 1969/70 input quantities per ton of jute manufactures (i. e., 1969/70 efficiency level) and July-December 1976 Input Prices — a measure of decline in the industry's efficiency in July-December 1976 relative to 1969/70.

(including depreciation) about 14 per cent higher than what they respectively would have been had 1969/70 prices been maintained. These estimates of costs are compared with losses incurred from exports (of jute manufactures) in July-December 1976 in Table IV. It will be seen from the Table that when depreciation allowance is calculated on the basis of replacement cost of assets there would

TABLE IV
COMPARISON OF (C—C*) WITH LOSS FROM EXPORTS OF JUTE
MANUFACTURES INCURRED, JULY-DECEMBER 1976
(Taka per Ton)

(1)	Loss from Exports		C—C*		Col. (4) —Col. (2) (6)	Col. (3) —Col. (3) (7)
	Excluding depreciation (2)	Including depreciation (3)	Excluding depreciation (4)	Including depreciation (5)		
Hessian	911	1,261	1,392	1,187	481	-74
Sacking	412	580	809	713	397	+133
Carpet backing	1,049	1,655	1,334	1,289	285	-366
Weighted average	700	1,005	1,109	1,181	409	-176

Source: BJMC; and Table III.

be, on average, a net loss of about Tk. 176 per ton in July-December 1976 even if 1969/70 efficiency was maintained. However, there would, on average, be a net profit of over Tk. 200 per ton if depreciation was calculated on historic cost of assets: and there would be a gross profit (i. e., profit before any depreciation is charged) of over Tk. 400 per ton (Table IV). If it is argued that under the present circumstances current costs are of primary concern, and replacement of assets would be taken care of through development grants, then, on the basis of our calculations, the industry would become viable if 1969/70 efficiency could be attained.

Indeed, in interpreting the estimates of costs one should remember that they are tentative and are only indicative. There are two main reasons for this. First, the assumptions made about increases in input prices between the two periods are themselves tentative; and second, factors which are assumed to have been within the control of the industry may include some factors such as power failure and shortage of skilled workers (at least in the short run—in the long run the industry may undertake to train up workers) which may not be within the control of the industry. If assumptions used about price increases are faulty, then the estimates made of costs would be either over or under estimates depending on whether, on the whole, price increases assumed are under or over estimates.

III

Table V provides evidence of the lower efficiency of the industry in July-December 1976 relative to 1969/70 in terms productivity of

TABLE V
CAPITAL, LABOUR AND MATERIALS PRODUCTIVITY, 1969/70
AND JULY-DECEMBER 1976

	Hessian		Sacking		Carpet backing		All products	
	1969/70	July-Dec. 1976	1969/70	July-Dec. 1976	1969/70	July-Dec. 1976	1969/70	July-Dec. 1976
Capital :								
Output per loom-hour	7.90	5.88	21.35	17.65	15.45	10.50 ³		
		(-25.6)		(-17.33)		(-32.04)		
Labour :								
Output per man year							4.44	3.64 ⁴
								(-18.02)
Materials :								
Wastage rate %							6.20	7.70
								(+24.19)

Source : [2] and BJMC.

³The actual decline in productivity is probably somewhat less than is indicated by these figures, because carpet backing output of July-December 1976 includes a larger proportion of lighter materials compared with that of 1969/70.

⁴This figure has been obtained by doubling the output per worker for July-December 1976.

labour, capital and materials. It will be seen from the Table that the efficiency in the use of capital, labour and materials was significantly lower in July-December 1976 than in 1969/70.

Labour productivity could not be measured by product since distribution of labour by product is not available. Hence labour productivity has been shown in terms of weight of all products. However, for correct interpretation of changes in such a labour productivity index between two periods, knowledge of the product-mix changes is necessary, because achievable output per period of time measured in weight varies widely from product to product.

Table VI shows that output-mix in July-December 1976 has, on the whole, shifted in favour of heavier products, sacking and carpet backing taken together. Hence, it would seem that the decline

TABLE VI
PRODUCT-MIX IN 1969/70 AND JULY-DECEMBER 1976
(in per cent of total)

Product	1969/70	July-December 1976
Hessian	41.5	36.2
Sacking	51.4	47.9
Carpet backing	7.1	16.9
Total	100.0	100.0

Source : [2] and BJMC.

in labour productivity in July-December 1976 relative to 1969/70 is actually greater than that implied by the decline of 18% in output per man-year.

IV

It has not been possible (due to shortage of time) to investigate in details the factors within the control of the industry which adversely affected the current performance of the industry. While there is a lot of prevailing wisdom both within the industry and outside in this regard, it seems to me that the need for a detailed and

continuous study of slacks in the industry cannot be overemphasised. Such a study should have three main focuses : 1) functioning of the Bangladesh Jute Mills Corporation (BJMC) ; (2) performance of individual mills ; and (3) inter-firm comparison of performance.

Inter-firm Comparison

While the first two may not be less important than the third, I would like to put particular emphasis on the inter-firm comparison study. Of course, one way of identifying specific problems of a particular mill is to study its operations in detail to locate slacks. But the nature and extent of problems will be appreciated better if its performance is compared with that of other mills which have done better while operating under similar conditions. The technique of inter-firm comparison consists in a simultaneous study of different firms in an industry through juxta position of their performance data for the purpose of evaluating the performance of each firm in relation to that of every other firm as well as the general run of achievements in the industry. Individual mills currently submit their performance data to the BJMC, and the BJMC is aware in a general way of the failures and successes of individual mills. But, if the technique of inter-firm comparison is to be used as a tool of management, then it must be properly designed for the purpose of identifying specific comparative weaknesses of individual mills. If an inter-firm comparison is to yield useful and applicable results, very detailed data is required from the firms. Moreover, it should be carried out regularly (annually, six monthly, quarterly, and even monthly—with varying details)—to check on how different mills are tackling their identified problems, and whether new problems are emerging. The BJMC can easily get the necessary data from the mills, and should institute a properly designed scheme of inter-mill comparison.

This technique is fairly extensively used in Western Europe and elsewhere. A good deal of literature is available on the subject. See, for example, [6] and [7].

Study by Foreign Experts

Since the mid-1960's there have been several studies of the industry conducted by so-called foreign experts. They came from different countries ; they came from different international agencies such as the World

Bank and UNDP and also from private consulting firms; and they came with different educational backgrounds and experiences. Some of those who studied the industry in the period after Liberation are of high professional calibre. But they cannot be expected to understand, in a few weeks of stay in the country, the industrial environment of the country, and, much less, the socio-cultural background and expectations of people who work in the industry. As a result, their studies have tended to be superficial and mechanical, and their recommendations generally inappropriate and irrelevant. However, some of the studies have succeeded in making some useful points.

Indeed, if we want aid, then probably, whether we find it useful or not, we will have to let experts from aid-giving agencies study the industry from time to time for their use. But, I see no point why private foreign consulting firms should be invited to study the industry. Such firms have standard formats which they use everywhere. Having seen some of the reports prepared by such firms, I am convinced that these studies are not at all useful and that the fees paid to them go waste. Moreover, they are also harmful in that the officials have to give them time in providing information and in discussions with them, which they could profitably use in their jobs.

I strongly feel that local personnel, even when they have less professional attainments, should be able to do more useful studies than foreign experts. This is because local personnel have a better understanding of the background and hopes and aspirations of the people involved in the industry and also of the physical and social environment in which they live and work.

V

Management Structure

One basic question relates to the very concept of sector corporation. The BJMC, as has been conceived, is the commercial unit in the management structure of the industry and is entrusted with the guardianship of assets in the jute mills and has the responsibility of ensuring that overall targets and objectives set for the industry are achieved. It is essential to ascertain whether or not the corporation

has the necessary operational freedom to carry out its responsibilities properly. It must be remembered that flexibility and quick decisions and actions are of crucial importance in production management, because the key to success is timely exploitation of changing market and technical conditions. The general impression is that the corporation has to observe so many rules and regulations rigidly prescribed by the government in the areas of recruitment, procurement etc. that it has become more of a civil service department than an organisation concerned with production and commercial activities. If the BJMC is to be the commercial unit as it was conceived to be, it is essential to grant to the corporation what it lacks as commercial unit in terms of operational freedom.

It is, however, generally believed that the corporation could have achieved better results even under the present arrangements in relation to its powers and responsibilities. We have found earlier in this paper that the industry was considerably less efficient in 1976 than in 1969/70. A study designed to establish specific failures of the corporation will be a worthwhile exercise. In so far as the failures can be identified, steps may be taken to improve the situation. But since the powers and responsibilities of the corporation have not been precisely delimited, in many cases it may not be possible to identify corporation's faults in specific enough terms for policy purposes. Although it is well known that accountability cannot be properly established unless powers and responsibilities are clearly demarcated, powers and responsibilities of the BJMC (as well as of the other sector corporations) have not yet been clearly demarcated.

We would, however, like to argue that the mills and not the BJMC, should be the commercial unit. Mills are the productive units and they should have the real authority for decision-making and implementation of decisions. Under the prevailing arrangement, it is left to the corporation to delegate to a mill whatever authority the decision makers of the corporation think fit. Our proposal is that the mill should be the commercial unit with appropriate authority vested in its management. The powers and responsibilities of mill managements should also be clearly defined.

Delegation of appropriate commercial authority to the mills will make mill managements more responsible and the accountability and

follow-up action at the mill level, where it matters most, can be effectively implemented. This will also promote competition among mills and will thereby bring about improvement in their performance. Under the prevailing arrangements, more efficient mill managers have no incentive to exert themselves fully as long as less efficient ones are getting away with poor performances under cover of the corporation's central responsibility.

If the mill is accepted as the commercial unit with appropriate delegation of authority, the BJMC will be primarily a coordinating and overall policy making body. Relieved of its responsibility of being directly and immediately involved in the running of individual mills, the BJMC can effectively perform the important role of the central body concerned with overall policy making in relation to production, export promotion, development of new uses of jute, expansion of capacity; supervision of mills; coordination between mills on the one hand and the industry and different government agencies and departments on the other; and research and development.

Nationalisation

There is a lack of understanding within the government machine of the problems of industrial management. Traditionally, the government performed civil and military functions as its regular areas of direct responsibility while, in the field of production, the government's role had been primarily regulatory and promotional. Nationalisation meant direct government responsibility for production. The government departments (such as the Ministries of Planning, Finance, Commerce and Labour) which had responsibilities relating to production have persisted with their traditional bureaucratic attitudes (which had developed in relation to private sector productive activities) in relation to nationalised industries in the absence of an appropriate policy framework. It is essential that an appropriate policy framework be established defining, among other things, the relationships of the industry with the minister-in charge, and various government agencies and departments within whose purview it comes for one thing or another in order for the industry to pursue its activities in an effective manner.

The policy foundation of the whole nationalisation programme has continued to remain shaky ; and if anything, it is now in a more confused state than ever before. Stability of objectives and policies is essential for efficiency. The sooner the confusions are removed and the role of nationalised industries in the economy are clearly defined the better it is for the economy.

Incentives for Workers

Real wages in the jute manufacturing industry has declined sharply for all categories of labour over the years after Liberation. For unskilled labour, they declined between 1971/72 and 1974/75 to less than half [5].

Currently, the industry is faced with a serious problem in the form of absenteeism of workers. Absenteeism is particularly acute among skilled workers such as weavers. Qualified *badlis* are also not available to replace them. As a result output is being reportedly affected. The main reason for the absenteeism is reportedly low wages. This is a problem that the Industrial Wage Commission may attempt to find a solution for. The question is involved. On the one hand, money wages may have to be increased by a large margin to make the industrial work attractive ; but, on the other, such a move will increase costs and make the prospects of the industry more difficult. But the issue has to be resolved. One way of going about it may be to link wages to productivity. Along with minimum wage, a minimum productivity should probably be defined. It may also be possible to define an attractive enough package which may include a moderate wage increase along with facilities such as housing, medical care, provision for incentive bonus and social security benefits.

V

In conclusion it may be observed that there is no doubt that the industry is now less efficient than in 1969/70 ; and that there is scope for reducing costs by tackling factors within the control of the industry, without having to undertake a thorough industrial reorganisation.

But the basic weakness of the industry lies in its management structure. Appropriate decentralisation of authority, delimitation of powers and responsibilities of different tiers of management; a policy framework and rules of business based on proper realization of the production responsibility of the governments (in the nationalised industry); effective financing arrangements; sound jute policy; and an effective system for measuring the performance of the industry and managerial competence are among the essential preconditions which must be fulfilled to create the right environment for the industry to function efficiently.

The export bonus scheme enabled the industry to grow fast in the pre-Liberation days, but it left the industry basically inefficient. The profits realized by private industrialists in those days were entirely a reflection of the export bonus earnings. In a recent paper [1], the present author has found that in 1969/70 the f.o.b (export) prices of jute manufactures in fact were, on average, about TK. 644 (including depreciation) less than the cost of sales, yet the industrialists made substantial profits in that year. Again, the export bonus scheme by providing a relatively higher exchange rate for exports of jute implied a transfer of income to the industrialists from the poor jute growers in so far as the higher exchange rate was received by the industrialists for the raw jute component in the export of jute manufactures. It has been found that in 1969/70 the industry would have incurred a loss of about Tk. 346 (including depreciation) if the exports of raw jute were provided with the same (export) bonus facilities as that enjoyed by exports of jute manufactures.

The productivity of the industry in fact tended to decline during the 1960's [4]. And it may be observed, in passing, that one may legitimately doubt that, even if it was not nationalised, the industry would have been able to maintain its 1969/70 efficiency in the period after Liberation in the face of fundamental changes in the economic and social environment of the industry.

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Rural Industrialisation in Bangladesh— Problems and Prospects

by

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I. INTRODUCTION

In order to make the national development process meaningful and effective, the rural areas of a country must be developed. This is particularly true for a country like ours where 85% of people live in villages. But how can the rural areas be developed? The answer can be found through studies of rural conditions and by conducting experiments of development programmes in the rural areas. The main thrust of this programme should be to promote an integrated rural development; to give special attention to both higher levels of income generation and more equitable distribution of income in the rural areas. For achieving these objectives the programme is required to consider some factors which are not only interrelated but also inter-dependent. Rural industries, farm planning techniques, provision of credit, rural public works, delivery of social services including primary health care and building up of local institutions are essential for rural development. Amongst the different aspects of IRDP the rural industrialisation deserves special attention.

Rural industries may be defined as those small manufacturing and servicing units which are located in the rural areas and are carried on relatively on a small scale with the members of the family or with hired labours and are mainly concerned with the processing of indigeneous raw materials to meet the local needs.

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Rural industrialisation through the development of small and cottage industries is the corner stone of the present economic policy of Bangladesh. Development of this sector would generate employment, diversify rural occupation, develop agro-based industries and ensure equitable distribution of income in rural areas. Planned development of this sector would not only increase the supply of consumer goods but also contribute to earning valuable foreign exchange. Thus programmes for developing this sector must be well planned and realistic for implementation.

II. AN OVERVIEW OF THE DEVELOPMENT POLICY

Before going into the problems of rural industrialisation, an overview of the rural industrialisation programme in the context of economic development policy is relevant. A study of Five Year Plans of erstwhile Pakistan and documents relating to economic policy indicate that no serious efforts were made in this part of the country to promote small and cottage industries. Though some programmes were included in these documents yet no effective steps were taken for the execution of those programmes.

The country's self-reliant policy mainly concentrated on the programmes of increasing food production. Rural industrialisation did never get priority in the economic development policy of the country. All economists agree on this point that industrialisation is an inescapable necessity even for accelerating the development of agriculture. In fact, for balanced economic growth these two sectors must be developed simultaneously.

III. WHY RURAL INDUSTRIALISATION ?

There can be a number of reasons in favour of rural industrialisation of which the following are the most significant :

- 1) Agriculture is the primary sector of our economy and its progress will continue to be the main objective of economic policy of Bangladesh. The farmers would gradually require service facilities for their tools and implements. To increase the farm output, locally manufactured implements shall be

used and new implements have to be developed. Small industrial enterprises can be set up to manufacture agricultural implements and spares locally.

- 2) The farmers do not remain wholly engaged in agriculture throughout the year because of its seasonal character. The farmers may engage themselves in some subsidiary occupation during the off season to augment their income. Household and cottage industries can be an important source of such occupation.
- 3) Unemployment and underemployment is the key problem of Bangladesh. With the rise of population, new labour force is being added with the civilian labour force. In view of this our economic programmes should emphasize the development of such sectors which would generate maximum employment opportunities. Small and cottage industries involving comparatively less investment has a great potential to generate employment opportunities.
- 4) There is evidence that skills of different types are available in rural areas. The craftsmen and artisans can be trained to improve their skill and use modern tools for overall development of cottage industries.
- 5) For a large number of products raw materials are available in abundance in rural areas which can also provide with ready market for the finished products. To make rural economy self-reliant the contribution of this sector will be the most significant.
- 6) Small and cottage industry can be a potential source of self-employment for educated youth of the country.
- 7) The women section of our population will find a means of gainful employment if small and cottage industries are developed in rural areas.
- 8) With the availability of power and other facilities in rural areas the prospect of developing small industry as a complementary sector to large scale industry is very bright.

Indeed, potential for the development of small and cottage industries in rural areas is great, but at the same time problems of industrialisation is also great.

IV. APPROACH TO RURAL INDUSTRIALISATION

It is recognised by all concerned authorities that small and cottage industries are facing innumerable difficulties in maintaining its growth and development. In spite of the government efforts and emphasis on the development of rural industries in the development plans of the country this sector could not make any substantial progress. Rather many industries declined during the past years. This process can not be allowed to continue as this sector has enormous potential to generate employment opportunities for unemployed and underemployed masses of Bangladesh. There has been a lot of discussion about the problems of rural industrialisation and suggestions for accelerating the growth of this sector. It is observed that the development programmes administered from time to time for the promotion of this sector were directed towards the development of units rather than the development of entrepreneurs which is the key factor for any industrialisation programme. The major emphasis of the industrialisation strategy should be on the development of entrepreneurship.

The growth of entrepreneurship can be quickened by a systematic approach. We have enough reason to believe that potential for developing entrepreneurship in Bangladesh is great. But the development of entrepreneurship requires planned efforts by the country. The potential entrepreneurs require assistance in various forms like the selection of profitable investment outlet, training facilities, credit to meet fund requirements, marketing information to sell the product, extension service to solve operating problems, technical and management counselling from time to time, adapting local technology etc. Once these assistance are provided the entrepreneurship may develop to grow.

Action Programme

Industrialisation is completely different from commerce and trade. The trading class and the artisan groups do not like to enter into small scale industries for fear of risk and problems associated with such investment. In order to attract the potential entrepreneurs, an

action programme is urgently needed. Before such programme is launched the promoters should have complete knowledge about the industrial potential of a particular area in terms of resource availability. The main objective of this programme will be to grow a sense of consciousness amongst the prospective entrepreneurs in the rural areas so that they take initiative to set up small units. At present the government agencies are helping those units which approach them for assistance on their own. As a result, the household manufacturers have hardly any access to such urban biased government agencies. But under the intensive campaign programme, the officers of the agency entrusted with rural industrialisation will go to the village areas, make the local people enlightened about the potential of industrialisation based on indigenous raw materials, help the prospective industrialists to solve their problems and guide them by suggesting suitable lines of investment and render technical assistance, thus making it possible for the new entrepreneurs to take up new lines of production and also to improve their existing plants. The programme can thus be launched throughout the country.

The campaign has to be carried out in five stages. At the first stage survey of the industrial potential of the area has to be undertaken by a team of officers. A task force formed by the promoting institutions will then visit the area with a view to giving wide publicity to the prospective investors who are not aware of the investment opportunities and facilities offered by different institutions. The task force composed of people from different agencies will be able to acquaint the entrepreneurs about various facilities available in the country. In the third stage entrepreneurs will be assisted in preparing feasibility study. Credit facilities, technical and marketing advices shall also be ensured through some appropriate means. Finally, a comprehensive follow up supervision and assistance should be provided. As a result of these, popular enthusiasm will be created and people in the area will respond to the idea of developing rural industries.

Rural Industrial Project

In order to make rural industrialisation a success special measures should be taken to prepare rural industrial project. While formulating

such a project consideration should be given to various factors like availability of raw materials and ready markets. The programmes in the project area will be mainly of promotional character such as provision of training facilities, common service facilities, marketing facilities, credit facilities, purchase of machinery, construction of workshops and providing working capital whenever necessary. The programme should also provide technical assistance and guidance. It is further pointed out that it will also be necessary to undertake techno-economic surveys in each project area from time to time with a view to assessing local raw materials as well as human resources and determining its potential for industrial growth.

Rural Industrial Estate

Apart from this the question of establishing industrial estate in rural areas can be considered. Industrial estates can provide working premises for mechanised unit and also accommodate common service facilities. As stated earlier the absence of repairing services of tools and machinery nearby hinders the growth of small enterprises. The provisions of above facilities would certainly promote the growth of cottage industries.

Mechanisation of Cottage Industries

With the availability of power in rural areas, there seems to be ample scope to modernise cottage industries. The prospect of introducing and improving cottage industry products by the application of modern tools and implements is quite bright. The skill of the artisans can be improved by imparting training for producing sophisticated products. Moreover, small industries can be set up as complementary to big industries. While giving high values to our traditional products we must introduce diversification in the cottage industry products to sell it in the local as well as foreign market.

Need for Rural Organisation

The nucleus of rural industries development will be the villages. The organisational problem will be a great one in attaining the objectives of rural industrialisation. Efforts should be made by the promotional institutions or authorities in charge of looking after the

sector to organise potential village investors for setting up small units. The agencies should make it understood that unless villagers take initiative in organizing the industries and supervising them, effective result can not be obtained. Rural industrialisation should constitute a significant part of development plan of the village. While individual entrepreneur be given all cooperation and freedom to organise industries in line with development plans, committee consisting of cross-section of people should see implementation part of the project. However, it should be seen that individual freedom in organising and managing the unit is in no way interrupted. Alternatively industrial cooperatives may be formed in rural areas to set up industrial units.

Institutional Support

The promotional institutions have a key role to play in the successful implementation of rural industrialisation programme. Promotional institutions in various fields should play more effective role towards success of the programme. The Bangladesh Small Industries Corporation did not appear to have provided much help towards rural industrialisation over the last two decades of its existence. It could not offer integrated package assistance needed by the entrepreneurs. For example, entrepreneurial training facilities, extension service, were not provided by this Corporation. So, the introduction of entrepreneurial training programme including motivational training, provision of extension services over and above its other activities are of immediate necessity. Indeed entrepreneurial development scheme is the prerequisite for starting any industrial development programme in Bangladesh. It may be pointed here that many South East Asian countries have achieved considerable success in the development of this sector through this process. The corporation should concentrate its attention to the development of entrepreneurs rather than project itself. Once entrepreneurship programme is made successful the small industry development will progress automatically. The activities of BSIC, now BSCIC, should be recognised to achieve the above goals if necessary.

The Corporation should make arrangement to provide integrated package assistance covering the areas like entrepreneurial training,

preinvestment studies, feasibility studies, financing, extension service, and marketing the products.

Research and Development

Identification of problems and developing new means for improvement through research is vitally important for the development of any programme. There has not been any study to identify the problems of existing units, assess the potential resources for development and devise suitable means of development. Institutional facilities for undertaking such studies are inadequate in Bangladesh. As the country has now given emphasis on the development of cottage industries, it is also required to set up an appropriate institution to undertake comprehensive study on the problems of this sector. Such an institution can be set up under a university of the country.

Development of small and cottage industries is one of the national economic objectives of Bangladesh. Having this goal in mind we must identify proper approach towards the realization of this goal. The approach stated in this paper is based on experience of some underdeveloped countries. For final conclusion however, it is necessary to analyse the implications of each action suggested in this paper. It would be necessary to initiate pilot projects in some specific areas to test this approach.

On The Objectives of The Second Plan of Bangladesh

by

A. FAROUK

I. INTRODUCTION

A Plan has objectives to realize, determined by national preferences and goals that are feasible. Certain strategies are adopted to realize the plan objectives. Resources available are to be mobilized for achieving the Plan targets. Sometimes the social, administrative and infra-structural constraints can be more difficult than the resources constraint. In an economy, based on private enterprise and price mechanism, there can be some growth, even without planning. So, planning is not worthwhile for routine or small achievements in the short run. It is mainly for having long-range structural change in the economy in a desired direction, that national planning is considered relevant. As there are possibilities of alternative objectives (not mutually conflicting), priorities have to be determined on the basis of a national consensus. We have now about two decades of planning experience, but little structural change has taken place in the economy over the last twenty years that would facilitate growth.

Some characteristics of the economy that tell our magnitude of poverty are as follows : Our population density (1974) per sq. mile is 1283. The corresponding figures of Burma and India are 110

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and 432 respectively. Our literacy percentage is 21 and in Burma the figure is around 64%, India 40% and in Malaysia 90%. The present per capita GDP of Tk. 672 (1972/76, in 1972/73 prices) is about the lowest in the world, of which 61% comes from agriculture, about 6% comes from industries, about 11% from trade, whereas public administration and services together account for about 9%, and all other activities account for 13%. There has been little increase in real per capita income in the country in the last 50 years, as population increase has overtaken any addition to the gross production. Prices have gone up by about 350% between 1969/70 and 1976/77. Even for this performance, our dependence on foreign assistance is staggering. A country that had a favourable balance of trade to the extent of 60 percent of its export even in 1955/56, gradually reached a situation in which in 1974/75 its exports became worth less than one-third of its imports. Our terms of trade is continuously deteriorating. In 1976/77, about two-thirds of the development budget is financed by foreign assistance. What is called foreign assistance, is mostly loan now. The total disbursement of foreign assistance in 1971/72 was 168 million dollars, of which 80% was grant but gradually in 1974/75, the amount increased to 1091 million dollars, of which only 35% was grant. Low productivity of the traditional subsistence agriculture, absence of modern industrial sector and massive unemployment of the rural landless are our major problem areas. Our huge labour force, our fertile land and simple living of the common man, together with our past economic history should, however, suggest a better economic prospect than our present condition would show.

How has this situation come about? Historically, there are a few factors working behind it. First, since the fifties, we have pursued a policy of low rice price, to make jute cultivation feasible and to keep urban consumers contented through statutory rationing by import of foodgrains. This has discouraged increase of food production. Secondly, we have encouraged dependence on imported machinery, spares and basic industrial raw materials, resulting in an increased flow of capital goods, raw materials and supplies which has created a permanent deficit in the balance of trade, to be met through foreign borrowing (called foreign assistance). Thirdly, we have done little to change the traditional

base of the rural economy to a modern one by (a) not building the water control, roads and mechanised river transport, (b) not increasing the literacy of the population and (c) not doing the vital land-reforms necessary to extend the modern agriculture and its commercialization. The result is stagnation in the densely populated rural economy.

Increase of labour productivity and employment can come through the modern techniques (as opposed to traditional), for which there are necessary preconditions such as: (a) High rate of adult literacy, (b) economic farm-holdings suitable for farming of the HYV, (c) presence of an efficient and economic infra-structure (roads, markets, storage and transport services), (d) local production of the basic tools, building materials, elementary machines, spares and packing materials to feed a modern farming and the local consumer-goods industries, (e) a social and legal system in which impediments to agricultural modernization, population control and working of the price mechanism for the free enterprise sector are removed rather quickly.

During the first three Plans under Pakistan period, these basic conditions for modernization were very much absent. Literacy increased very little, land fragmentation increased, railroads and river transports deteriorated, population continued to increase. The course chosen in Pakistan days, was to rely mainly on GDP growth, on short-gestation, quick-yielding schemes. Even today, we have continued to accept this preference for quick yielding projects made profitable only through subsidy and transfer payments. Again, Planning in the past has been more of an editing of the projects that could be financed by foreign assistance rather than a deliberate decision to foster real long term growth, independent of foreign assistance. It is, therefore, not surprising that over the last 20 years the real per-capita income of Bangladesh has gone down, if anything. A Five Year Plan needs to have a perspective of future growth pattern in view, based on our values and a grasp of the fundamentals of our economic reality. It should take into account our resources, our ambitions and the historical experience, choosing a goal that is worthwhile as well as feasible,

II. A NATIONAL PERSPECTIVE PLAN

The First Five Year Plan of Bangladesh (1973-78) was dominated by the need to complete the reconstruction of war losses and to create the preconditions for building socialism in Bangladesh. The other objectives are reducing poverty, increasing the G.D.P., increasing the output of essential goods, averting the rising trend of prices, population control, reducing dependence on foreign aid and transforming the institutional and technological base of agriculture. The Plan is now being implemented through a modified programme called the 'Three Year Hard Core Plan'. There has been important changes in the assumptions and objective conditions both international and internal, so that prices, priorities and the financing sources for the First Plan changed materially. The evaluation of the achievements of the First Plan will not be available before the end of 1978. The present evidence shows that in spite of the marked improvement in the implementation of the development programmes since 1976, the targets of the First Plan would remain unfulfilled by the end of June, 1978. Due to slow implementation in the earlier years, shortage of anticipated finance, cost escalation and ineffective managements, even a reduced programme may not be achieved by this time. Preparation of the Second Plan would need completion of the on-going projects, an evaluation of the First Plan performance, a reorganisation of the essential data base for analysis and assurance that the nation is ready to commit itself politically towards completing the plan targets during a five year period. It is, therefore, assumed that 1980-81 could be the first year of the Second Plan, at the earliest and the plan-frame must be ready in the course of the next one year. The object of this paper is to initiate thinking on the nature of the plan frame and to propose a set of tentative objectives for discussion, in the light of a long-term perspective of 20 years.

The Second Plan will actually be the first normal time exercise in raising the level of productivity, now that the law and order, the inflationary pressure and the administrative weakness have been considerably brought under control, compared to 1975. A Five Year Plan becomes meaningful, if we keep before us, a long term perspective of growth, because a Five-Year period is too short to achieve

the desired structural change in the economy. For this purpose, a notional and rough pattern of structural change by the year 2000 A. D. may be kept in view, which is just 20 years from 1980/81.

If we take projections of the First Five Year Plan as the tentative starting point, the GDP in 1977/78 (at 1972/73 prices) would be Tk. 6542 crore and the per capita income Tk. 766 per year. If we assume a modest 200% increase in the GDP by the year 2000 A. D., the figure comes to Tk. 20,000 crores. If population control is assumed to bring about the projected change, the possible figure by the end of the century may be around 121 million. This would then double the per-capita income (by 2000 A.D.) to about Tk. 1653. What possible sectoral allocations and what structural changes would then be needed by the end of this century? If our land is utilized for modern cultivation, with the floods controlled and water during winter assured, a 100 per cent increase in production is likely to come (in Japan the yield per acre is now about three times that of Bangladesh). But a large part of the employment and increase of the GDP must come from other sectors, and the industries, power and housing must grow much higher by then. Trade and Transport will also expand. Starting with the projections of the First Plan, we may suggest a crude pattern of change (Table I). The figures are indicative of the direction only, as a basis for thinking.

This illustrative Table proposes that at the end of the century, we should be able to complete the basic infra-structure of modernization for a much higher real per-capita income and better living condition for the people,

The exercise of constructing a perspective plan, however crude it may be, shows the proposed structural change in the economy. This is different from short-run growth rate that may be achieved without any assurance of its continuation in future. For instance, a country may subsidize fertilizer, provide free irrigation water and distribute agricultural credit to increase current output to some extent. It may also increase production of consumer goods by import of machines and most of the raw materials. International aid or long term borrowing may finance these activities temporarily. But when

such assistance is suspended or withdrawn, production can sink back to the previous level, as the country can not make the necessary machines and spares and there is no infra-structure to make such efforts self-sustained. In that case, the internal farm price would

TABLE I
STRUCTURAL CHANGE IN THE GDP IN THE NATIONAL
PERSPECTIVE PLAN IN PERCENTAGE
TERM OF G.D.P.

	Projection 1977/78	Projection 2000 A.D.	Approximate increase
Total	100	100	
Agriculture	55.1 (3602)	36 (7204)	Double
Manufacturing	11.2 (731)	29 (5748)	8 times
Construction	5.0 (326)	3 (652)	Double
Power and Gas	0.4 (25)	1 (200)	8 times
Housing	4.4 (228)	11 (2280)	10 times
Trade, Transport and other Services	24.0 (1570)	20 (3916)	Two and a half times
Total (in crore Tk.)	6542	20,000	
Per capita GDP (Tk.)	766	1653	
	(in 1972/73 prices)		

not be profitable enough to enable the farmers to use the farm inputs at international prices. The situation becomes hopeless if the terms of trade is going against the country continuously. The accumulation of foreign loans in the meantime can eat up the traditional export earning. The present condition of the Bangladesh economy is no better than this. Without foreign assistance then, a per-capita growth rate can only be maintained by reducing the absolute number of population of the country, gradually going back to the traditional technology of cottage industries and labour intensive farming methods. Sustained

increase in production has come in the developed world, only by reorganising the technical basis of production at a higher level, by the use of machines and techniques that can be replicated at reduced cost through the economy of scale and management, appropriate for the country and its resource endowments.

Much of what is needed to raise the technical base of production and the quality of life of a people, is, however, classified by some economists as unproductive investment. Productive investment is that, which is destined for production of goods and material services ; while other investments such as construction of dwelling houses, roads, parks etc., is classified as unproductive investment. But it is this unproductive investment which is also the basis of higher level of productivity in the future and employment of unskilled manpower at the present moment. We may identify some of the needed investments in Bangladesh that are relevant for a higher level of productivity.

(a) The entire agricultural land would have to be transformed for modernized farming through increased specialization and controlled water supply, as opposed to traditional subsistence farming, heavily dependent on rainfall. Water control is the basic task, but land levelling, making holding size economic and making more efficient planning of crop re-distribution to release land for processing industries' requirements in addition to growing food, is a must.

(b) To absorb the huge excess population into non-farm occupations, a network of urban industrial areas will have to be distributed throughout the country, preferably at each Thana Headquarters. This will involve provision for all season transport and storage network. The rural industries will have to be established through a private sector, helped by the government.

(c) To manufacture the bulk of the spares and the simple machines and building material within the country, to reduce the recurring need of foreign exchange, a big investment in capital goods industries and more research to reduce the cost of production of construction material, power etc., will be needed.

(d) To prepare the manpower for use of new technology in farming, employment in industry, for population control and increasing their saving habits, the entire labour force must be made literate in Bengali, through at least 5 years of primary education. With the traditional technology, an illiterate may produce goods but for modern technology, literacy is a must, for higher labour productivity and mobility.

Thus, we foresee that by the turn of the century, we have created an economy in which a literate population is able to produce in farming, industry or services, with a technique of production that is largely non-traditional, and yet relatively simple, within our ability to manufacture and repair. This will provide higher production, higher savings and higher level of investment, assuring a self sustained growth thereafter.

III. OBJECTIVES OF THE SECOND PLAN

The Second Plan (1980-85) will, therefore, have to identify and tackle the basic problems of economy. There are, important constraints that restrict our options for policy. **First**, there is a need to increase employment in the country. Although shortage exists in technical manpower there is a big supply of landless labour and a fairly large supply of educated manpower that need jobs. Self-employment will not be possible for so many. A concerted attempt to provide good housing, transport, and compulsory primary education would create remunerative employment for this group. This is productive work, but finance has to be provided for this, and saving generated within the country may be inadequate for the purpose.

Secondly, the high price of building materials and manufactured goods must be lowered, to provide the incentive for private sector investment in housing and increased agricultural production. The present high price is the result of high cost of imported inputs (including fuel) and large dependence of the industrial sector on imported knowhow, machines, tools and spares. As the terms of trade are going against Bangladesh, the longterm cost-reduction in many of the labour intensive services and industries like rural transport, readymade textiles, leather goods, wood and food processing, etc.,

is only possible through transportation of gas and electricity to the industries and local manufacture of spares, operational supplies and the simple machineries. A Bangladesh Energy Study (Asian Development Bank) was completed in 1976, which provide a basis for further work in this direction. In the matter of manufacturing machineries, although we have nothing beyond the stage of casting as yet, the Bangladesh Machine Tools Factory now under construction, will complete its first phase by the end of 1978. Even if this industry is not able to break-even in the short run, it must be developed and managed as the basic industrial structure. Recent work of a notable Bangladesh economist shows that one of the very few activities in which it is profitable for us to increase further production showing high Social Rate of Return as well as high Market Rate of Return is the machinery manufacturing industry.¹ Serious efforts will have to be made to make this venture successful through standardization of all future import of machinery in the country and by a progressive ban on the imported spares and machines that can be manufactured or assembled within the country. The entire Second Plan period may be devoted to the development of market and expertise for this industry, for which, expansion of the other light industries may be slow in the beginning. Co-ordinated programmes for other machinery and electrical goods industries will have to be built to utilize the facilities of the Machine Tools Factory by producing sewing machines, pneumatic-wheeled rural carts, wheel barrows, motors for country boats, specialised farms designing and fabricating the small industries' plants etc.

Thirdly, in order to increase the yield of farm production, we have to grow more of HYV crops. For this, water control is necessary. Water control is defined to include flood control and irrigation for economic and uniform production of the most suitable crop in a given area. At present at the most 10 per cent of the total

¹This refers to the Basic Solutions of a Model of Accounting Prices, where an exercise is made to measure the social cost of production, marginal import cost and marginal export revenue for a set of products in a common unit of valuation. Vide : *The Economy of Bangladesh*—A. R. Khan, Macmillan, 1973, Pages 107-127.

arable land may satisfy this condition. To bring this proportion to nearly 100 per cent in 20 years, we need a total Water Control Plan including re-excavation of silted rivers, construction of a network of dams, barrages, canals, tanks, tubewells and then a land levelling work. The work is primarily labour intensive. The part of the work that can come in the Second Plan period may not give immediate benefit but will provide a much higher increase in yield at a later stage. A study of this problem has begun and the Bangladesh Water Development Board in 1977 prepared a Comprehensive Plan on Resuscitation and Training of Rivers and Town Protection in Bangladesh. This study indicates that the task is feasible, but needs further work. A scheme was estimated to cost about Tk. 2800 crore of which only Tk. 231 crore would be foreign exchange. The major part of this work is in channel improvement, measures against erosion and construction of embankment. If yield is increased and assured for rice, more land will be released for commercial cultivation of diverse crops that must feed the rural industries.

Fourthly, transport is a major factor causing the low productivity of labour in Bangladesh. With improved techniques and better facilities, increased production may be possible, but it may not be economic to do so unless the output is easily transportable to the consuming markets. This is, however, a capital hungry sector.

Investment made today in the transport infra-structure will create higher productivity and new employment at a future date. The Second Plan must start the task of creating the basic road and water-transport system as a part of an overall master plan. Our transport could be more speedy, cheaper and yet labour intensive. For instance, a change from head-load to the wheelbarrow, from the wooden wheeled bullock-cart to a pneumatic-wheeled push cart, from a physically worked boat to a motorized boat can increase employment as well as productivity. At the Thana level, there has to be proper storage facility and quicker and more mechanised transport. We should have a technology that can be replicated,

maintained and yet employ lot of people. A massive work of labour-intensive construction can start in the Second Plan period. The basis for preparing such a programme will be provided by the Rural Transport Study and the Banglaesh Transport Survey, that are nearing completion (Planning Commission). Reducing the cost of producing bricks (e. g., through gas use) and local production of some elementary machines will help the process.

Fifthly, one essential lesson from the world economic development is that no nation can increase its labour productivity nor promote a self-sustained growth unless the masses can read and write. Adult education can solve the short-term problem, but making primary education (class I to V) compulsory for all children in the country is now a must. It was recommended by the National Education Commission and it constitutes a frequently made public demand.² Primary education can be made compulsory with only a marginal additional expenditure to be met by a local rate at the level of the union councils. A voluntary movement by the intelligentsia has already produced great enthusiasm. Since it does not involve any foreign exchange and it increases the employment of the manpower beyond S. S. C. level, the scheme merits to be included in the Second Plan.

In addition, other objectives that are already recognised for the Second Plan are increased family planning programmes, increase of technical education facilities, raising capacity utilization of the existing industries and increasing the incentives for technical people to work and stay within the country. It will appear that most of the objectives stated above are of a nature that will contribute to future increase of labour productivity and will facilitate the healthy growth of a private enterprise. But they will not be 'quick-yielding' within the Second Plan period.

IV. SUGGESTED STRATEGY OF THE SECOND PLAN

The major strategy of the First Plan was to increase output in those sectors of the economy where production is labour intensive.

²To give two examples: The Union Council Chairman who met in Dacca in April 1977, recommended enactment of a law. 'Ittefaq' in its editorials dated May 3 and May 17, 1977 recommended it.

It did not envisage any sharp structural change. It was also not intended to be marked by any rapid industrialization (First Plan, p. 16-20). Experience has shown that it is not possible to increase productivity without a change of technique. In spite of all our efforts, very little addition has taken place in the market-worthy production of rural industries. One basic contradiction in our present economy is the large import of foodgrains together with our desire to increase food production through the private sector. At the current input prices the farmers do not find it profitable to produce more. Increased prices of manufactured goods, a low and uncertain price of the farm output and a high rate of population growth may have generated, what a notable economist of Bangladesh has called "the below poverty level equilibrium trap"³. Low rice price is both an incentive to population increase and a disincentive to increase of rice production. The technical base of production in Bangladesh can not be uplifted overnight. But unless the painful process is started now, we can not achieve it in the foreseeable future. The Plan Strategy must solve this contradiction one way or the other. Rice, salt and sugar could go entirely to the private trade, with government maintaining a buffer stock for open-market operations, when price goes above a certain level. Seasonal variation in the price should be left to the market mechanism, leaving the farmers and producers to adjust to that. Food self-sufficiency is meaningless without reference to the employment and purchasing power of the landless and the urban poor. If rice is costly, people can respond to it by changing other kinds of food. During the Second Plan period, however, food import will have to continue (though not rationing), because increased employment in construction work will increase the demand for wage goods, without immediate increase in its supply.

It should also be possible during the Second Plan, to begin a process of land-reforms that will reduce share-cropping, consolidate the scattered holdings and eliminate the extremely uneconomic holdings through shifting the extremely small farmers to whole-time non-farm

³M. Alamgir, Bangladesh: A case of Below Poverty Level Equilibrium Trap. B. I. D. S. 1976.

occupations, in a phased manner. Without this, increased investment in water control and extension will not lead to expansion of the acreage under HYV.

This plan will employ the unskilled manpower in the country through mass mobilization, to create the basic infra-structures that will take time to complete, without which modernization of the economy is not possible. Construction, earth-work, primary-school teaching and increased middle-level technicians, para-medics etc. will be the major job opportunities. The need of greater mobilization of manpower may not always be possible through rewards in monetary terms. So, we have to cut down the level of comfort of the well-to-do through taxation of the unearned income and create a mentality for building the country through greater work and simple living. Reducing corruption and creating a feeling that everybody has chance to rise through open competition, are necessary conditions for its success. It is here, that the planning process becomes a political exercise involving the masses as well as the leadership.

V. FINANCING OF THE PLAN

Can Bangladesh afford to implement financially such a hard Second Plan from July 1980? The approximate financial burden has been projected hypothetically in the Appendix. This projection at 1975/76 prices is based on very crude data, only to bring the main issue for discussion. It will cost approximately 100 billion Taka in 5 years, including the public and the private sector. In terms of GDP, about 20 per cent will have to be invested and most of the landless labour and the high-school graduates will be employed because of the big construction, earth-work and the activities generated by compulsory primary education. Some wage-goods viz. foodgrains will have to be imported, because increased food and other farm produce will come mainly at the end of the Plan. The strategy, as explained earlier, is to take advantage of the presently available food aid from our friendly countries to enable a transformation to water-controlled agriculture that can be sustained without any subsidy on inputs. This is the reverse of the existing strategy. Much of the light-industrial

expansion will be left to the private enterprise and the price-mechanism will be allowed to determine the factor allocations in the private-sector as much as possible.

Although it will cause hardship for the nation, such a plan may be financed in the following manner on the assumptions that (a) it is accepted that a nation with the lowest per-capita income needs a big sacrifice at the initial stage to stand on its own feet; (b) that there is a dedicated and honest political leadership for the nation, who by their personal example of honesty and efficiency, inspire the relatively well-to-do minority in the country to do hard work and simple living, (c) that international community is willing to continue its support to our development efforts for increasing our labour productivity and organising a private-enterprise based economy with a higher technical base. Bangladesh deserves a special treatment because this is a test-case for the recently stated policy of the World Community to eradicate poverty from this planet, through mutual cooperation and understanding.

It will appear from the Table at the Appendix, that the financing of the Plan has been divided in four parts as follows.

First is our government finance through a budget surplus (assuming the present volume of current expenditure). A high land tax and a higher rate of tax on the unearned income can obtain this surplus. At present the land tax is very small and only one per cent of the families in the country (i. e., about one lakh) are paying income-tax. Now the well-to-do avoid paying tax because some of their incomes are concealed and some of their luxury purchase (e. g., gold, automobiles, alcohol, foreign travel etc.,) go untaxed. If something is made illegal and yet the well connected or rich people still continue to do this, the only result is that the State is deprived of the revenue. The policy of making the rules same for every citizen and making them pay for what they do, is a better policy in such matters. A total of 23 billion Taka is anticipated from domestic savings including increased taxation.

Secondly, the private sector is expected to invest about 13 billion Taka. This is a small part of the total outlay, constituting about 11 per cent of the Plan outlay but much more than that provided

in the First Plan. outlay the Stock Exchange restored and hindrances to private investment removed, it is expected that a major part of it will go to multi-storied urban housing, light industries, processing and the service industries.

Thirdly, foreign assistance will constitute about 60 per cent of the plan outlay, including the food, commodity and the project aid. The food aid is mostly to be spent in the "Food for Work" type of projects, which has not so long been treated as a part of the development outlay. Considering this, the total dependence on foreign assistance is not disproportionate to the share of foreign assistance in the last two years of the First Plan. However, a greater part of the loans should be spent on basic projects like manufacture of machines, tools, gas based industries like the PVC and for bringing self-sufficiency in the intermediate technology. In the First Plan period, a substantial part of the foreign assistance was spent in soft and welfare programmes including fellowship and on the import of consumer goods for relief.

Fourthly, it will be necessary to meet a gap of about 5 billion Taka through some unconventional internal source, if we want to achieve a substantial level of infra-structure building. There are two known sources for this. In the current year, we have seen a popular zeal to do certain work of labour intensive type through voluntary effort. There is also some amount of work done through the 'Swanirvar Movement'. It is this kind of voluntary work that can supplement regular paid work. Another point is that the current expenditure of the government is known to have increased in recent years very rapidly. Government subsidies have reached a high proportion for mass consumption, public corporations and trading agencies, including subsidy of inputs to agriculture. In many organisations either purely government or run by government grants, there is now duplication of work, too many staff, particularly at the lower levels and there has been expansion of facilities that may not be justified in the context of our shortage of fund. A thorough rationalization of the whole system can yield savings that could be used for more productive investment in development. Such economy may lead to surplus staff in some organisations that can be absorbed in the development projects. The exact magnitude of such economy

is not possible to indicate, but it is evident that such wastes now exist in the current expenditure of the government.

VI. SOME IMPLICATIONS OF THIS APPROACH

Under this approach, there will be considerable hardship during the Second Plan period. It will also require greater economy and reorganisation of government's current expenditure. But there is also a hope that our per capita income can increase in real terms, contrary to the experience of the last 30 years. Some of its other implications are summarized as follows :

- (a) It does not aim at remarkable change in the G.D.P. or the per-capita income within the Second Plan period. Its main concern is to build the technical basis for higher productivity and a structural change to be completed by the year 2000 A. D.
- (b) It does not depend on food self-sufficiency during the Second Plan. Rather it is based on import of food to be utilized for capital formation as a part of the strategy during the Plan period. It is intended to use the present Aid available in Food for infra-structure building by our surplus manpower ; keeping, at the same time, a reasonably high price for the foodgrains within the country. This objective can be attained if foodgrains are distributed as wages for development work, with government open-market operation as needed, but no rationing.
- (c) Reducing dependence on foreign aid is not considered as an immediate plan objective. But the available foreign aid will be used only for increasing the technical base and productivity in the economy within the period of the perspective plan.
- (d) The Plan involves the beginning of a series of legal changes for land-reforms, primary education, population control and a final decision with regard to the question of denationalization of the industries that are now causing loss to the public exchequer.

The recruitment, pay and service condition in the government services will have to be more competitive and incentive-oriented for higher achievements. Those whose skill is scarce and those who work more, would have to be paid more and very qualified citizens will have to be given a chance to compete for all public appointments and positions. Public Honours and Rewards for development work could be a substitute for regular remuneration in some cases.

In conclusion, it is necessary to point out that the figures given here are only illustrative. If the principle of having a hard Second Plan is acceptable to the nation, the actual preparation of projects or lining them up in order of priorities will have to be done at the next stage. Perhaps without a 'big push' like this, it is difficult to get rid of the extremely low living standard of our millions within this century.

Appendix—1

A HYPOTHETICALLY PROJECTED SECOND PLAN (1980-85)
SOME MACRO-AGGREGATES

	1980/81	1981/82	1982/83	1983/84	1984/85
1. Population (In million)	91.3	93.3	95.3	97.3	99.2
2. GDP at 75/76 prices (In million Taka)	99,291	102,820	106,659	110,779	115,272
3. Growth of GDP (In percentage)	3.4	3.6	3.7	3.9	4.0
4. Per capita income at 75/76 prices (In Taka)	1,088	1,102	1,119	1,139	1,162
5. Development outlays at 75/76 prices (Both public & Private) (In million Taka)	19,856	20,580	21,363	22,195	23,464
6. Development outlays as % of GDP	20	20	20	20	20
7. Domestic Savings as % of GDP	6.5	6.5	6.6	6.6	7.0
8. Proposed Sources of Finance:					
a) Domestic Finance through a higher rate of Taxation (In million Taka)	3,972	4,216	4,480	4,763	5,187
b) Private sector investment (In million Taka)	2,473	2,511	2,551	1,585	2,868
c) Anticipated foreign assistance (In million Taka)	12,411	12,853	13,332	13,847	14,409
d) Savings through Volunteer work & economy realised by re-organization of current expenditure. (In million Taka)	1,000	1,000	1,000	1,000	1,000

Appendix-II

A HYPOTHETICAL STRUCTURAL CHANGE IN THE GDP OF BANGLADESH IN THE PERSPECTIVE
PLAN (1980-2009 A.D.) (Showing GDP at both 1972/73 and 1975/76 prices)

Major Sectors	1977/78		Latest estimate for 1977/78 at 72/73 prices	1978/79 at 75/76 prices	1979/80 at 75/76 prices	Growth in 20 years (1980-2000 A.D.)	1999/2000 A.D.		Approximate increase in GDP in 22 years (1978- 2000 A.D.)
	Figures shown in First Five Year Plan at 1972/73 prices	(In million Taka)					at 75/76 prices	at 75/76 prices	
1. Agriculture	36,020 (55.1)	34,803 (56.8)	49,450	51,428	52,971 (55.2)	93% @ 3.4% annu- ally	102,441 (36.0)	72,040	2 times
2. Manufac- turing	7,310 (11.2)	4,920 (8.0)	6,965	7,522	8,124 (8.5)	905% @ 12.2% "	81,669 (28.7)	57,480	8 "
3. Construc- tion	3,260 (5.0)	2,606 (4.2)	3,656	4,079	4,919 (5.1)	91% @ 3.3 "	9,390 (3.3)	6,520	2½ "
4. Power & Gas	250 (0.4)	411 (0.7)	609	685	791 (0.8)	260% @ 6.6% "	2,846 (1.0)	2,000	4½ "
5. Housing	2,280 (4.4)	2,806 (4.8)	4,179	4,388	4,696 (4.9)	591% @ 10.1% "	32,440 (11.4)	22,800	8 "
6. Other Sectors	15,700 (24.0)	15,651 (25.5)	22,200	23,310	24,482 (25.5)	128% @ 4.2% "	55,774 (19.6)	39,160	2½ "
Total:	65,420 (100)	61,197 (100)	87,059	91,412	95,983 (100)	196% @ 5.6% annually	284,560 (100)	200,000	3 times
Population (In million):	85.4	84.8	84.8	87.0	89.1	—	121.0	121.0	1½ "
Per capita income: (In Taka)	766	722	1027	1052	1077	—	2,352	1,653	2 times

Notes:—Figures in parentheses indicate percentage term of GDP.

Appendix—III

A HYPOTHETICAL PROJECTION OF THE GDP OF BANGLADESH FOR THE PERSPECTIVE PLAN

(1980-2000 A.D.)
(At 1975/76 Prices)

(Tk. in million)

Major Sectors	1977/78		1979/80		1984/85		1989/90		1994/95		1999/2000	
	GDP	Growth*	GDP	Growth*	GDP	Growth*	GDP	Growth*	GDP	Growth*	GDP	Growth*
1. Agriculture	49,450 (56.8)	3.5%	52,971 (55.2)	3.5%	58,484 (50.7)	2%	66,947 (44.4)	2.8%	82,633 (40.7)	4.3%	102,441 (36.6)	4.4%
2. Manufacturing	6,965 (8.0)	8%	8,124 (8.5)	8%	12,366 (10.6)	8.3%	23,952 (15.5)	13.6%	43,598 (21.5)	13.3%	81,669 (28.7)	13.3%
3. Construction	3,656 (4.2)	16%	4,919 (5.1)	16%	9,894 (8.6)	15%	16,460 (10.9)	10.7%	14,113 (7.0)	(-2.7)%	9,390 (3.3)	(-1)6%
4. Power & Gas	609 (0.7)	14%	791 (0.8)	14%	1,274 (1.1)	10%	1,787 (1.2)	7%	2,281 (1.1)	5%	2,846 (1.0)	4.5%
5. Housing	4,179 (4.8)	6%	4,696 (4.9)	6%	6,224 (5.5)	5.8%	10,774 (7.2)	11.6%	18,652 (9.2)	11.6%	32,440 (11.4)	11.7%
6. Other Sectors	22,200 (25.5)	5%	24,482 (25.5)	5%	27,030 (23.0)	2%	31,335 (20.8)	3%	41,735 (20.5)	6%	55,774 (19.6)	6%
Total :	87,059 (100.0)	5%	95,983 (100.0)	5%	115,272 (100.0)	3.8%	150,655 (100.0)	5.5%	203,012 (100.0)	6.2%	284,560 (100.0)	7%
Population (in million)	84.8	39.1	2.4%	99.2	2.2%	106.4	1.41%	113.8	1.35%	121.0	1.25%	
Per capita Income (in Taka)	1027	1077	2.3%	1162	1.5%	1416	4.0%	1784	4.7%	2352	5.7%	

* Average annual growth rate.

Notes :—(i) Figures within parentheses indicate percentage of GDP ;

(ii) In the Perspective Plan period per capita income is projected to increase by 118%

A HYPOTHETICAL PROJECTION FOR 20-YEAR PERSPECTIVE PLAN
(1980-2000 A.D.) SOME MACRO-AGGREGATES

	Second Plan (1980-85)		Third Plan (1985-90)		Fourth Plan (1990-95)		Fifth Plan (1995-2000)	
	1984/85 (Terminal year)	1980-85 (Five years)	1989/90 (Terminal year)	1985-90 (Five years)	1994/95 (Termi- nal year)	1990-95 (Five years)	1999- 2000 (Terminal year)	2000 (Five year)
1. Population (In million)	99.2	—	106.4	—	113.8	—	121.0	—
2. GDP at 75/76 prices (In million Taka)	115,272	—	150,655	—	203,012	—	284,560	—
3. Growth of GDP (In percentage)	4.0	20	5.5	30	6.2	35	7.0	40
4. Per capita income at 75/76 prices (In Taka)	1,162	—	1,416	—	1,784	—	2,372	—
5. Development outlays at 75/76 prices (Both public & private) (In million Taka)	23,464	107,458	37,825	172,033	47,434	215,611	59,848	272,039
6. Development outlays as % of GDP	20	20	20	20	20	20	20	20
7. Domestic savings as % of GDP	7.0	6.6	9.3	9	12.3	12	15.3	15

- Notes:—1) Assuming overall ICOR of 5.6 for the Second Plan Period with the sectoral break-up-4.0 in Agri; 8.8 in Manuf.; and 5.0 in other sectors.
 2) Assuming overall ICOR of 4.9 for the Third Plan Period with the sectoral break-up-3.0 in Agri; 7 in Manuf.; and 4.4 in other sectors.
 3) Assuming overall ICOR of 4.1 for the Fourth Plan Period with sectoral break-up-1.8 in Agri; 6 in Manuf.; and 4 in other sectors.
 4) Assuming overall ICOR of 3.3 for the Fifth Plan Period with the sectoral break-up-1.6 in Agri; 4.5 in Manuf.; and 3 in other sectors.
 6) Assuming population growth 11.3% in SFYP; 7.2% in TFYP; 7.0% in FFYP and 6.3% in Fifth Five Year Plan Period.

**Abstracts of Articles presented at the Annual
Conference of the Bangladesh Economic
Association**

**APPROPRIATE AGRICULTURAL TECHNOLOGY—THE
CONCEPT AND RELATED ISSUES**

by

Jahangir Alam

Appropriate agricultural technology covers a wide range of technologies from which a choice can be made to cater to the need in a particular situation. An attempt has been made to conceptualize the issues related to the subject in the context of technological development in Bangladesh. Some possible criteria such as the creation of job opportunities for the rural unemployed and partially employed labour force have been suggested for the selection of technology. Suggestions have also been made to undertake an extensive research programme to assess the unexploited potentialities, build up entrepreneurship and encourage creative innovations by our own people, and utilize, where needed, the imported technology as a catalyst. Emphasis has also been made to collect and disseminate technical information on appropriate agricultural technology for the benefit of our people.

বাংলাদেশের কৃষি ও চাষ-তীব্রতা

মোঃ মাহমুদ খান

তৃতীয় বর্ষ (সম্মান),

অর্থনীতি বিভাগ

ঢাকা বিশ্ববিদ্যালয়

গত কয়েক বছরে আমাদের কৃষিতে তেমন কোন উন্নতি পরিলক্ষিত হয়নি। যেহেতু আমরা কৃষি নির্ভর দেশ এবং যেহেতু কৃষিভূমির পরিমাণ অত্যন্ত স্বল্প তাই কৃষির উন্নয়নের জন্য প্রয়োজন কৃষি-ভূমির পূর্ণ সহ্যবহার। সীমিত কৃষি ভূমির পূর্ণ ব্যবহারের জন্য চাষ-তীব্রতা বা cropping-intensity-এর প্রতি নজর দেয়া দরকার। চাষ-তীব্রতার সঙ্গে খাদ্য উৎপাদনের যে সরাসরি যোগাযোগ রয়েছে তা ছক-১ থেকেই স্পষ্ট।

ছক—১

চাষ-তীব্রতা ও খাদ্য উৎপাদন

	১৯৭০/৭১	১৯৭১/৭২	১৯৭২/৭৩	১৯৭৩/৭৪	১৯৭৪/৭৫
চাষ-তীব্রতা* (শতকরা হিসাবে)	১৪০	১২৯.৫	১৩৪	১৩৬	১৩২.৫
খাদ্য উৎপাদন (হাজার টন)	১১১০৬	৯৯১১	১০০৩৯	১১৮৪৮	১১২৪২

*পতিত জমি গণনার আনা হয়েছে। উৎসে চাষ-তীব্রতা নির্ণয়ে পতিত জমি ধরা হয়নি।
উৎস : Bangladesh Agriculture in Statistics.

বাংলাদেশে জমির স্বল্পতা ও গড় ভূমির পরিমাণ কম হওয়ার চাষ-তীব্রতা বর্ধাসম্ভব সর্বাধিক হওয়াই স্বাভাবিক। কিন্তু চাষ-তীব্রতা বাড়ানো আর সম্ভব নয় এটাও সত্য নয়। বন্যা নিয়ন্ত্রণ ও সেচ সম্প্রসারণের মাধ্যমে নিঃসন্দেহে চাষ-তীব্রতা বাড়ানো যায়। কিন্তু এ সমস্ত প্রকল্প অত্যন্ত ব্যয়বহুল। এর অনুপস্থিতিতে অন্যান্য কিছু ব্যবস্থা চাষ-তীব্রতা বাড়াতে পারে। চাষের ঝুঁকি হ্রাস করার মাধ্যমে চাষ-তীব্রতা বাড়ানো যেতে পারে। ভারতে ১৯৭১/৭২ থেকে কৃষকদের সময়মত চারা সরবরাহের ব্যবস্থা করা হয়েছে। এর সুফল হল অল্প সময়ে কসল পাওয়া যায় এবং সময় সংকোচন কৃষকদের ঝুঁকিকেও হ্রাস করে। তাছাড়া এমন প্রমাণ রয়েছে যে চাষ-তীব্রতা বড় কৃষকের তুলনায় ছোট কৃষকের ক্ষেত্রেই বেশী। সুতরাং ভূমি সংস্কারের মাধ্যমে ভূমি বণ্টন করা হলে চাষ-তীব্রতা বাড়তে পারে।

**SYNTHETIC PLANNING FOR DEVELOPMENT : A CASE
FOR THE SPATIAL STRATEGIES FOR RURAL
TRANSFORMATION IN BANGLADESH**

by

A. K. M. Habibullah

Assistant Professor of Economics
Chittagong University

After deliberating on the importance of the spatial input into the Development Planning (i. e., the importance of sub-national level planning) the regional variation in the rate of urbanization from 1947 to 1974 has been analyzed. The author has found that though in consideration of the total size of population in Bangladesh the emerging metropolises are very small, they are showing the signs of overgrowth in terms of shortages of urban amenities and socio-economic problems. He has then proposed a few strategies of spatial organizations keeping the long run growth objectives of the total economy and related urban growth in view. To transform the rural economy he has suggested the growth of small concentrated centres with the surplus rural population with various economic activities.

**SOCIO-ECONOMIC CONSEQUENCES OF RURAL TO
URBAN MIGRATION AND ITS IMPLICATION
FOR RURAL DEVELOPMENT**

by

Nityananda Chakravorty

Research Scholar
Department of Economics
Dacca University

Concomitantly with the situation of more developed countries, the less ones are experiencing massive flows of migrants into their cities while high fertility level persists. So far as a change in economic structure accompanying economic development causes internal

migration, this paper tries to establish that internal migration of labour from rural to urban areas does not occur in developing world in response to an intersectoral disequilibrium manifested by a differential in manufacturing (urban) and agricultural (rural) incomes. What is rather significant and dominant is the rapid increase in the urban service employment caused by shifts in the patterns of labour demand rather than by the emerging excess supply of rural labour. Extension of rural employment opportunity through the opening of new production frontiers, abandonment of concentration of industrial construction chiefly in towns are particularly suggested to stop this rural emigration in a situation where every government in the developing world is committed to a growth philosophy strictly with a rural bias.

স্বচ্ছাশ্রমে ছাত্রদের অংশগ্রহণ : একটি আলোচনা

মালিক মোঃ শাহম্মুর

তৃতীয় বর্ষ (সম্মান)

অর্থনীতি বিভাগ

ঢাকা বিশ্ববিদ্যালয়

বাংলাদেশের প্রথম পঞ্চবার্ষিক পরিকল্পনায় একটা Dilemma-র কথা বলা হয়েছে— তা হলো “a lot of work needed to be done all over the country and a lot of people going around without work.” যেহেতু উন্নয়নমূলক বিনিয়োগের জন্য আমাদের যথেষ্ট পরিমাণে উদ্বৃত্ত সম্পদ নেই, তাই মজুরীর বিনিময়ে সব প্রকল্প গ্রহণ সম্ভব নয়। তাই প্রশ্ন উঠে স্বচ্ছাশ্রমের। কিন্তু আজকের শ্রেণী বিভক্ত সমাজে সবার থেকে স্বচ্ছাশ্রম আশা করা সম্ভব নয়, কেননা বিষয়টি উৎপাদন সম্পর্ক এবং বণ্টন ব্যবস্থার সাথে জড়িত।

ছাত্রদের স্বচ্ছাশ্রমে অংশগ্রহণ এ প্রবন্ধের মূল আলোচ্য বিষয়। একটি দেশের শিক্ষাব্যবস্থায় সে দেশের সমাজের সামগ্রিক অবস্থা প্রতিফলিত হয়। সে দিক দিয়ে আমরা যে শিক্ষা লাভ করছি তা সম্পূর্ণ উল্টো। আমাদের ছাত্রসমাজ শিক্ষার দোহাই দিয়ে কায়িক শ্রমবিমুখ হয়ে উঠেছে, যার দীর্ঘমেয়াদী ফল খুবই ক্ষতিকর। গতবছর আমাদের ছাত্রসমাজ বেশ কয়েকটি স্বচ্ছাশ্রমভিত্তিক প্রকল্পে অংশ নিয়েছে। অনেকের

মতে এ সমস্ত প্রকরে ছাত্রদের অংশগ্রহণে একদিকে যেমন খরচ বেশী পড়ে তেমনই উৎপাদনও তুলনামূলকভাবে কম হয়। কিন্তু আমাদের ক্ষেত্রে প্রত্যক্ষ সুবিধাসমূহ ছাড়াও পরোক্ষ সুবিধাসমূহ অজিত হতে পারে। যেমন, শারিরিক শ্রমের মর্যাদা প্রতিষ্ঠা করে একটা নতুন ভাবধারা সৃষ্টি হতে পারে এবং তৎসংগত শিক্ষার সাথে বাস্তব অবস্থার পার্থক্য কমাতে পারে। কিন্তু বিচ্ছিন্ন প্রয়াস দীর্ঘ সময়ের জন্য যথেষ্ট নয়। আর তার জন্য প্রয়োজন বর্তমান শিক্ষা ব্যবস্থার পরিবর্তনসহ প্রাতিষ্ঠানিক সংস্কার। প্রাতিষ্ঠানিক সংস্কার এমনভাবে করতে হবে, যাতে করে স্থানীয় নেতৃত্ব গড়ে উঠতে পারে এবং সে নেতৃত্বই স্থানীয়ভাবে প্রকল্প গ্রহণ করতে পারে। যে সব স্বেচ্ছাশ্রম ভিত্তিক প্রকল্পে সর্বাধিক সামাজিক সুবিধা অজিত হতে পারে—শুধুমাত্র এমন সব প্রকল্প গ্রহণ করতে হবে।

MANAGEMENT OF CO-OPERATIVES AND RURAL DEVELOPMENT OF BANGLADESH

by

M. Ameeruz Zaman Khan
Chairman
Department of Management
Rajshahi University

When a group of persons economically weak are actuated by a desire to strengthen their position and improve their economic condition for that purpose act together in some economic processes, be it production, distribution, exchange or consumption and divide the profits arising from their joint efforts in an equitable manner, they are said to co-operate and the association so formed is said to be Co-operative Society. The form and scope of co-operation, however, vary widely from country to country.

Management of Co-operatives involve planning, organizing, motivating and controlling the efforts and resources of the co-operators. This chain of management functions is efficient when resources, are available in appropriate time, trained personnel are recruited for the organization, corrective actions are taken at the right time and personnels are motivated in times of need.

Co-operatives are the best institutional communication links between the masses and the government in a country like Bangladesh. Industrial co-operatives can facilitate urbanization, avenues of employment and economic growth. Unfortunately, very few industrial co-operatives have developed in Bangladesh and some of them are located in semi-urban areas.

Co-operative farming both joint and collective are practiced successfully in many countries. Out of the experiences of these countries we can learn certain things which can profitably be applied in our country for good village leadership and rural development.

A COMPARATIVE STUDY OF DUGWELL AND DEEP
TUBEWELL IRRIGATION IN NORTH BENGAL :
SOME PRELIMINARY FINDINGS

by

Md. Abu Bakar Siddique
M. Phil. Fellow
Institute of Bangladesh Studies
Rajshahi University

This is an attempt to have a comparative study between dugwell and deep tubewell irrigation in North Bengal. For this purpose, two villages—one adopting dugwell irrigation technique and the other deep tubewell—in Naogaon subdivision of Rajshahi district were selected. The study, among other things, aims at (i) determining the existing nature of dugwell irrigation, (ii) examining the impact of irrigation on agricultural productivity, income and employment and (iii) analysing the policy implications. Interestingly, it has been found that with a traditional small scale and labour-intensive technology, dugwell adopters were able to earn more income, generate more employment opportunities and achieve more per acre yield as compared to deep tubewell adopters. This was possible due to certain advantages of dugwell over deep tubewell. These are: (i) dugwell is a very

low-cost technology in comparison to deep tubewell ; (ii) all materials for installing a well are locally available ; (iii) management problems are minimal and (iv) it is highly employment generative. So far as appropriateness of technologies is concerned, it seems that dugwell is more appropriate than deep tubewell.

FUNCTIONAL RELATIONSHIPS OF HUMAN RESOURCE
DEVELOPMENT AND BANGLADESH

by

A. F. M. Shahadat Hossain
Chowdhury
Project Economist
Sonali Bank
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Dacca

Every one tries to develop ; and development is a function of developed human resources. We and our government are trying to develop our human resources but due to the gap between the policy makers and implementors, we are not getting the proper result. Religion has a great influence in our society and we are blindly, instead of creatively, following it. At this stage of social development, besides our government effort, we should encourage private organizations to develop our human resources.

TAXATION AND RESOURCE MOBILISATION IN BANGLADESH

by

Md. Shafi Ullah
Assistant Professor
in Accounting
Dacca University

There are three methods of financing the development programmes in a developing country—(1) Borrowing from the public both within and outside the country; (2) Printing new money and (3) Taxation. In Bangladesh the percentage of domestic resources to the total resources available for financing the development programmes for the last four years from 1973/74 to 1976/77 comes to 25%, 16%, 26% and 20% respectively. In financing the programmes, the contribution of taxation has been increasing year by year and may continue in future also. But the problems encountered with the taxation systems in Bangladesh for resource mobilisation can be summarised in the following way: (1) Direct taxes contribute only a small proportion of total tax revenue; (2) heavy reliance on indirect taxes; (3) social and welfare services provided by the government are so few that the tax payers overestimate the burden of taxation and under estimate the benefits of government expenditure; (4) frequent changes in the taxation policy of the government. In order to overcome these problems several administrative means could be adopted such as: (a) an effective staff of adequate size and qualification, with suitable training programmes, adequate controls to ensure efficiency and development of a cooperative attitude between the assessee and the administrative staff; (b) simplicity of tax-structure; (c) establishment of a simple well-defined, effective procedure and suitable forms of return; and (d) avoidance of tax evasion and falsification of tax-revenue by the assessee.

CREDIT NEEDS OF TRADERS, SHOPKEEPERS AND
SMALL MANUFACTURERS IN URBAN AREAS
AND THE COMMERCIAL BANKS

by

M. Eunus
Assistant Professor
Department of Economics
Rajshahi University

Traders, shopkeepers and small manufacturers form an important economic group which functions as a missing link between the producers and the final consumers of goods and services. This section of people requires mainly two types of credit viz. short term credit and intermediate term credit for normal business activities. In a survey undertaken by the author of this paper during 1974/75, it is found that here at Rajshahi town and its surrounding areas loans are granted by the commercial banks mainly against the following securities: (a) hypothecation/pledge of stocks of goods, (b) third party guarantee, (c) gold ornaments and/or mortgage of immovable property, (d) saving certificates and surrender value of life insurance policies.

The credit needs of traders, shopkeepers and small manufacturers are of a special nature and at present, as it appears, the commercial banks fail to satisfy these credit needs to a greater extent. Thus the non-institutional sources of credit have, in this regard, assumed a greater importance. This is not a healthy sign and on consideration of maintaining regularity in the flow of credit the commercial banks should be made more effective as lenders. This suggests that in order to fulfil the credit needs of the borrowers concerned, specific policy measures should have to be adopted by the commercial banks.

CO-OPERATION BETWEEN BANGLADESH AND MIDDLE
EAST IN THE FIELD OF HUMAN RESOURCES

by

Mizanur Rahman
Economist of S. F. Ahmed & Co.
Chartered Accountants, Dacca

Middle East countries usually require oil and gas-oriented skilled technicians other than the construction, telecommunication and power section. There are one Engineering University, three Engineering Colleges, Nineteen Polytechnique Institutes in Bangladesh. These institutes are hardly producing any kind of the said skill required in Middle East, particularly in oil and gas section. In the light of the above observation this paper is suggesting the following measures :

1. Improve and re-equip the domestic institutes to produce technicians suitable for use in Middle East.
2. Establish a manpower institute that may carry out research on human resources both for national and international supply of skilled manpower.

**LIST OF PAPERS PRESENTED AT THE THIRD ANNUAL
CONFERENCE OF THE BANGLADESH ECONOMIC
ASSOCIATION, 1977**

Session I	Problems of Rural Development
1. M. A. Hamid	Rural Development : What, for Whom and How ?
2. Jahangir Alam	Appropriate Agricultural Technology — The Concept and Related Issues
3. জাহাঙ্গীর আলম	জাতীয় কৃষি নীতি : প্রাসঙ্গিক কিছু ভাবনা
4. M. A. Hamid S. K. Saha A. Rahman A. J. Khan	Impact of Irrigation Projects on Agricultural Productivity and Income Distribution in Bangladesh : Some Preliminary Findings
5. Jadab Chandra Saha	Determination of the Interest Rate on the Unorganised Agricultural Credit Market in Bangladesh
6. M. A. Hamid	Swanirvar Bangladesh : Role in Village Development
7. M. A. Quasem	Land Raform in Bangladesh : Some Observations
8. M. L. Rahman	Harnessing Rural Development
9. Mofazzal Hossain	Suggestions on the Problems of Rural Development and Unemployment
10. Habibullah Bahar	Problems of Rural Development
11. Jalaluddin	Problems of Village Development (in Bangladesh)

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| 12. Md. Abdus Samad | Problems of Rural Economy of Bangladesh |
| 13. মোঃ মাহমুদ খান | বাংলাদেশের কৃষি ও চাষ-তীব্রতা |
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| 16. Md. Nurul Islam Chowdhury | Organization and Management : A Proposal to Reorganise Rural Bangladesh |
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| 20. A. H. M. Habibur Rahman | Problems of Rural Institutions |
| 21. মালিক মোহাম্মদ শাহ্‌নুর | স্বৈচ্ছাশ্রমে ছাত্রদের অংশগ্রহণ : একটি আলোচনা |
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| 23. আতিউর রহমান | সেচ সংস্কার প্রসঙ্গে |
| 24. Md. Kayser Hossain | Some Aspects of Past, Present and Future Strategies of Rural Development in Bangladesh |
| 25. Ameeruz Zaman Khan | Management of Co-operatives and Rural Development of Bangladesh |
| 26. M. A. Aziz | Economics of Sugar Cane Production in Two Selected Areas of Bangladesh : Some Tentative Findings |

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| 27. Abu Baker Siddique | A Comparative Study of Dugwell and Deep Tubewell Irrigation in North Bengal : Some Preliminary Findings |
| 28. Muhammad Yunus | Some Preliminary Findings in the Study of Deep Tubewell Operation in Chittagong Division |
| 29. Sofia Hasna Jahan Ali | Some Thoughts on the Problems of Developing Rural Bangladesh |
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Our Topics for Discussion : What and Why ? |
| 2. কবির উদ্দিন আহমেদ | মানব সম্পদ উন্নয়ন প্রসঙ্গে |
| 3. Tahmina Khatun | Human Resource Development |
| 4. M. K. A. Momen | Human Resource Development is a Necessary in Bangladesh |
| 5. A. F. M. Shahadat Hossain Chowdhury | Functional Relations of Human Resource Development and Bangladesh |
| 6. Shafi Ahmed Khalid | Ensuring the Growth of Leadership |
| 7. Jahanara Huq | Development Planning for Mobilization of Womanpower : Some Thoughts |
| 8. মাহবুবুল মোকাদ্দেস (আকাশ) | মানব সম্পদ উন্নয়ন প্রসঙ্গে |
| 9. Taherul Islam | Few Implications of Public Financing of Education and Work-oriented Self-Financing of Educational Institutions |
| 10. Md. Mustafa | Human Resource, Its Uses as a Development Strategy : Educational Implication |

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1. M. Habibullah
2. Rizwanul Islam
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Problems of Unemployment

- Rural Employment in Bangladesh
Labour Absorption in Bangladesh
Manufacturing: Performance and Potentials
- Unemployment in Bangladesh
Mobilization of Rural Women for Gainful Employment
- অর্থনৈতিক হেতুবাদ ও বেকার সমস্যা
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- Capital Formation and Employment Promotion: Some Observations
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1. Ayubur Rahman Bhuyan
M. K. Chowdhury
2. Md. Shafiulla
3. Md. Shamsuddin Ahmed
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Trade, Monetary and Fiscal Policy

- Effects of Devaluation on Bangladesh Trade Balance: An Empirical Study
- Taxation and Resource Mobilisation in Bangladesh
- Capacity for Absorption of Foreign Capital in Bangladesh
- Fiscal Policy and Its Socio-Economic Effects in a Developing Country
- Trade, Monetary and Fiscal Policies
- Credit Needs of Traders, Shopkeepers and Small Manufacturers in Urban Areas and the Commercial Banks

7. Sadiq Ahmed Some Aspects of the Tax Structure in Bangladesh
8. Rafiqul Islam Selective Regulations of Credit
9. M. A. Rashid Agricultural Financing by Commercial Banks
10. Sayed Mushtaque Ahmed Public Finance — A Neglected Subject

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2. Nisar Uddin Economic Co-operation Among the Third World Countries with Special Reference to Bangladesh
3. Mizanur Rahman Co-operation Between Bangladesh and Middle East in the Field of Human Resources

Session VI

Nationalised Industries

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2. M. Habibullah Problems of Nationalised Industries in Bangladesh
3. Qazi Kholiquzzaman Ahmed Performance of the Jute Manufacturing Industry of Bangladesh—Some Comments
4. Rowshan Kamal A Study of Japanese Small and Medium Sized Industries for the Promotion of Sub-contracting Industries in Bangladesh
5. A. H. M. Habibur Rahman Rural Industrialisation in Bangladesh — Problems and Prospects

6. Faridul Islam

**Some Observations of the Present
Educational System in Bangladesh**

Session VII

**Thoughts on the Second Five Year
Plan of Bangladesh (Symposium)**

A. Farouk

**On the Objectives of the Second
Plan of Bangladesh**

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