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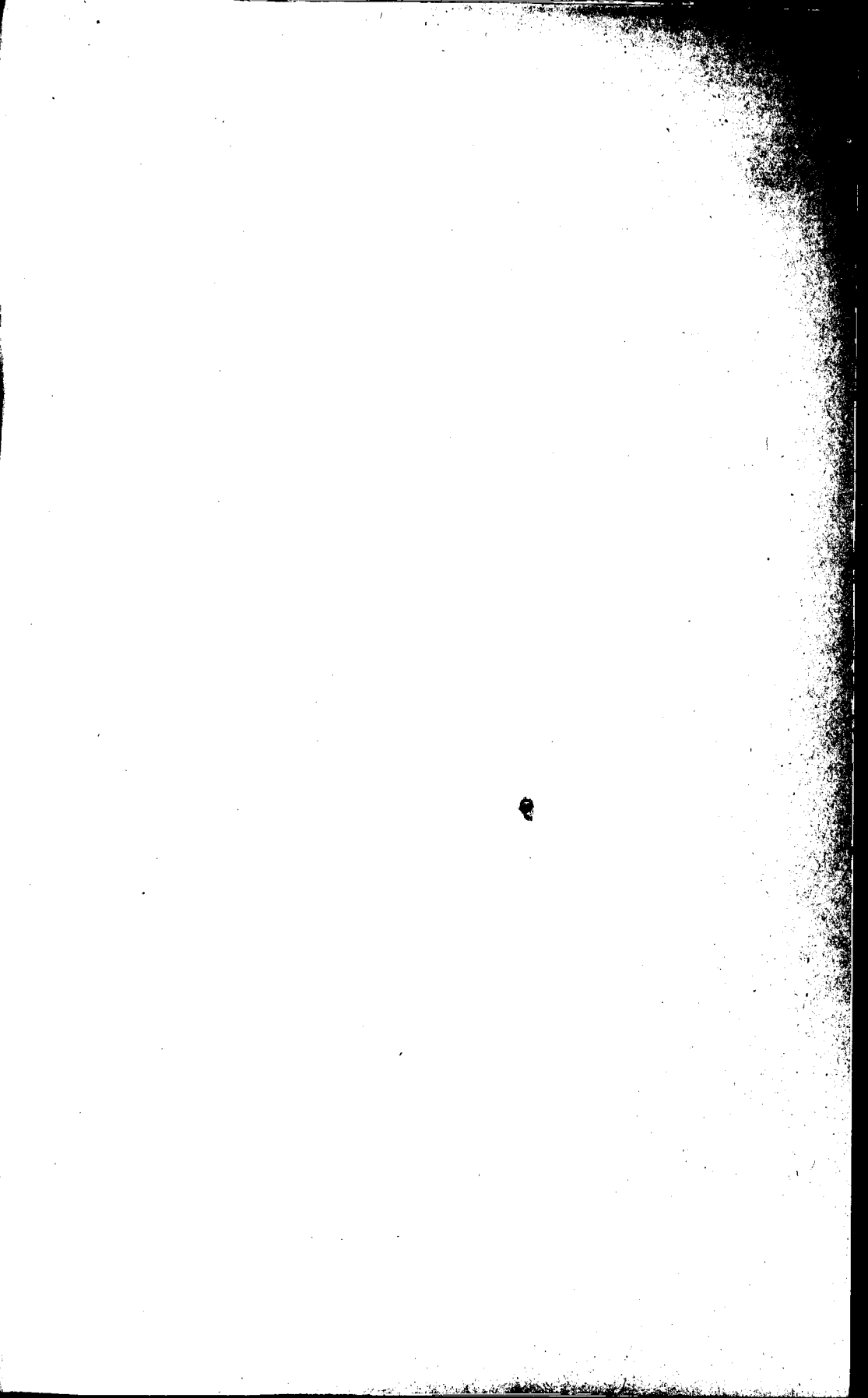
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LIMITS AT FINANCING FIFTH FIVE YEAR PLAN

*Khalid Aftab**

Realism and caution need always be shown in planning resources for economic development. However, the development plans of L.D.C.'s often show disregard to this golden rule by hoping to obtain unlimited finances from abroad. Pakistan has also been guilty of over optimism in assessing resource availability although Pakistan has been more fortunate in achieving resource forecasts in some years of her planned economic effort. In spite of the success story of Pakistan's planning in 1960's, the economy is still predominantly dependent on the limited resource base of agricultural sector. This is the state of affairs as the country embarks upon the Fifth development plan (1978-83).

Economic Framework and Investment Program.

Against the background of less than satisfactory performance of the economy between 1970 to 1977 (average growth rate 3.1% per annum) the fifth plan envisages five years of rapid growth, averaging 7.5% growth of G. N. P. This calculation is based on crucial assumptions about the performance of agricultural and industrial sectors, with a hope that private enterprise will show buoyancy. Thus the role of public sector will be rationalised i.e. emphasis would shift from investment in heavy industry and physical infra-structure to agriculture and social sectors. Focus on agricultural sector (averaging 6% growth rate) and completion of on-going industrial units (average growth rate of industry estimated at 10%) are assessed to take the economy out of the 'slow-growth' trough of 1970's.

Table - 1.

Sectors	Annual Compound Growth Rate.
1. Agriculture.	6.0
2. Manufacturing	10.0
3. Construction.	8.4
4. Trade and Transport.	7.7
5. Others.	4.9
G.D.P.	7.0

Source : Fifth Plan. Page 27.

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The Investment, Savings, Trade and Growth policies are claimed to have been so designed as to provide a basis for sustained growth relying on domestic efforts, which is the major objective of the plan.

Entire development effort in plan period is estimated to cost Rs. 210 billion, including a fixed investment component of Rs. 204 billion. The fixed investment component is projected to grow at 10.5 per cent per annum in the next five years. Public sector share in this total comes to Rs. 148 billion, whereas private sector is expected to contribute Rs. 62 billion.

Public Sector expenditure of Rs. 148 billion is considered necessary to implement projects in hand and to undertake effort to move in the direction of priority sectors such as agriculture, education, health, and rural development. The entire development program in the public sector has two elements:-

- (1) Public sector program is to be financed through budgetary resources.
- (2) Semi-Public sector program is to be financed outside budgetary resources, including own resources of corporations, foreign loans and equity borrowing from banks.

The share of budgetary finance comes to Rs. 128 billion and non budgetary finance to Rs. 20 billion. The share of Public Sector Program makes 70 per cent of the plan size of Rs. 210 billion, which is not significantly different from the share of public sector's share in the recent past.

The real change appears to have come in the 'composition' of public sector program. Public expenditure is planned to decline significantly after the completion of steel mill at Karachi. The gap is expected to be filled by private sector industrial investment especially in sugar, cement and fertilizer industry.

In terms of priorities of public sector development Programme, agriculture sectors share appears to be especially noteworthy. Agriculture and water together claim 21.7% of the total outlay. Raison d'être of this decision lies in the wish of the Government to avoid serious shortfalls in agricultural output. It is hoped that efficient utilization of (a) water resources, (b) expanded use of modern inputs and (c) creation of permanent supporting institutions will help avoid unexpected failures.

A special feature of the fifth plan is the decision to revive private sector by inducement. The Plan hopes to achieve better results in the private sector provided the confidence of private investors is sufficiently restored.

In any case, a sum of Rs. 62 billion is earmarked for this sector. The distribution of sectoral shares in private investment are given the following table.

Table II

Sectoral shares in Private Investment. (In Percentages).			
Sector	1972-77	1977-78	1978-83.
Agriculture	18.5	20.3	17.7.
Industry & Mining	27.1	21.2	31.4
Transport	22.4	20.5	18.1
Housing	18.0	22.6	21.3
Miscellaneous	14.0	15.4	11.5
	100	100	100

Source : Fifth Plan : P.46

In spite of the assumed high output yield of new investment the planned growth rate would require a major investment effort, the burden to be largely shared by the public sector, especially the Public corporations whose capital formation has already shown substantial increase in the last few years. The table below reviews the past progress towards the goals of fifth Plan.

Table III

Fixed Investment at Current Cost (In Billion Rupees).

	1972-73, 73-74, 74-75, 75-76, 76-77, 77-78, 82-83, 1978-83							
Total Fixed Investment.	7.7	11.3	17.3	22.5	27.0	29.25	48.10	204.00
Public	3.9	6.7	12.7	16.8	20.5	20.25	33.10	142.33
Private	3.8	4.6	4.8	5.7	6.5	9.00	15.00	61.67
Net Foreign Savings.	1.1	5.5	11.6	12.1	13.8	7.84	9.82	51.35

Source : Annual Development Plans and Fifth Five Year Plan.

It is quite evident from the table that the realization of planned targets will continue to bank on the buoyancy of the public sector in the next few years. The role of private sector remains, in any case, doubtful. It's contribution to Industrial sector's growth will entirely depend upon the restoration of investor's confidence which remains a function of two uncertain factors, viz., psychology of investing classes and the political conditions.

The table also indicates a major problem i.e. the net foreign deficit on current account has risen almost in step with public investment, As a proportion of G.D.P., the domestic gap reached 10.4% in 1974-75, and remained 9% in 1975-76 and 1976-77, whereas it increased again in 1977-78.

Domestic Financing of Investment :

Two problems can be identified as the main constraint on plan fulfilment, namely domestic savings gap and non-inflationary financing of the public investment, The following table of savings and investments figures for different years throws light on the prospects of meeting the two constraints mentioned above.

Table IV
Financing of Investment. (Billion Rs.)

	1977-78	1982-83	1978-83
Total Gross Investment	30.25	50.00	212.50
Financed by :			
(a) Net External Resources	7.84	9.82	51.35
(b) National Savings	22.41	40.18	161.15
(i) Public Savings	3.20	16.00	60.70
(ii) Private Savings	19.21	24.18	100.45
(c) Domestic Savings	13.91	30.20	113.61
As Percentage of G.N.P. :			
Gross Investment	17.1	19.9	19.3
Gross Fixed Investment	16.5	19.2	18.6
National Savings	12.6	16.0	14.6
Net Foreign Savings	4.4	3.9	4.7
Domestic Savings as % of G.D.P.	7.8	12.5	10.8

Source : Fifth Plan. 30 & 32.

Realistic analysis will demand further splitting of this data for private and public sectors respectively.

Private Savings :

Financing of private investment in the plan period is estimated to be met from domestic sources to the extent of 83 per cent of the total. The remainder 17 per cent is to be covered by foreign component. It is noteworthy that resource mobilisation by capital market over 1970-78 was only 2.5 per cent of the total investment. Only 2 per cent was financed with public sector assistance (mainly in agriculture and housing), and 22 per cent was financed through banking and non-banking institutions. Compared to this the plan envisages the domestic resources for financing private investment at Rs. 51.3 billion (or about 83 per cent of the total). Of the three sources of finance, viz., non-bank, bank, and self-finance the last is expected to contribute the major share (69%) of the domestic effort and 59 per cent of the total finance.

Table V
Financing of Private Investment

	(Rs. billion)	Percentages
Total Investment	62.0	100
(A) Foreign Loans	10.70	17.26
(B) Domestic Resources	51.30	82.74
(i) Institutional non-bank	4.0	6.45
(ii) Bank Credit	12.50	20.16
(iii) Internal Savings	34.80	56.13

Source : Fifth Plan. P. 49

- (i) The desired target of increased Private savings appears to be conditional upon the parallel increase in the private investment. A shortfall in one will be accompanied by a decline in the other.
- (ii) Moreover, a fall in private investment will also have adverse effects on Balance of Payments, thus adding to the over-all financial difficulties.
- (iii) As revealed by these figures, domestic savings make 10.8 % of G.D.P. for the entire plan period or maintaining annual compound growth rate of 18 per cent. Keeping in view the population growth rate of 3 per cent and a reasonable

depreciation figure of about 4%, the saving ratio should rise at a still higher rate to achieve a higher net-saving-ratio.

- (iv) The possibility of meeting the domestic saving ratio target will be conditional upon the incomes policy, especially in the agricultural sector, and also on the investment climate. A review of agricultural commodity pricing with an upward bias will be needed to ensure achievement of saving targets- as this will also stimulate private investment in agriculture.

Public Savings :

The central problem in this case would be the non-inflationary transfer of part of private savings to the public sector. The objective of the plan is to reduce inflationary bank financing to almost nil. The main issue, thus, remains that of public sector savings.

Of the total public sector development programme of Rs. 128 billion (excluding Rs. 20 billion to be directly financed by public corporations), a sum of Rs. 71 billion will be financed through domestic resources. Balance sum of Rs. 57 billion is proposed to be financed by external resources. Therefore, in order to reduce dependence on bank sources of finance a genuine effort is required to mobilise voluntary savings. The plan estimates a total limit of bank borrowing at Rs. 10 billion. Resource mobilisation on the basis of existing tax and subsidy policies is estimated to be Rs. 34 billion. Hence mobilisation of additional resources to the extent of Rs. 27 billion appears necessary.

At the same time the monetary expansion is planned to be only slightly higher than the G.N.P. growth rate. Genuineness and practicality of this goal is yet to be ascertained. Judging by the base year record of deficit financing the prospects of tight monetary policy are quite slim. An effective inflationary finance requires internal mobility of factors of production. This flexibility is largely technological. Absence of flexible industrial structure, and L.D.C's dependence on the resources and technology from abroad, put a limit to the mobilisation of resources through inflationary methods. In the case of Pakistan too inflationary finance used as a means of shifting resources from consumption to investment has proved to be useless. This process has misdirected

savings and encouraged inefficient production. Thus non-inflationary steps will have to be taken to mobilize additional sum of Rs. 27 billion. They are: (i) increasing tax revenue. (ii) increased surplus generation by public corporations; (iii) reduction in subsidies; and (iv) reduction in non-development expenditure. Among these, tax policy revision and its application for this end needs maximum consideration. There is no denying the fact that the significance of tax policy is derived from the achievement of allocative aims and stabilization of economy. The problem from planning standpoint becomes that of how tax structure be used to stimulate growth? It is a matter of common knowledge that every plan has its dynamics. In other words past and new projects effect the time sequence of growth of national income and the growth of taxable capacity. Making too large a plan is likely to create problems of taxation and of raising resources. Hence the first fiscal goal for the plan period and beyond should be maintainance of cost-price relations that favour rising production.¹

These policy instruments can be used in this respect, namely, indirect taxes, subsidies and rate of exchange. From the viewpoint of revenue collection there is always some margin to raise direct and indirect taxes in L.D.C's. As for the yield of direct taxes (both personal and corporate) in Pakistan, it has not increased with incomes: from 2 per cent of G.N.P. at factor cost (and 2.5 per cent in 1971-72 their yield has fallen to 1.3 per cent in 1974-75. Substantial increase in tax collection in 1975-76 has only brought it to 1.5 per cent level. In 1977-78 there was only a marginal improvement of Rs. 10.55 crore or 4.1 per cent in direct taxes. Thus there is a clear case for raising direct taxes for resource generation.

On the other hand indirect taxes increase is bound by many limitations. In the case of Pakistan indirect taxes increase would not offer many possibilities during the plan. While revenue considerations are important in the choice of fiscal instruments, they can not override the impact on production incentives without, of course, at the risk of economic growth.

Alongwith the objective of increased revenue and somewhat stable prices the fiscal policy will also have to provide adequate protection to some industries and appropriate incentives to export biased industries.

1. Stolper, W.F: Planning without Facts, 1966.

Against the background of Balance of Payments developments in 1977-78—the most important of these being a sudden increase of 90 per cent in home remittances—the future state of balance of payments can be assessed by the following factors. First, how far output and exports of cotton products recover from the low level of previous years. Second, what gap of wheat demand is to be covered by imports in the next five years. Any optimism about autarky in wheat is to be weighed against the uncertainties of agricultural yield. Figures of wheat production in 1977-78 indicate a serious shortfall, much below expectations of planners.² The carry over stocks of previous year (1976-77) and the procurement from 1977-78 crop were just about enough for six months. The problem will be compounded if wheat is available at higher prices in the international market. Leaving aside the prospects of food aid, wheat supplies alone are likely to cause a big drain in the foreign exchange. This apprehension is based on two factors: (a) that wheat demand in Pakistan is price and income inelastic and population pressure is continuously increasing,³ and (b) world prices of wheat and edible oil have shown almost violent upward trend in the recent years. Finally, any unforeseen drain on foreign exchange would force short term borrowing, which will further increase the debt burden.

The fifth plan at least makes a realistic estimate of expected sharp increase in the debt-servicing charges which is attributed to the expiry of debt rescheduling in 1978-79, obtained from the consortium countries. Consequently the first years current deficit is estimated at Rs. 1150 million, i.e. Rs. 350 million higher than in 1977-78

The average deficit on balance of payments during the Plan period will rise from \$ 800 million (1977-78) to \$ 1000 million. The only hope of relief in this period remains home remittances. But this is a quite uncertain factor to be relied upon. Thus, the rational approach to solve this problem would naturally be improving the ratio of exports to imports.

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2. Govt. of Pakistan : Finance Division. Economic Analysis of the Budget 1977-78.
 3. Zafar Mahmood : Income and Price Elasticity of Demand for Wheat: (Un-published study of Economic Research Institute, Lahore, 1978.)

Table VI
Summary Balance of Payments (\$ Millions)

	1977-78	1982-83	Plan-Average.	Annual compound Growth Rate.
Merchandise Trade	-1503	-1614	-1659	1.4
Exports	1306	2200	1898	11.0
Imports	2809	3814	355	6.3
Current Invisibles	+711	+622	+622	-2.7
Payments	831	1271	1127	8.9
Receipts	1542	1893	1749	4.2
Capital Account	+792	+992	+1037	4.6
Payments	322	403	471	4.6
Receipts	1114	1395	1509	4.6

Source : Fifth Plan. P. 53.

Judging by past performance, there appears to be little room for optimism about export performance. According to official estimates the exports of Pakistan between 1973-77 stagnated in real terms (the average annual rate of 9 per cent was mainly related to world inflation). Firstly, substantial export surplus will have to be generated in the future. Competing claims of increased consumption (per capita consumption will increase by 3.4 per cent per annum) will make achievement of above mentioned objective quite difficult, especially in the case of agricultural commodities. Secondly, a realistic way to partly circumvent the relative changes in international prices of Pakistan's exports would be reduction in internal inflation. Little honest effort has been made so far to curb inflationary finance in Pakistan. The base year (1977-78) figures of deficit financing amply support this contention. Compared to a deficit of Rs. 2227.7 million in 1976-77, the deficit met through deficit financing in 1977-78 was Rs. 3860.2 million.⁴ Possibilities of a radical policy change in resource mobilisation effort are quite remote. A part of the domestic savings requirements can possibly be met through inflationary forced savings and the rest by public sector's bank borrowing.

4. Govt. of Pakistan : Finance Division : Budget Summary : 1976-77. and 1977-78.

Foreign Aid and Investment.

These apprehensions are supported by the fact that a large deficit in plan estimates is left to be covered after accounting for capital inflows. The average plan requirement of capital inflows from abroad is \$ 1.5 billion per annum, allowing for repayment of loans received in the past. The anticipated aid inflows average \$ 1.2 billion a year.

TABLE—VII
AID REQUIRED AND LIKELY AVAILABILITY (\$ Millions)

	1977-78	1982-83	Plan Average.
Project Aid	663	1000	900
Food Aid	92	50	100
Commodity Aid	196	200	200
Total :*	951	1250	1200
Required	1114	1395	1509
Gap	163	145	309

Source : Fifth Plan. P. 56.

*Excludes IMF Trust Fund and short term Borrowing.

This table and the investment figure reveal that aid requirement as a percentage of total investment comes to about 70.3 per cent—that too, excluding capital to be obtained from IMF Trust Fund and and short term borrowing. Contrary to the objectives of the plan, dependence on external resources is not likely to be reduced compared to the previous years. According to the revised estimates for 1977-78 the total external resources used were Rs. 8864.89 million,⁵ while the average annual estimated requirements for the next five year comes to Rs. 1.5 billion which might even be exceeded on account of short term borrowing for essential imports. Containment of current deficit is planned to be covered by export promotion along with import substitution in food and other essential items. Import substitution of food, appears to be a difficult and rather wishful goal to achieve, unless the government can offer requisite price incentives to the producers. By any standard, failure to achieve this goal will upset the entire financing schedule.

(5) Govt. of Pakistan : Finance Division : Estimates of Foreign Assistance : 1978-79.

On the other hand, the prospects of non-food commodity aid are also limited. It is believed by the planners that the shortfall in commodity aid will be off set by project aid availability. Uncertainty of aid in terms of time and volume, once again borne out by suspension of U.S. aid in the first year of the fifth plan, should have been taken note of more seriously. On top of it, gap is planned to be covered through rescheduling of debt liability—a programme with obvious risks. In the final analysis, if the planned financing schedule can not be smoothly carried out then commercial borrowing would become inevitable. Such a measure will add to Balance of Payment pressures and might defeat the major objective of the plan, namely, self-reliance along with self sustained growth.

Strategy for Agricultural Modernization in Pakistan and Role of ADBP

*Dr. Abdul Matin**

The agricultural sector in Pakistan is multisegmental. At the one extreme is the traditional farming where millions of families working on small units cultivate land primarily for subsistence purpose and only marginally for market consideration. Here the yields are low and stagnant. The technology is primitive. Investment per acre is nominal. The capital equipment consists of customary tools and implements. Little or no chemical inputs are bought. Conventional seeds are sown. Natural manure is applied. The organization of work and cultural practices is generations old. Family labour and animal power are the main sources of all operations. The availability of institutional credit is insignificant if not non-existent. The market surplus, if any, is sold to the assembly merchants who make the purchases at prices much below the warranted level. The general physical infrastructure and institutional setting in this segment are neither geared to expanded output nor to efficiency of production and change. The milieu is non conducive to progress.

Whether these farmers are located in the Barani areas or hilly tracts, arid zones and sailaba places, their problems are common. The environmental bottlenecks coupled with and compounded by the financial, technological and institutional constraints suppress and depress the possibility of and tendency to raise investment, initiate modernization of farming and increase production. Consequently the cultivators lead impoverished lives. They are engulfed in the vicious circle of perpetual poverty and static economic equilibrium. By virtue of their resignation to the prevailing state of affairs nothing gets done individually or collectively for the introduction of dynamism into the situation. Plan after plan and decade after decade the parameters and variables of the entire system remain the same.

* Chairman, Agricultural Development Bank of Pakistan, Islamabad.

Their problems go by default. In fact they stay out of focus. At present there is no mechanism for inviting the attention of the policy makers to their maladies. The injustices to which they are exposed do not constitute stimuli for the rest of the society. After all violence, demonstration, protests and slogans are alien to these people. They carry on their way of life in the customary fashion without ventilating any grievance or making collective complaint. Few therefore take notice of their fortune or worry about what is to be done to initiate change.

In contrast to the traditional segment there is at the other end a modern farming community who operates large and medium size farms on commercial scale. The output is market oriented. Production is diverse, flexible and responsive to the changing pattern of demand and pricing policy. Cultivation is capital intensive. The cultural practices are substantially mechanized. The operators are skilful. The decision making process is based on cost/benefit considerations. It is serviced around.

The advanced segment is buttressed by an array of four inter-related facilities, namely;

- (i) Input industries and a systematic delivery system of improved seeds, chemical fertilizers and plant protection measures.
- (ii) Arrangements for the supply of mechanical power such as tractors, tillers, bulldozers, threshers, shellers and miscellaneous mechanical devices.
- (iii) Organized marketing network and official procurement of major produce together with the facilities for warehouses, storage, grading, processing, preservation and packing of material. And,
- (iv) Availability of institutional credit both for fixed investment and working capital requirements.

Although these facilities and arrangements are characterised by numerous imperfections but the existence of a modicum of infrastructure and development promoting milieu make for continuous change and improvement. The progressive farmers are vocal and articulate. They have the consciousness and capability to draw the attention of the Government to their difficulties and to pinpoint

the deficiencies of the current policies and short-comings of institutional practices. There is thus an in-built mechanism to prompt perception of the urgency and keep up pressure for the mitigation of the bottlenecks encountered by them. They get proper hearing and preferential treatment in many respects. The network of incentives and lubricating measures is brought into play for triggering their entrepreneurial abilities. The approach to their problems is, however, incremental and adhoc rather than structural and systematic.

In between these two extremes are found farmers who are in the stage of transition. They have successfully initiated some elements of the biological, chemical and engineering technology and are receptive to further changes. The old ways are being gradually abandoned and new opportunities are availed. The production of cash crops is increasingly taken in hand. The motivation to raise output is translated into imitative innovations and marginal improvements. They are, to a limited extent, alert to the pace set up by the progressive farmers. Depending upon the background knowledge, previous reinforcement, resource position and credit availability they show the tendency to catch up when feasible. For them progressive farmers constitute a reference group. An identity of interest is perceived with them. They tacitly back up whatever demands are projected by the leading group. This intermediate group constitute the core potential for radiating change to the traditional segment and acts as a vehicle of adopting tried and economically proven innovations by the progressive farmers.

In view of the close interaction between the progressive and intermediate groups and exposure of the traditional segment to the transitory one the whole agricultural sector thus form an interlinked system where a change in one part is capable of having an impact on the other, however, remote or indirect that influence might be. The moving part of the system as an integrated unit is the agricultural policy framework and operational programme including credit and all the projects and activities periodically designed to push it forward in the direction. Since the option of operating on one segment at a time with the expectation of automatic spread over or trickle down of dynamism to the other segments is in the short run unreliable and entails polarization of rural people and

generation of inequities and tensions, the alternative course to work on all the fronts simultaneously with a definite set of priorities and preferences contains greater promise of balanced and orderly development of the desired tempo.

Thus viewed the task of development is threefold. The first move in the desired direction is to induct the traditional farmers into the mainstream of modern agriculture. The small cultivation units need to be turned into viable and more productive entities. To this end the flow of institutional credit, technical assistance and supplies of inputs is to be extended to them. The system of supervised credit is to be brought into play on their farms. The practice of spot loaning and system of village banking need to be pressed into service for their benefit. A chain of farm service centres are to be organized in the hinterland to cater to the requirements of small farmers. Their weak holding and bargaining power is to be improved via the formation of cooperatives, farmers associations and linkage of credit with marketing of cash crops. The fixation of reasonable prices both for inputs and output is crucial in getting them involved in an exchange economy. The whole package is to be regarded in the initial stages as promotional in character. It cannot be selfliquidating right from the beginning. The charging of preferential interest on institutional credit with possibilities for rescheduling of debts with a grace period seems to be particularly advisable. The establishment of a Special Cell in the Ministry of Agriculture for purposes of identifying and projecting their problems and view points is necessary to keep them in focus. Our national sense of justice and dictates of harmonious progress make it obligatory to help solve their handicaps.

The second element in the task is to step up the pace, extend the coverage and enlarge the scale of activities on the part of intermediate group. The role of this class of farmers is vital both in the spill over of progress to the traditional segment as well as accelerated adoption of tried technology in the agricultural sector as a whole. As late comers into the field of innovations they are normally deprived of the advantages which the pioneers have had of an earlier start. Experience reveals that whether it was the installation of tubewell or tractorization of farming or supply of inputs etc the pioneers had an edge in pricing, subsidies, support services and other terms and conditions of transaction over the late comers. The initial zeal for the introduction

of novel things normally prompt the Govt. to institute facilitatory concessions which are subsequently withdrawn or curtailed. This group is thus denied the gains arising out of prior set of incentives.

To ensure the continued uptake of new varieties of crops, improved animal breeds, chemical fertilizers, mechanization of production, internalisation of better methods of farm management and appropriate irrigational practices the late comers are to be allowed the same facilities and incentives which were enjoyed by the pace setters. The rapid and frequent discontinuation of the incentives and concessions tend to halt the vary process of change brought about with great difficulty. The feedback from the experiences of the progressive farmers should be used to lubricate the efforts of those who follow the same path. It is short sighted to get envious of those who succeeded in raising income through positive efforts and then deny equal opportunities to others to try the same. The perspective of development economics need to be combined with budgetary considerations by the fiscal authorities in order to appreciate the totality of consequences from the maintenance or withdrawal of incentives from those who pick up the thread a little later.

The final component of the task is to strengthen and reinforce the innovational and pace setting activities of the progressive farmers. They are the torch bearer and catalyst of agricultural transformation. Their role in fostering new techniques of production, better rotation of crops, multiple cropping and suitable use of input package is really indispensable in sustained progress. The breakthrough in the stagnant agriculture was achieved through their entrepreneurial abilities and the prospects of continued surge forward are linked with their zeal, incentives and committed backing by the Government. The difficulties and obstacles in their way need to be therefore constantly surveyed and set aside in order to permit and promote continued innovations.

It is the mark of a dynamic society that the growth agents are rewarded and encouraged. The price for innovation is willingly paid. There is no impulsive reaction to the affluence of those who make it up by sheer hard work, vision and risk. The supreme interest of the society is the governing principle of policy making apparatus and decision making bodies. The commitment to rationality, efficiency and excellence of performance is over riding. No

society has so far recorded sustained progress without an atmosphere evoking creative faculties of members and placing premium on initiative, socially desired investment and contribution to technological progress. A forward marching economy stimulates the basic motivations of men and women for taking up and leading the cause of modernization. We in Pakistan have to learn from and act upon the relevant experiences of those who have gone through the process of progress.

Given a favourable setting, the talent and expertise of the progressive elements can be mobilized for :

- (a) The maintenance and spread of green revolution.
- (b) Realisation of maximal benefits from the crops produced.
- (c) Extension of new technology to the Barani areas, Hilly tracts, arid zones and sailabla places. And
- (d) Installation and expansion of Agro-serving industries.

A broad list of the projects, activities and equipments in which the progressive farmers might be interested to invest is annexed. The fiscal, commercial and financial measures can be brought to bear on the undertaking of these schemes and utilization of promising opportunities for the transformation of agriculture.

Objectives

The magnitude, sequence, allocation of resources and implementation of the three frontal task is to be determined in the light of the following set of dominant objectives in order to make the operation macroeconomically more meaningful and adequate.

1. Initiation and sustenance of agricultural growth rate of 5 to 6% per annum.
2. Diversification of farming with particular emphasis on the achievement of self-sufficiency in food grains, increasing export surplus of rice, cotton and tobacco, and greater production of protein rich foodstuffs such as pulses and dairy and poultry goods.
3. Generation of new employment opportunities enough to absorb landless worker and minimize disguised unemployment and under-employment.

4. Ensuring distributive justice in developmental benefits through fair pricing of farm produce, elimination of exploitation by middlemen, containment of the cost of inputs used by the farmers and widespread regional dispersal of investment and credit.

Strategy.

Now the question is how to set in motion the process of achieving these objectives.² Evidently by operating upon the three main-springs for growth in production and efficiency of productivity. The variables of 'area effect' 'cropping intensity effect' and 'yield effect' are to be manipulated to get going in the desired direction.

In so far as area effect is concerned the opportunities for the expansion of cultivated area, reclamation of land and conservation of soil are very wide and should be availed. A rough estimate shows that 70 million acres is potentially suitable for agricultural production in Pakistan. The cultivated area is now 44.43 million acres. This can preferably increase at about 2.5% per annum in order to maintain the existing rural man : land ratio. Here the crucial factors are water resource development and farm power supply. It is necessary that a sound portfolio of projects for the end in view is firmed up, properly funded and vigorously implemented. The process of increasing arable land is costly, long and time consuming but necessary in the context of our conditions.

Besides the area effect there are vast potentialities for increasing agricultural production through double cropping. The intensity of land use can be raised from 88% to 120 to 130% through the extension of assured irrigation facilities, sound water management and availability of required power and implements. The currently low cropping intensity is one of the major factors in small production, and meagre farm income.

In the total cultivated area of 44.43 million acres, some 35.14 million acres of land is irrigated during the Kharif and Rabi seasons while the balance of 9.29 million is rainfed. The irrigated land is not wholly double cropped because of the scarcity of water. The cropping intensity on it is only 94%. The Barani land is sown only once in a year. The cropping intensity on it is 71%. Double cropping is not feasible without the extension of irrigation facilities to it.

To facilitate the prospects of double cropping on all the irrigated land and to extend irrigation network to barani area and bring new land under cultivation, additional water is necessary. It is, therefore, desirable to explore the possibility of increasing water availability from all sources, say, at the rate of, about 3 to 4% per annum. There are three ways for the purpose.

The first is the early completion of the Chashma right bank and Pehur canals in NWFP, full utilization and extension of Patfeeder canal in Baluchistans, construction of the proposed Kalabagh Dam and Jalalpur Canal in Punjab, build up of Manchar and Chotiari reservoirs and Hub Dam in Sind together with the completion of the projects envisaged for the Federal area. This would increase the withdrawal of water from the three western rivers and their tributories which stand at 96 MAF at present. The extra withdrawal of water is possible. The entire utilizable surface water supply of western rivers is 116 MAF. But during the past decade the level of canal withdrawal in the country has remained almost stagnant. It has fluctuated around 96 MAF. The full utilization of the 9.3 MAF utilizable capacity of Tarbela storage in due course and the completion of the various on going and proposed projects would not exceed the limit of feasible withdrawal. The activation of efforts on this score holds prospects of rich dividends.

The second course is to improve the present efficiency of irrigation system which is hardly 50%. This can be done by :

- (a) Minimization of water loss estimated at 36% during the course of conveyance from the canal head to the farm gate. This means saving of about 30 MAF. The control of huge water conveyance loss is feasible via conservancy measures such as lining, prevention of seepage, improvements in design of outlets and standard maintenance of canals. The vertical drainage will not only curtail the loss but also help eradicate water logging and salinity which annually takes out of cultivation about 40 to 60 thousand acres of land. And
- (b) Elimination of the water on the farm which is estimated at 15% of the total water received at the farm gate. This requires sound farm management and is possible through proper alignment and maintenance of water courses, levelling of the fields and cultivation by furrows and basin techniques.

The third course of action is the underground water utilization. There are currently 1,39,000 tubewells in the private sector and 10,000 in the public sector. The former pump out 25.17 MAF water for irrigation purposes while the latter are designed for controlling water logging and salinity. The underground sweet water availability allows the doubling of the number of private tubewells. It is both feasible and profitable to stretch out the network of such tubewells at the rate of about 5,000 to 6,000 per annum until the underground water is fully used up.

While recognizing the importance of tapping water resources and managing the irrigation system more efficiently the dominant thrust for increasing production has to be on, 'yield effect' front. This centres around the provision of strategic inputs and services. In common with the Area effect and land intensity effect, it also requires the requisite availability of regular water and farm power. To raise yield it is therefore necessary to operate upon the following three variables :

- (1) Input Package
- (2) Farm Power
- (3) Water availability

Input Package

- (i) Here varietal changes and extension of area under improved seeds is most significant. The traditional seed has low output. The sustained increase in acreage under high yielding varieties having greater viability is the first essential step in raising output. The quantity of improved seed for major crops need to be increased at 15% to 20% per annum in order to cover the whole of sown area over a reasonable period of time. The multiplication of foundation seed into certified seed by progressive farmers present little technical constraint. The problem is essentially of subsidizing the procurement at reasonable level and distributing the artificial seed among cultivators. In the interest of food self sufficiency one may realistically project 85% to 90% coverage of wheat in irrigated areas during the next five years. Similarly progressive escalation of the area under improved seeds for cash crop must be fixed and an action programme accordingly chalked

out. The cotton crop requires particular attention. The revival and greater production of cotton is linked with constant innovation in biological technology. To get optimal effect the improved seeds should be chemically treated against seed and soil born diseases before supply to growers.

(ii) Extension and improvement of fertilizer application. The fertilizer use at present stands at about 31 nutrient pounds per cropped acre. Apart from the low doze the farmers have a tendency to use it in an unbalanced proportion. Reliance is placed primarily on nitrogenous fertilizer while phosphatic and potassic are ignored. The N:P ratio actually used is 7 : 1 as against the recommended ratio of 3 : 1 depending upon the nature of the soil. It is possible and desirable to increase fertilizer use at 15 to 20 per annum and promote balanced use. Planned domestic production and import of fertilizer allow the surge forward. The availability of water can be programmed for the purpose. The distribution system has already been streamlined to some extent. Despite high prices the benefit input rate from fertilizer application is favourable. It is in the range of 2 : 1 to 6 : 1 depending upon the crop grown. Cotton and sugarcane yield the highest ratios. The demand is therefore rising. When used in correct proportions, fertilizer in combination with other inputs provides the key to the sustenance of green revolution. It is therefore desirable to aim at 80 to 90% coverage of the cash crops area and embrace 70% of the food grains acreage in a balanced manner at the shortest possible time.

(iii) Enlargement and improvement of plant protection measures. Presently the use of pesticides per cropped acre is around 0.25 pound. It must be increased by 10 to 15% per annum in order to minimize the loss of output resulting from insects, pest and diseases. To do so the federally administered aerial plant protection operation need to be stepped up for all those crops where the scheme is successful. Wherever aerial operations are not effective ground operations must be brought into play. The two operations must be properly coordinated. The major

bottlenecks of ground operation specially the supply of equipment and material should be attended to. It is high time that the spread of diseases and pest attack are arrested and the infected areas are saved from the tremendous damage caused to the silver fibre. One should aim at covering about 70 to 80% of the area under cotton and 50% of the area under other cash crops during the next five years. The target for food grains coverage should be around 60% of the area.

The new seed, chemical fertilizer and plant protection package is neutral with respect to size of holding. The package can be applied by small as well as big farmer. It promises an opportunity for all to participate in commercial production. The results are immediate. No risk is involved in the process. The return is certain and positive. There is no need for going through a prior complex training in its proper use. The knowledge about it is already there. Motivation to do so is found. Necessary finance for the purpose can be institutionally made available. The credit institutions are as a matter of fact actively engaged in it. The ADBP as well as Commercial Banks have made a break through in mitigating the financial constraints of the farmers in applying the package. The accelerated progress is essentially a question of organizational outfit and planned physical supply and marketing system for the package. A big move is called for on the input package front.

Farm Power

Apart from the input package planned increase in production necessitates the requisite supply of farm power. There are two main sources for the end in view. The first is draught animals and the second is mechanical power. The Farm Mechanization Committee estimated in 1970 that the sources put together provide about 0.1 H.P. per acre. This might be an underestimate of the reality of the situation. According to the calculation of the Planning Commission the farm power availability in 1976-77 is 0.18 H.P. per acre. This includes the power available from the tubewells which supply as much power to-date as the entire animal stock put together. Whatever estimate we take as a point of departure the existing farm power is insufficient for proper cultivation, introduction of suitable cultural practices and growing demands of green revolution. It acts as

a constraint on the growth and modernization of agriculture. Double cropping is impeded on account of the scarcity of farm power. Serious shortage of labour are particularly experienced during the peak seasons of sowing and harvesting operations. The deficiency of power must be removed.

The recommended minimum level of farm power for the developing countries is estimated to be 0.2 H.P. per acre. The same level is postulated for Pakistan.

To reach this minimum level we have the following options :

- (a) To increase the stock of animal power from the existing level of 7.5 million heads to say, 10.5 million head in a phased manner.
- (b) To induct mechanical power on the required scale and bridge the existing as well as future gap.
- (c) To increase both animal and mechanical power at a pre-determined rate and the ratio gradually increasing in favour of mechanical power.

Evidently the desired increase in animal power is neither practicable nor economical. The existing growth rate in the stock of draught animal is hardly 1% per annum. It cannot be easily stepped up. An increased use of animal power even if somehow made physically possible is highly uneconomical. The fodder and maintenance cost make the whole proposition financially unsound. Neither the economy nor the individual farmer can afford to foot the bill. It is estimated that the annual maintenance cost of a pair of bullocks is around rupees four to five thousand. The total expenditure on the operational cost of additional 3.0 million bullocks per annum would be Rs. 1500 crores, An outlay of this magnitude on recurring basis is clearly beyond the capacity of the farmers as well as the economy. The farming sector simply does not have the necessary economic surplus to take up such a gigantic project of raising and maintaining the flock of additional 3.0 million draught animals. The required land for fodder production cannot be spared.

The alternative under the circumstances is to rely on the introduction of increased mechanical power. Pakistan is in fact doing so. At present the annual import of tractors is around 15 thousand and the figure is projected to increase year by year. But the existing supply of tractors both from imports and domestic assembly considerably falls short of the annual requirement which we estimate to be in the range of 20 to 25 thousand tractors per annum. This can be seen from the fact that the cultivated area in the country is 45 million acres. Assuming that the current farm power is actually 0.18 H.P. and it is to be increased to the minimum required level of 0.2 H.P. the additional power requirement comes to about 1.0 million H.P. This means an addition of 20 thousand tractors of 50 H.P. each per annum. This coupled with the growing replacement need of about 4 to 5 thousand tractors justifies both the accelerated increase in imports from abroad as well as the expansion of local assembly plants and manufacturing units. The total supply of tractors per annum should therefore be around 25 thousand in order to overcome the farm power constraint in cultivating the existing area more effectively.

While indicating the requirement of 20 to 25 thousand additional tractors per annum it is not necessary that tractor as such of 45 to 50 H.P. should be exclusively imported. The important thing is to eliminate the farm power deficiency. This can perhaps better be done through a sound combination of tractors and power tiller import. The benefits of tractorization primarily accrue to the big landowner. Small farmers by and large do not have the ability and credit worthiness to purchase tractors. Hence to accomplish the twin objectives of supplying sufficient farm power and to channel the gains of mechanization to small farmers the import of power tillers of 10 to 15 H.P. and rice transplanters in increasing quantity may be favourably considered. Power tiller is found to be economical. Farmers will go in for it with the passage of time on an increasing scale. The same is the case with rice transplanters. The actual number of both the machines to be imported may be periodically determined in the light of demand projections and farmers acceptability. Three to four thousand would be a safe number.

Whatever the combination of tractor, power tiller and rice transplanter import the elimination of farm power gap is essential

to sustain progress in agricultural modernization. The realization of favourable yield effects are linked with the adequate availability of farm power.

To reap the full benefit of farm mechanization it is advisable to plan the production of thrashers in harmony with increased tractorization and power tillers availability. There is pressing need for mechanical threshing. The conventional method of harvesting, threshing and winnowing is costly, time consuming and involve loss of grain of about 2%. It subjects the completion of the processes to the vagaries of weather. Mechanical threshing, on the other hand, is cheaper, quicker and popular. It fits in with tractorization and increases the utilization period of tractor by 150 to 200 hours per annum. At present only 11 to 15% of the grain is threshed mechanically. It would be desirable to extend the operation in a phased fashion for greater efficiency and reliability of the work. The number of threshers must be preferably increased by 3 thousand units per annum.

The elimination of farm power deficiency and import of tractors and power tillers together with threshers in right proportion is necessary but not enough. These machines are used for seed bed preparation and other on farm operations and post harvest activities. They cannot be utilized for heavy earth work, bund construction and land reclamation. That require bulldozers. Since an addition of 3.37 million acre of double cropped land is foreseen for the plan period the required number of bulldozers must be imported. There is considerable shortage of heavy earth moving machinery in the country and it would be essential to import at least 200 to 300 bulldozers on the average per annum to do the job.

Water Resource Development.

Besides input package and adequate farm power increased yield is dependent upon proper irrigation of crops. The supply of water for irrigation purposes comes from surface and ground water sources. The two put together provide 101 MAF at farm gate. This means 3 acre feet of water per year for the 35 Million irrigated cropped area. This availability is both inadequate and irregular. It acts as the biggest constraint on double cropping. Similarly the shortage, untimely and often the non-judicious use of water obstruct the realization of maximal yield effect. The adverse repercussion on

cropping intensity and productivity are magnified by the rapid spread of salinity and water logging as a result of the defective water management and control of the scarce irrigation facilities. It is estimated that currently the water supply per cropped acre roughly fall short by 30 to 35% from the desired level for optimum yield. To cope with the problem the farmer resorts to the spreading of the available water which is of no avail.

The solution of the problem actually lies in :

- (a) The increase in water availability at the canal heads, reduction of loss during the transit to farm gate and efficient on-farm management of the water. This is the responsibility of WAPDA and provincial irrigation Department. They may be advised to chalk out an operational programme for the purpose. The possibility of increasing water from this source at 2.5 to 3% per annum need to be actively pursued.
- (b) The fuller utilization of the ground water resources through the installation of tubewells. It is estimated that the ground water aquifer is recharged between 4 MAF to 60 MAF per annum. The present pumpage capacity is around 25 MAF. This can be easily increased to around 50 MAF. The programme for tubewell in both the private and public sector need to be invigorated. The time lag between installation and energization must be eliminated to make prompt use of the investment.

The Agricultural Enquiry Committee* in its report has referred to the significance of water resource development, identified the major problems in the field and given a set of recommendations for the purpose. Similarly the draft Fifth Plan has gone in depth into the problem and suggested a detailed operational programme. We strongly advice the speedy implementation of the measures and projects indicated in both the documents with suitable modification and rephrasing in the light of feed back.

Role of ADBP

It is significant that both in the minimization of farm power shortage as well as allevation of underground water scarcity the

*Agricultural Enquiry Committee Report of the Working Group on Land and Water Resources, Government of Pakistan, Ministry of Food and Agriculture, Islamabad, April, 1975.

ADBP is in picture. The Bank is the single largest supplier of agricultural credit in the country. With a network of 174 branches run by experienced personnel the bank is the main financier of farmers. It provides funds for the uptake of modern technology, application of chemical inputs, tapping of underground water resources and miscellaneous activities including diary farming and poultry farming construction of storages and warehouses etc. The supply of credit is designed to mitigate the capital constraints encountered by farmers in raising productive investment, increasing output and diversifying operations.

The Bank has played a pioneering role in the mechanization of agriculture, expansion of poultry farming, orchard development and modernization of fisheries. It alleviated the problem of farm power shortage through the funding of accelerated tractorization. Out of 86507 tractors imported into the country from early nineteen sixties to 30-6-1978, 41446 were financed by ADBP. Similarly, 43014 tubewells were financed. A network of minor irrigation projects was pushed through. It was the ADBP which initiated the process of the mechanization of Fisheries. The first mechanized trawler was purchased out of the bank loan. Subsequently, the fleet of 129 trawlers, now operating along the Karachi and Mekran Coast, were funded out of the credit given by the Asian Development Bank. The same story holds true in the field of modern poultry farming. Beginning with the financing of ARBOR ACRES, the ADBP extended its helping hand to most of the major commercial firms engaged in the business. The Bank has by and large taken a leading role in meeting the credit requirements of Development Areas like Guddu, G.M. Burrage and Thal. Its contribution in the grow-more-food campaign is well known.

So far the Bank has serviced more than 8 lac farmers all over the country with a total lending of Rs. 385.63 crores. The data on the flow of credit to different categories of farmers reveal that on the average landless cultivators got 14.1% of the disbursements. Farmers owning less than 12.5 acres of land received 12.5%. Persons having land between 12½ to 50 acres obtained 39.9% of the total loan. Landlords having 50 to 100 acres borrowed 21.7%. The share of individuals owning 100 acres and above was 8.2%. The residual of 3.2% went to Corporate bodies. This means that small

and medium size farmers were the largest beneficiaries of credit. They obtained 66.5% of credit.

The policy is to further increase the relative share of small and medium level farmers who constitute the backbone of agriculture in Pakistan. In fact the Bank is an arm of the Government for implementing the overall agricultural policy periodically formulated by the Federal authorities. The Bank's yearly targets pertaining to the size, composition and regional spread of credit are linked with the annual development plan for the agricultural sector. The operations are at present tailored to the objective of reviving the momentum gained in farm production especially output of food grains, cotton, sugarcane and other cash crops. This is done with an in built equitable dispersal of funds.

In view of the very important role of ADBP in financing agricultural progress its services must be utilized to the maximum possible extent. The Bank is the only institution in the country which has access to the small farmers. It has developed the necessary expertise over the years in servicing their unique requirements. The volume of credit advanced by the Bank should be, therefore, enlarged and geared more effectively to put them on the path of agricultural progress.

6. The Bank has the following specific schemes designed for financing the credit requirements of farmers :

- (i) Supervised Credit.
- (ii) Village Banker Scheme.
- (iii) Model Villages.
- (iv) Mechanized cultivation through Cooperatives.
- (v) General Loaning.

Objective of Credit

7. The supply of credit under all the above schemes is guided by the following objectives :

- (i) Increased farm production and rise in yield with particular focus on food grains, oil seed , protein rich foodstuff producers, as well as sugar beet, tobacco and cotton.
- (ii) Diversification of farming and increase in the income of small farmers via vegetables production, livestock breeding, Bee-keeping, sericulture, and inland fisheries etc.

- (iii) Promotion of distributive justice in the availability of credit and flow of benefit arising out of institutionally financed fixed investment and application of modern inputs.
- (iv) Evolution of self reliant small farming operations with minimal dependence on non-institutional sources of borrowing.
- (v) Recovery of the amount loaned and reinforcing viable functioning of ADBP.

Historically 60% of the normal loaning facility was used for the purchase of tractors and attachments and installation of tubewells. In view of the heavy investment involved in these items the beneficiaries were primarily owners of large and medium size farms. Now the intention is to shift the focus on the servicing of the peculiar requirements of the peasants having holdings in the range of 12½ to 25 acres. This is envisaged through the financing of power tillers, mechanized cultivation through cooperatives, improved tillage and harvesting equipments, fractional tubewells, lift pumps and flow pumps. Credit would also be advanced for land levelling and improvement of water courses. This is being done to improve the efficiency of the irrigation system and to minimize in particular the loss of water on farm and between the 'Mogha' and farm gate.

Project Oriented Credit

Apart from the regearing of general loaning a project oriented credit is proposed to be launched. The approach involves an integrated process of lending for planned increases in production, rise in productivity and storing and processing of produce. This would have built-in opportunities and scope for recovery of loans. The new line of action is not a breakaway from the traditional lending procedures. It simply adds a new dimension to them. The idea underlying the strategy is to finance on an increasing scale self-liquidating schemes designed for raising fixed farm investment, boosting up production of specific crops and installation of agro-based and farm serving industries. Agricultural transformation and rise of farm income with distributive justice are the ends in view. For this purpose, major loans applied for under the scheme would be backed by preparation of feasibility report and

economic-financial analysis of project. The Project can be sponsored by individual agriculturists or a group of farmers. The Band would carry out detailed examination before sanctioning funds.

It is felt that the scope for the expansion and diversification of project oriented credit is very large indeed. In considering the path of diversification the following broad ranges of opportunities offer themselves. These are :

I. Maintenance of Green Revolution

The maintenance of green revolution calls for increased supply and timely delivery of key inputs such as improved seeds, fertilizers, better plant protection measures, elimination of farm power shortage, proper availability of irrigation facilities and changes in post harvest technology. To this end ADBP would dovetail lending operations with a comprehensive programme.

- (a) Expansion and improvement in the production of certified seeds so that continued extension of the area sown to high yielding variety is facilitated. The farmers engaged in organized seed production, multiplication, processing, storing and dissemination would therefore be suitably financed on a larger scale.
- (b) Coordination on credit activity with fertilizer supply corporations and technological extension departments in order to ensure proper utilization of the money advanced for manuring.
- (c) Supply of funds for purchase of pesticides, chemical spraying material and equipment with a view to promoting ground spraying.
- (d) Focus on special crops production projects such as food grains, cotton, tobacco, sugarcane, edible oil seeds and protective foodstuffs including dairy and poultry products. The linkage of credit with the end products would make our operations subservient to tangible outcome.
- (e) Priority treatment to special integrated development areas particularly the properly working network of IRDP markazes; and new land reclamation and settlement schemes.

- (f) Spread of mechanical farm power with a gradual shift from heavy tractorization to small power tillers, rice transplanters, combined seed and fertilizer, drill and land levelling equipment etc.
- (g) Financing the establishment of Machinery pools so that farm power equipments are available on hire basis to all those farmers who cannot finance the purchase of such machinery out of their own saving and borrowed money and their holdings do not warrant full time use of any particular machine,
- (h) Innovations in post harvest technology particularly the massive introduction of :
 - (i) Small portable mechanically operated wheat threshers, maize shellers, rice shellers, oil seeds shellers and drying equipments ;
 - (ii) Mechanical diggers for sugarbeet, groundnuts and other rooty crops ;
 - (iii) Chaff cutters, and
 - (iv) Pulse crushing plants. The innovation in post harvest technology can minimize crop losses and preserve the refined quality of the produce.

II. Realization of maximal benefits from the gains of green revolution.

To obtain maximal benefit out of the increased output resulting from the modernization of agriculture, the wastage and loss of produce subsequent to production must be minimized. For this purpose it is necessary to finance the following types of projects ;

- (a) Construction and keep up of warehouses and silos on scientific lines in order to check deterioration in quality and reduce losses in quantity of stored products resulting from pest- and physical degeneration.
- (b) Financing of cold storage for perishable products including fruits, vegetables, potatoes and onion etc.
- (c) Grading and packing of citrus fruits, dates and all those commodities which are exported.
- (d) Preservation of high valued fruits and vegetables through natural drying, desalting and fermentation, canning, freezing and irradiation.
- (e) Curing and fermentation of valuable crops like tobacco.

III. Extension of green revolution to Barani famers and Hilly areas

So far the Barani areas and Hilly regions have remained outside the sweep of agricultural progress. About 17 to 18 million acres out of the total cultivation of 47 million acres is for all practical purposes untouched by technological change. Neither the benefit of chemical nor that of engineering and biological technology have reached them. No improvement in the farm, range, arid zones or watershed management techniques are in evidence in these places. The people of Barani and Hilly areas live in conditions of dire poverty. Subsistence farming is their way of life. The primitive methods of production and stagnant output with wide fluctuation of yield caused by the vagaries of nature characterize their farming. They are deprived of institutional credit for developmental purpose. Their economy can be transformed through the financing of a sound portfolio of project covering :

- (a) Soil conservation through afforestation, watershed management, renovation of range land and pasture control.
- (b) Retention and conservation of moisture through the growth of crops suited to the soil
- (c) Digging of Ponds in small depressions where rainwater run off could be contained and subsequently used for irrigation.
- (d) Development of waste land, improvement of bunch terraces and build up of small flood control schemes.
- (e) Breeding of quality sheeps, goats and cattles.

In the hilly tracts there are bright prospects for :

- (a) Orchard development, progressive farmers in the field must be given credit for the purpose.
- (b) Livestock breeding, projects designed for cross breeding and cattle breed improvement should be financially backed up.
- (c) Bee keeping.
- (d) Sericulture.
- (e) Inland fisheries and.
- (f) Poppy replacing crops preferably growth of medicinal herbs, spices, plants used for flavouring purposes and organized mushroom production.

- (g) Life irrigation and shallow small size tubewells in the riverine areas.
- (h) Commercial utilization of wild plants and bushes particularly Mazgri for hand bags, fruit boxes, matting and rope making.
- (i) Wool scouring, silk reeling and weaving.
- (j) Wood seasoning Kiln, Saw Milling and Wood rosins.

IV. Agro-servicing industries

An increased production and higher and stable income from the agricultural sectors possible to the extent that incremental production is not hampered by insufficient demand, and an efficient marketing system is organized and farm produce are further processed for value added purposes. To this end in view the establishment, expansion balancing and full utilization of Agro-based industries is of paramount significance. They open up and enlarge the market for farm produce at stable and remunerative prices, provide outlets for the most profitable utilization of agricultural commodities and help improve quality of crops. Such industries not only contribute to agricultural output, value of the material, farm income and stability of earning but also establishes a nucleus for future industrialization. The integration of agricultural production with a net work of agro-based industries is therefore needed to have mutually reinforcing growth of both farming and processing and manufacturing industries.

So far the focuss of attention in the agrobased industries has been mainly on wheat flour, rice milling, cotton ginning and an assorted fruit processing and edible oil industries. These have had very limited linkage effects. Now that sufficient headway has been made in the installation of the simple units a shift is needed towards the development of more elaborate agro-based industries using farm products and by-products such as :

- (a) Animal feed complexes for catering to the requirements of organized dairy and poultry farms based on the mixture of sliced beet with molasses and corn. The sugar and sugar beet industries yield these by products in abundance.
- (b) Use of Bagasse for coiling boards and light weight heat insulating hollow blocks and particles board and paper.

- (c) Corn starch production and utilization of the by-products such as germs for corn oil and corn gluten for broiler feed.
- (d) Fruit canning, jam making, juice extraction from citrus, mango and other fruits, tomatoes extract and soft drinks.
- (e) Forest based industries including sawn wood, sleepers veneer log, match boxes, carts boxes. Boat building, cart making.
- (f) Manufacturing of Agricultural implements.
- (g) Tractors and tubewell workshops.
- (h) Khandsari plants and gur making.
- (i) Oil crushing and oil expellers.
- (j) Installation of plants for bons frit and bone meal.
- (k) Dal factories, chillies grinding machines.

Undoubtedly the tasks of identification, planning and policy design for the construction of agro-based industries in the private and semi-public sectors are outside the purview of ADBP. Our job is simply to mitigate one of obstacles in the way, namely, financial constraint encountered by the existing and future entrepreneurs in the field. The underlying assumption are that there would be no shortage of bankable projects presented for credit by reliable entrepreneurs and firms. The various public utilities and infrastructure necessary for the expansion of agro-plants are found or would be created with the rising requirement. The presupposition is that a sound economic policy designed for the motivation, stimulation and technical guidance of the enterprises is in operation and constantly reviewed for purposes of setting aside investment barriers and difficulties. The farmers and investors are responsive to the promising opportunities for gains from the uptake of new technology and investment in new projects.

The successful implementation of the strategy would, of course necessitate a positive demand creation role on the part of ADBP functionaries. They will have to keep vigilant eyes on credit worthy projects sponsored by persons or provincial development authorities and semi-public Federal agencies. A more active involvement would be called for in helping borrowers in the fulfilment of formalities, prompt sanctioning of loans, effective use and supervision of credit, timely supply of inputs and provision of technical assistance whenever possible.

Since the Bank has acquired deep roots in the rural economy and gained considerable insight into agricultural credit management it is capable of meeting new challenges. Being an arm of the Government the funding of the programme and strategy of agricultural development periodically designed by the public authorities is the responsibility of the Bank. It has to carry forward the task of farm modernization on the financing front. The performance of this function and the quality of services rendered by it would be greatly improved when the clientage including the traditional, progressive and intermediate category of farmers ensure efficient utilization of borrowed money and honour their repayment obligations to the institution. The claim for and provision of better credit facilities must be matched by corresponding servicing of debts in time. Here in lies the key to the transformation of agriculture and viability of the organization engaged in it.

APPENDIX I

PORTFOLIO OF PROJECTS FOR PROGRESSIVE FARMERS CATEGORY 'A'

1. Expansion and improvement in the production of foundation and certified seeds and the processing and storing of it.
2. Large scale production of crops such as food grains, cotton, tobacco, sugarcane, edible oil seeds and protective food-stuffs including dairy and poultry products and the purchase of tractors, small power tillers, rice transplanters combined seed and fertilizers drill, land levelling equipment and chemical spraying materials and equipment for ground spraying for the purpose.
3. Innovations in post harvest technology particularly the adoption of :
 - (i) Small portable mechanically operated wheat threshers, maize shellers, rice shellers, oil seeds shellers and drying equipments :
 - (ii) Mechanical diggers for sugarbeet, groundnuts and other rooty crops ;
 - (iii) Chaff cutters, and pulse crushing plants.

The innovation in post harvest technology can minimize crop losses and preserve the refined quality of the produce.

CATEGORY 'B'

- (a) Construction and keep up of warehouses and silos on scientific lines in order to check deterioration in quality and reduce losses in quantity of stores products resulting from pests and physical degeneration.
- (b) Build up of cold storages for perishable products including fruits, vegetables, potatoes and onions etc.
- (c) Grading and packing of citrus fruits, dates and all those commodities which are exported or used by high income group.
- (d) Preservation of high valued fruits and vegetables through natural drying, desalting and fermentation, canning freezing and irradiation,
- (e) Curing and fermentation of valuable crops like tobacco.

CATEGORY 'C'

- (a) Soil conservation through afforestation, watershed management/renovation of range land and pasture control.
- (b) Retention and conservation of moisture through the growth of crops suited to the soil.
- (c) Digging of ponds in small depressions where rainwater run off could be contained and subsequently used for irrigation.
- (d) Development of waste land, improvement of bunch terraces and build up of small flood control schemes.
- (e) Breeding of quality sheeps, goats and cattles.

CATEGORY 'D'

In the hilly tracts the bright prospects for the following schemes can be utilized.

- (a) Orchard development, vegetables, potatoes, Zeera growth and mushroom.
- (b) Livestock breeding, projects designed for cross breeding and cattle breed improvement and establishment of ranches and livestock fattening.
- (c) Bee keeping.
- (d) Sericulture.
- (e) Inland fisheries.

- (f) Poppy replacing crops preferably growth of medicinal herbs, spices, plants used for flavouring purposes and organised mushroom production.
- (g) Lift irrigation and shallow small size tubewells in the rivering areas.
- (h) Commercial utilization of wild plants and bus-hes particularly Mazari for hand bags, fruit boxes, matting and rope making.
- (i) Wool scouring, silk reeling and weaving.
- (j) Wood seasoning Kiln, Saw Milling and Wood rosins.

CATEGORY 'E'

- (a) Animal feed complexes for catering to the requirements of organized dairy and poultry farms based on the mixture of sliced beet with molasses and corn. The sugar and sugar beet industries yield these by-products in abundance.
- (b) Use of Baggasse for ceiling boards and light weight heat insulating hollow blocks and particles board and paper.
- (c) Corn starch production and utilization of the by-products such as germs for corn oil and gluten for broiler feed.
- (d) Fruit canning, jam making, juice extraction from citrus, Mango and other fruits, tomatoes extract and soft drinks.
- (e) Forest based industries including sawn wood, sleepers veneer log, match boxes, crate boxes. Boat building, Cart Making.
- (f) Manufacturing of Agricultural implements.
- (g) Tractors and Tubewell workshops.
- (h) Khandsari plants and gur making.
- (i) Oil Crushing and oil expellers.
- (j) Installation of plants for bone grit and bone meal.
- (k) Dal Factories and Chillies grinding machines.
- (l) Rice husking, cotton ginneries and flour mills.

Manpower Planning in the context of Development Planning with special reference to Pakistan*

****Mrs. A.R. Chaudhary**

Introduction.

In this modern era of growing aspirations, nations striving to achieve and preserve their economic, social and political freedom, under-privileged groups within a community, struggling and fighting for their rights, every human action has to be planned.

Development planning is undertaken by national governments to achieve multifarious predetermined economic objectives but to accelerate the rate of economic growth has generally been the overwhelming consideration. These days with the emergence of the nations of the Third World, availability of job opportunities, equitable distribution of income and improvement in quality of life are regarded as equally important objectives. Development planning demands a careful assessment and harnessing of country's resources natural as well as human. Manpower planning implies policies ensuring optimum use of human resources. The need for manpower planning arises because unemployment of human resources is a very grave and complicated problem. It does not only mean wastage of national resources but also results in social unrest, frustration, rise in crimes, problems which are far beyond the scope of economists.

In the words of Professor Lester¹ "Planning approaches the future with the aid of systematic analysis, so as to minimize surprise and uncertainty and to eliminate mistakes and waste... Manpower

*A modified version of the paper presented at *National Seminar on Econometric Models and Operations Research*; University of Agriculture, Faisal Abad, May 3—5, 1978. by the author.

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1. Lester, R.A. *Manpower Planning in a Free Society* Princeton University Press, Princeton, New Jersey, 1968.

planning applies this process to the preparation and employment of human resources for productive purposes." Thus, the primary purpose of manpower planning is to enlarge job opportunities, improve training and employment decisions, enhance satisfaction on the job, raise the quality and utilization of labour resources, reduce the cost of job search and industry staffing and thereby increase the output of the nation. It aims at avoiding serious manpower imbalances especially wasteful surpluses of high level manpower. If a rough outline of future manpower requirements of a country can be made available, governmental agencies as well as various public and private enterprises requiring manpower can make better future plans². In this age of specialization, most jobs require five to ten years of training from the time a person decides to choose a particular career, e.g. medicine, engineering,

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2. Ample literature is available on detailed analysis of objectives and problems of manpower planning on a firm's level as well on national level, see for example :
- (i) Bowey, M.A. *A Guide to Manpower Planning*. The Macmillan Press Ltd., London, 1974.
 - (ii) Jessop, W.N. (Conference Director), *Manpower Planning Proceedings of the Conference on Operational and Personnel Research in the Management of Manpower Systems*, Unwin Bros., Ltd., London, 1966.
 - (iii) Harbison, F. & Myers, C.A. *Education, Manpower and Economic Growth* McGraw-Hill Book Company, New York, 1964.
 - (iv) Huq, M. S. *Education, Manpower and Development in South and South East Asia* Praeger Publishers, New York, 1975.
 - (v) Yesufu T.M. (Ed.), *Manpower Problems and Economic Development in Nigeria*, The report of International Seminar on Manpower Problems in Economic Development, Lagos, 1964. The Nigerian Institute of Social and Economic Research, Ibadan, Oxford University Press, 1969.
 - (vi) Wykstra, R. A. (Ed.), *Human Capital Formation and Manpower Development*, The Free Press, New York, 1971.

accountancy etc. Hence future manpower requirements should be assessed in order to avoid surpluses or shortages in certain professions, resulting in many problems especially twin problems of brain-drain and educated unemployment.

In a democratic country, manpower planning requires careful scrutiny of national aspirations. There are instances where conflict may arise in employment generating and income generating policies in the short run and a choice has to be made³. A strategy for achieving maximum increase in employment must reconcile the rival claims of output and employment, between labour intensive and capital intensive techniques of production and among competing claims of different sectors of the economy for new investment. This can be formulated into a linear programme with objective function being maximization of employment subject to a set of constraints, some of which have been mentioned above. Use of sophisticated mathematical techniques is difficult in a developing country where economic data is generally fragmentary, of non-homogeneous nature, collected largely for administrative purposes and not necessarily for planning. However, use of mathematical and statistical devices for manpower planning will at least clearly indicate the gaps in available data and point out the right sort of data required. This will be self-rewarding; even though the sophisticated methods employed, sometimes yield nonsensical results⁴.

In general, manpower planning is a multidimensional problem and here we can only examine some of its facets.

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- 3, A comprehensive discussion of this argument as applicable to LDC's (Less Developed Countries) is contained in AYO Ogunshye's "Manpower Problems in the Context of Economic Planning", in *Manpower Problems and Economic Development in Nigeria* op. cit. pages 14-26.
 4. A good discussion on use of mathematical and statistical devices for manpower planning can be found in Gautam Mathur's "On Human Resource Development" Robinson, E.A.G. and Kidron, M. (Ed.) *Economic Development in South Asia*, Proceedings of a conference held by the International Economic Association at Kandy, Ceylon, Macmillan and Co. Ltd. London, 1970.

Educational Aspects

Educational planning by the State with the objective of promoting economic development is as universally approved as economic planning itself. So investment in education in desired channels should be given top priority. Educational development should be integrated into the total plan so as to ensure that the supply of qualified manpower is matched by the demand for it. For this it is essential to collect data on future manpower requirements and work out the educational structure accordingly. Some vital issues may have to be settled at this stage e.g. whether less formal education and more direct training for skills and occupations is not the appropriate way of increasing productivity in agriculture? Or is it that primary education or functional literacy is imperative?⁵. Similarly, whether to keep University admissions in non-development oriented courses like history, philosophy, literature etc. limited to a minimum? Such decisions can only be taken when future assessment of economic demand for various types of education can be made. The use of mathematical and statistical techniques, extrapolation, linear programming, input—output analysis etc. may be helpful, but such forecasts suffer from obvious pitfalls as difficulties arise in controlling diverse variables affecting the input-output coefficients in the rapidly changing conditions of developing countries. Complexities also emerge in evolving conversion mechanism concerning production function of education etc. The task of gearing the expansion of the educational system to quantitative forecasts of the demand for highly qualified manpower is very difficult. Here, we have to reconcile the conflicting objectives of satisfying the private consumers, demand for education, i.e., "The social demand for education" and equalizing the yield of investment in education with the yield of investment in physical capital, i.e., "Rate of Return" approach. These approaches like the "manpower forecasting" approach, suffer from many shortcomings. Instances can be found where higher education is expanded just to accommodate the rising number of qualified applicants on the assumption of Say's

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5. Detailed discussion on costs and benefits of popularizing educational programmes of non-formal type is available in Manzoor Ahmad's, *The Economics of Non-formal Education, Costs and Benefits* New York, Praeger publishers 1975.

Law that supply creates its own demand. It is very difficult to reconcile all these conflicting objectives. Efforts can be made by the manpower planners to treat "manpower forecasting" and "Rate of Return" approach as complementary and also incorporate the data furnished by economic planners regarding future manpower projections. It is perhaps not out of place to distinguish here between "projections" and "forecasts",

Forecasts generally imply predictions subject to realization of a certain target of economic growth whereas "projections" predict the outcome of purely spontaneous forces. So manpower projections can be made even in a purely unplanned economy whereas manpower forecasts can only be made subject to availability of data regarding future economic targets fixed by economic planners.

The foregoing discussion amply supports the argument that manpower planning is prone to uncertainty regarding future. So in devising a manpower planning system, we shall be better off if we can build into it the kind of flexibility that allows automatic adjustments regarding bottlenecks and surpluses and a multiplicity of alternatives exist in producing and utilizing skilled manpower ⁶.

Training Aspects

- (i) Policies should be evolved to train the present labour force in desired channels mainly through in-service training programmes, on the job training, adult education programmes etc. Most of the developing countries have high degree of urban unemployment and rural under-development. Manpower planning in these countries should aim at developing skills of the existing rural labour force for using improved agricultural implements and practices. Training courses conducted for dispersal of knowledge for raising agricultural productivity, should also aim at fostering qualities of civic consciousness, discipline, time sense, political responsibility etc., among the rural people. Similarly, functionaries of nation building departments should be trained in methods of mobilising under-employed rural manpower. Agricultural orientation courses should

6. This argument is largely based on Mark Blaug's "Approaches to Educational Planning" in *Human Capital Formation and Manpower Development*, op. cit, pages 462-495.

not be such as to produce people imbibed with theoretical knowledge, based on foreign literature but they should be well acquainted with ways to deal with agricultural problems of the native country and should be in a position to impart this knowledge to the rural community.

- (ii) Employment opportunities for women should also be given greater emphasis. One of the reasons for low labour participation rates and high dependency burdens in Pakistan is low female participation in labour force⁷. It is often argued that when enough job opportunities are not available for males, womenfolk should not compete for jobs. This does not seem to be sound economic reasoning. Job opportunities especially for rural women who form about 75% of the entire female population in the working age group, can be created by encouraging cottage industries, handicrafts and establishing new and reinforcing existing training institutions. No programme of economic development can succeed without active participation of women power within the social and cultural frame work of the society.

Now we shall study problems of manpower planning with the objective of development of human resources in Pakistan.

Employment Situation in Pakistan

A look at the objectives of various economic plans of Pakistan⁸ shows that the primary objective has generally been a rise in gross national output although improving employment opportunities, reducing income inequalities and formation of human

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7. A detailed analysis of educational facilities as well as job opportunities available to females in Pakistan is contained in Amatul R. Chaudhary's "Role of Women in Economic Development: A case Study of Pakistan" *Economic Journal* Volume VIII No. 2 Winter 1975 (A Government College, Lahore Publication). Also see Amatul R. Chaudhary's "Growth and Composition of Female Education in Pakistan 1947-75", *Pakistan Economic & Social Review* Volume XIII No. 1 Spring 1975. (A publication of Economics Department, University of the Punjab, Lahore.)
8. Government of Pakistan, 1st (1955-60) 2nd (1960-65) 3rd (1965-70) and 4th (1970-75) Five Year Plans. Annual Development Plans.
Pakistan Economic Surveys 1972-73, 72-74, 74-75, 75-76, etc.

capital through providing better health and educational facilities have been the secondary objectives. Whenever conflict arose between the primary and secondary objectives, we generally find that decisions were taken in favour of the former. This, however, has not been the case after the separation of East Pakistan. We observe that during the period 1971 onwards, we failed miserably even to keep up the growth of G. N. P. due to conflicting economic policies of the Govt. Firm and conclusive data on levels of employment for various categories of labour is not available in Pakistan. Different studies show varying magnitudes of unemployment. According to Labour Force Survey 1974-75, 1.71 per cent of the entire labour force was unemployed. (Rural unemployment rate was 1.33 per cent and urban unemployment rate was 2.73 per cent). On the contrary, The Housing, Economic and Demographic Survey, 1973 showed the rate of unemployment in the country at 13.1% (rural unemployment rate was 11.6 per cent and urban unemployment rate was 17.7 per cent). According to an Expert Working Group⁹ unemployment level is 5 per cent and under-employment level is 15 per cent in Pakistan.

Educated Unemployed

Regarding educated unemployment, this problem arises because of a mismatch between supply and demand forces for skilled manpower, resulting in wastage of valuable human resources and scarce financial resources available for educational purposes. Various studies conducted in Pakistan and other South Asian Countries reveal that this problem has assumed alarming proportions since the last decade¹⁰.

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9. Planning and Development Department, Government of the Punjab, Lahore, *Punjab Development Review*, Fifth Issue June, 1976 Page 43.
 10. Regarding problem of Educated unemployed in South and South East Asian Countries; many reference are cited in M.S. Haq's *Education Manpower, and Development in South and South East Asia* op. cit pages 20- 3. Regarding Pakistan; some studies & surveys are mentioned in the following :
 - (i) Hoda S.S. *Manpower Review*, Volume I, No. 2 & 3. Manpower Division, Government of Pakistan, Islamabad, 1975.
 - (ii) *Proceedings of the Training Course on Educated unemployment, Islamabad 4-14 November 1973*. Organised jointly by The Manpower Division, Government of Pakistan and the Asian Regional Team for Employment Promotion, Bangkok.

One such study made by Board of Economic Enquiry, Peshawar¹¹ regarding persons entering labour market after Matriculation or higher examination in the Province found that no unemployment existed among graduates of Medicine and post-graduates in Education, Agriculture, Science and Medicine. Rates of unemployment found among other categories of the educated ranged as follows :—

<i>Levels of Education</i>	<i>Un-employed</i>
Matriculates	64 per cent
Intermediates	50 " "
Graduates (B.A. / B. Sc)	41 " "
Post-graduates.	34 " "
Professional Graduates	30 " "
All levels (combined)	47 " "

Another sample survey was conducted by the Manpower Division in 1973 among the trainees of Polytechnic Institutions. Two samples investigated through personal interviews and mailing enquiry revealed unemployment rate at 28.4 per cent through personal interview method and 31.68 per cent through mailing enquiry¹². Similarly, another survey conducted by the Punjab Board of Economic Enquiry¹³ covering a sample of persons receiving graduate and post-graduate degrees during 1967-68 and 1968-69 showed the level of unemployment at 47.1 per cent. Certain other features of the survey were :—

- (i) Unemployment was 37.8 per cent among 1967-68 group and 52.4 per cent among the 1968-69 group.
- (ii) Unemployment rate was highest for B. Sc. Degree holders (73.4 per cent) followed by B. As' (58.2 per cent). Master of Arts (44.8 per cent), Master of Science (41.1%).
- (iii) Unemployment rate was higher at 62.5 per cent among females as compared to 43.2 per cent among males.
- (iv) Unemployment was 55.7 per cent among the third divisioners, 47.4 per cent among second divisioners and 31.1% among the 1st Divisioners.

11. See S. S. Hoda's "Unemployment of the Educated in Pakistan" *Manpower*, Vol. I No. 2, 1975 page 34.

12. *Ibid* page 34.

13. *Proceeding of the Training Course on Educated Unemployment*, op. cit. page 77.

Such sheer wastage of trained manpower is really deplorable and points out to the need of manpower planning in Pakistan. The N. D. V. P. (National Development Volunteers Programme) was a remedial measure but failed to serve its purpose because of mismanagement of concerned departments. Details of the programme and causes of failure may not be repeated here. But the need to absorb educated unemployed is very acute because the nation has spent some of its very scarce resources on their training and it is a matter of grave concern if this skilled category of manpower remains unutilized.

Brain Drain

Another aspect of defective manpower planning is the so called "Brain-Drain" problem. It refers to the emigration of scientists, doctors, accountants, professors, etc. from developing countries mainly due to economic "pull" from other countries accentuated by the "push" factors like political instability, non-availability of basic human rights, lack of research facilities, fear of personal victimization etc in the home country. The wide gap between the salaries offered in developing countries as contrasted to those offered in economically advanced countries (where majority of these professional people had received their training) keeps on widening because of the contribution of these professionals and intellectuals from the developing countries. This vicious circle can only be broken up if manpower planning policies in the developing countries are effective in retaining their best brains. The extent of "Brain Drain" from Pakistan is great although exact magnitude is not known obviously because of the restrictions imposed by the Govt. on the emigration of certain categories of highly skilled professionals. However, table 5 given below reveals the gravity of the situation to some extent ¹⁴.

Remedies lie in trying to assess correct future manpower requirements in removing economic and social bottle-necks in the way of highly qualified professionals and above all in creating conditions of work where promotions and placements are correlated to suitability and efficiency and not on the basis of personal contacts, nepotism, favouritism, party affiliations etc.

All the above mentioned factors suggest remedies to manpower planning problems from the demand side but supply side can not

14. Ibid. page 314-115.

be left unattended. One of the most serious impediments to effective manpower planning in Pakistan has been the unwarranted and explosive rate of growth of population. Unemployment situation gets aggravated because each year a substantial magnitude is added to the already large backlog of unemployed people. Here is another challenging task for manpower planners because highly qualified and trained personnel is needed to make population control programme a success. A major reason for the ineffectiveness of governmental efforts in this respect has been the inability on the part of the Govt. officials entrusted with the task to reach and communicate effectively with the masses. A thorough, impartial, and academic investigation of the affairs of this programme is essential in order to reformulate policies involving all segments of society in this effort. Voluntary organizations, schools and other educational institutions can collaborate with Govt. in planning and implementing such policies. Population control policy should also be incorporated within the framework of manpower. Planning and a high priority should be given to it in formulating national Plans.¹⁵

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15. A detailed account of public sector expenditure and achievements in this field can be found in Amatul R. Chaudbary's "Preliminary Cost Benefit Calculations of Pakistan's Family Planning Programme 1965-72" *Pakistan Economic and Social Review*, Volume XII No. 2, Summer 1947. This study was based on many assumptions and the benefit cost ratio thus calculated was 25.1. This clearly showed that country had much to gain by an expansion of the population planning programme provided the data made available through official sources regarding benefits was reliable.

TABLE 1

PAKISTANIS EMPLOYED ABROAD 1968-1975

Year	In Private Sector	In Public Sector	Emigration	Admitted to U K.	Total
			NOCs issued for USA, Canada and Australia etc.		
1968	2,083	97	—	38,121	40,305
1969	1,769	129	—	38,452	40,320
1970	1,837	428	—	39,874	42,139
1971	3,440	194	—	40,120	43,624
1972	3,359	1,171	1,553	40,838	45,921
1973	7,654	4,646	1,556	41,923	55,779
1974	14,652	1,676	1,700	38,979	57,007
1975	21,766	1,311	541	41,510	65,128
Total	56,460	9,652	5,350	3,19,821	3,91,283

TABLE II

PAKISTANIS EMPLOYED ABROAD DURING THE YEARS
1971 TO 1975 IN PRIVATE SECTOR (OCCUPATION-WISE).

S. No.	Occupations	1971	1972	1973	1974	1975	Total
1	2	3	4	5	6	7	8
1.	Engineers ...	12	—	38	60	130	240
2.	Doctors ...	4	—	—	—	—	4
3.	Nurses ...	47	30	32	24	22	155
4.	Teachers ...	10	25	8	4	15	62
5.	Accountanis ...	21	11	45	54	70	201
6.	Managers ...	1	4	—	17	45	67
7.	Welders ...	18	—	—	442	659	1,119
8.	Stenographers ...	11	31	26	93	74	235
9.	Storekeepers ...	41	34	44	83	124	326
10.	Agriculturists ...	—	—	—	11	—	11
11.	Clerks/typists ...	43	110	133	327	671	1,148
12.	Foremen/Supervisers (factories/firms) ...	58	57	52	—	176	343
13.	Masons ...	773	469	912	1,166	1,789	5,109
14.	Carpenters ...	—	514	597	924	2,619	4,654
15.	Electricians ...	436	315	338	252	678	2,019
16.	Cooks ...	557	295	90	159	314	1,415
17.	Waiters/bearers ...	416	375	—	116	146	1,053
18.	Steel Erectors ...	397	—	—	—	452	807
19.	Plumbers ...	252	201	53	153	4.6	1,085
20.	Painters ...	243	318	26	87	133	807
21.	Labourers ...	—	290	616	3,126	5,934	9,966
22.	Technicians (all types) ...	—	—	390	512	315	1,217
23.	Mechanics ...	—	—	129	455	1,167	1,751
24.	Cable Jointers ...	—	280	311	—	24	615
25.	Other categories ...	—	—	3,814	6,587	5,883	16,214
	Total ...	3,340	3,359	7,654	14,652	21,766	50,771

TABLE III

HIGHLY QUALIFIED PAKISTANIS APPOINTED BY
FOREIGN GOVERNMENTS THROUGH BUREAU OF
EMIGRATION DURING THE PERIOD 1ST JANUARY
1971 TO 31ST JUNE, 1974 (3½ YEARS)

Year	Libya	Saudi Arab	Nigeria	Iran	Abu Dhabi	Malaysia	Sudan	Iraq	Other Country	Total
1971	15	68	13	8	—	23	—	—	67	19
1972	993	53	43	3838	15	20	1	1	71	1171
1273	2507	135	350	167	182	248	126	23	256	4646
1974	649	150	—	—	—	119	—	—	210	1777
Total	4164	406	386	4013	179	410	127	56	640	7788

Conclusions

Some broad conclusions emerge out of the foregoing analysis:—

1. Efforts should be made to integrate manpower planning in the national economic plans. Deficiency of data should not debar us from attempting to apply the use of mathematical and econometric techniques in evolving a full employment manpower strategy. Once deficiencies in collection are made obvious, data collecting agencies can be advised to generate data of the type required by manpower planners.
2. Rural under employment and unemployment problems need very careful and cautious approach. Integrated Rural Development Programme, Rural Works Programme etc are all steps in the right direction. Greater stress should be laid on popularizing programmes of primary, adult and other non-formal type of education among the rural masses including females. Acquisition of technical education and

skills; higher levels of literacy resulting in changed attitudes, broadened horizons etc, shall go a long way in increasing rural labour productivity, in eliminating problems of under-employment and backwardness and in abridging the gap between living conditions of the rural and urban people. This shall also help in checking unplanned and undesirable rural exodus to urban areas and shall improve quality of life in general.

3. The development and utilization of human capital should be the major objective of development planning. For this, a radical change in the concept and structural design of the educational system is inevitable. It should be multi-dimensional and flexible enough to combine theoretical knowledge with practical aspects. There should also be effective conoordiation between educational and manpower planners so that problems of educated unemployed and brain-drain could be minimized.
4. Development Policies promoting economic growth must also aim at achieving a right sort of balance between capital and labour intensive activities. Development strategy should be based on national factor endowments. Models of development built in capital-abundant, labour-scarce industrially advanced countries should not be applied indiscreetly.
5. Full utilization of human resources should accompany optimization of output because unemployment of human resources is not only an economic problem but also a social and political problem of a grave nature.
6. The unprecedented rate of population growth constitutes an inherent threat for the successful execution of development plans. The high rate of growth goes on accentuating pressure on resources. Manpower planning polices cannot be effective in isolation but a well coordinated population planning policy should be women into it, otherwise it will be difficult to aim at full employment of human resources because a gigantic backlog of unemployed manpower is already existing in the economy.

FEDERAL BUDGET—1978-79—A REVIEW

*Salman Ahmed**

The federal budget of Islamic republic of Pakistan for the year 1978-79 was presented by Chief Martial Law Administrator, Gen. Mohammad Zia-ul-Haq on 29th June, 1978. This budget was prepared in a stable and encouraging economic atmosphere. One helpful sign for the 1978-79 fiscal year was that the budget makers knew that the World Bank's Aid to Pakistan Consortium, which had just concluded its session in Paris will provide 1850 m. in economic assistance for 1978-79. So the gross inflow of external resources is expected higher by Rs. 3,72.8 m. (36.9%) to Rs. 12,137.7 million. Their ratio to net development expenditure will be 63.9%.

At the same time the export performance during 1977-78 has also been encouraging with exports projected at \$ 1300 million for the year ending June, 30. The home remittances of Pakistanis abroad are to reach a record level of \$ 1100 million this year, up from \$ 550 million in 1976-77. All this should provide a good basis for planning the course of the economy in the 1978-79 on a sound and expanding basis as far as foreign exchange resources are concerned.

The budget attempts to build upon the base laid down during the past year of hectic reordering of priorities. To restore the confidence of private entrepreneurs and set up investment and production, a number of concessions and reliefs have been announced. The major portion, of course, goes to the manufacturing sector which has been languishing for the past several years. The excise duty on cotton yarn, fabrics, and specialized textiles and import duty on machinery and plants for balancing and modernisation have been withdrawn. This would meet the long standing demand of the textile manufacturers and enable them to maximise their production and exports. Similar relief in excise duty has been offered to the wool, leather and sugar industries.

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In order to help capital formation on the stock market, the budget has provided quite a few incentives. The public limited companies have been given a five year tax holiday and the capital gains tax has been extended upto 1981 and the permission has been granted to carry over capital losses upto 15% to the next year.

In the Agriculture sector, Pakistanis working abroad have been allowed to send tractors under the personal gift scheme. This would meet the increasing demand for tractors in the country. The abolition of import duty on power tillers and planters and the 75% subsidy on pesticides are intended to raise the output in Agriculture Sector.

The transport sector had been encouraged a great deal. The net reduction on sales tax and duty on buses and trucks had contributed to a difference of 42% which was indeed essential. The duty on commercial wagons had been reduced from 100 to 60%. This would go a long way in solving the difficulties and bottlenecks of transportation.

The duty on scrap iron and iron had been increased from 40 to 55% and the price of cement has been increased which would adversely affect the building and the engineering industries.

The Annual Development Plan is estimated to cost Rs.21,663.6 million, an increase of 18.4% in gross terms. This development expenditure is necessary for the success of new Five Year Plan which is also launched from the same date, 1st July, 1978.

The net size of the budget is higher by 13.5% to Rs. 43,221.8 million primarily because of non-development expenditure which increased by 20.6% to Rs. 24, 221.8 million of which only Rs.19000 million have been earmarked for development. The gross revenue receipts have been projected at Rs. 8 91.5 million. Net capital receipts of the Federal Govt. are expected lower from Rs. 2332.3 million to Rs. 1,049 million. Similarly, total domestic federal resources consisting of revenue surplus and net capital receipts available for financing the development expenditure will be lower by Rs. 2720.8 million (61.2%) to Rs. 1.724.5 million. A resource gap of Rs. 4168.4 million compared with Rs. 3860.2 million last year is thrown up which means far greater domestic effort. After paying the provincial shares the federal government will be left with

only Rs. 1724.5 million for financing development projects. Even after adding the gross inflow of external funds to this amount, the total resources will fall short of the requirements of the Annual Plan which is not good budgeting.

It is to meet this gap of about 4.17 billion that the government has decided to make economy cuts, some resort to deficit financing and increase some of the taxes. As a result of these taxes on Telephone call charges, motor gasoline, power, cement, etc., the net revenue will increase by Rs. 1.91 billion. This will reduce the gap to Rs. 2.26 billion. This residual gap will be covered to the extent by improving tax administration and economising on development and non-development expenditure so as to limit deficit financing to irreducible minimum.

It goes without saying that the fresh tax efforts at resource mobilisation will increase the burden of indirect taxation and unless borrowing from banks is kept to the minimum, cost push inflation can be aggravated.

The law relating to the taxation of agricultural income will remain suspended for another year. It is doubtful if in the present economic situation, the bigger landlords who continue to be the chief beneficiaries of the subsidy on agricultural inputs, can be allowed to stay outside tax net with any advantage either. Taxing higher agricultural incomes is essential to mop up additional resources and put an end to the duality in the taxation structure.

The new budget clearly projects the economic policy of the present regime based on Islamic socio-economic justice and seeks to avoid the pitfalls of the past two economic eras. Until the late sixties wealth was allowed to accumulate in the hands of a pampered class, while in the seventies private enterprise was starved and wrong policies were pursued which deepened the economic malaise and added to the people's frustration. In the new scheme of things, these extremes are avoided.

Book Review

The Economic Growth Debate : an Assessments*

The debate on economic growth set off by Prof. Mishan's celebrated book 'The Costs of Economic Growth' (1967) has now been summarized and evaluated by the same author in this volume.

The central issue of this book—the social desirability of economic growth—has much relevance to the contemporary societies of the West and the East. The author, however, confines his study to the Western society only.

The book is divided into two sections. In both parts a number of related issues have been discussed. Part I starts off by pointing out sources of complacency in conventional approach to the measurement of social welfare. The question ; wheather continued economic growth can be expected to enhance social well being! has fascinated policy makers and researchers in the previous years too. In recent years their interest has increased manifold. In fact rethinking on social consequences of economic growth has been produced by the problems of economic survival of some Western countries in 1970s. Whereas the views of supporters of economic growth are reflected in the statement: 'Economic growth must not be condemned, it must be given a new direction', the author is sceptical of the beneficence of this approach. It is believed that further growth will not enable us to 'stop the rot'. Economic growth is considered as neither necessary nor sufficient for the growth of social welfare. In fact expansion of economic growth may be inimical to the life we aspire to.

A related problem about physical possilities and their beneficence as a guiding norm of social policy is taken up next. As for the physical ill effects of economic growth these are grouped into four categories: (1) transport and communication—leading to

*By E.J. Mishan, George Allen and Unwin Ltd., London (1977).

frustration from mass media and problems of migration ; (2) rapid innovation—causing ecological disruption ; (3) weapons technology—making the ‘stand-off’ delicate and risky for the survival of the world ; and (4) size and concentration—producing economic polarisation and social tensions. Economic approach is considered as being limited to technical externalities and distributional justice only. Whereas a far ranging debate is considered essential to sort out this urgent problem.

Next two parts of book I deal with the pro-growth allegations and their answers ; and a sceptical examination of the hopes, thus raised, is made. To counter the claims of pro-growth economists, Prof. Mishan favours something akin to steady state economy for the developed countries. This end is to be achieved by means of rationing of raw materials, control of technology and the desired levels of affluence and distribution. To an initiated reader the objective of steady—state economy would appear to be simply imaginative. In Mrs. Robinson’s terminology, conditions of steady—state growth are described as “Golden Age”, ‘thus indicating that it represents a mythical state of affairs not likely to obtain in any actual economy’.

However, Prof. Mishan is sceptical about the future prospects of pro-growth policies. His reservations are absolutely candid about ‘distributional aspects of growth, hazards of pollution by modern industry and the problems linked with the sense of vanity of individual in a capitalistic society, who wish to acquire goods also for the status value associated with their possession. Thus on the one hand modern economic growth creates inequalities while on the other it ‘throws an embarrassing light on the pathetic quality of the rise in the real standard of living as measured in terms of ‘everything freakish’ as well as product innovation of consumer durables’.

A program for the ‘Good’ society is then ‘elaborated in the second part of the book. Numerous chapters are devoted to the ‘constituents’ of a good society. Among these leisure, love and trust, role of myths and institutions, and individual freedom have been discussed in detail.

The demands of technological society often tempt people to postpone immediate pleasures for a better future. They do so in the hope of improved earnings, status or social acceptability.

According to the hypothesis of the author a possible solution to this state of affair would be provision of more 'agreeable' work rather than shorter hours. Yet it is not solution easy to arrive at, nor one that is compatible with sustained growth. On the other hand 'commercialisation' of life has come to replace love and mutual trust of individuals of the west. This change has been built on two developments: i) individualistic ethics and ii) faith in technique. This is indeed a natural consequence of the desire to replace personal services by economic goods.

Turning to the role of 'myths' and personal freedom the author advocates the need to have a permanent code of ethics for a good society. He is upset by the 'increasing uncertainty and apprehensions concerning the purpose of life and moral basis of western civilization'. More so because the modern society is fashioning its affairs according to the 'humanistic' religious precepts. It is feared that the spread of such 'morbid' trends will reduce the enjoyment of individual liberty and, thus, incompatible with the good society. Hence there is a need to curtail individual choice in economic matters since these have direct bearing on the social set up. For this would check two unpleasant trends witnessed in capitalistic world, namely, exposure of humanity to previously unknown dangers and increasing social conflict.

Finally, the feasibility of such a program need be assessed. The author concedes that there are various practical difficulties involved in this blueprint for action. First, the Western world's technical progress is pro-growth biased and the people 'hooked on' efficiency. Any attempt to switch over to no-growth society will involve problem of adjustment. Second, vested interests of producers, workers and the "Third Estate" (scientific community) will resist any such shift to a state of non-growth and, thus, no scientific discovery. The third factor known to work against similar move will be the state of confrontation existing between nations who would not accept an inferior position under such conditions.

All said, Prof. Mishan has been successful in at least raising and putting some crucial questions on economic growth into proper perspective. There is, no doubt, a need for further investigations and thinking to evolve a public policy that will make in possible to reconcile the objectives of growth with greater social harmony and well being.

— Khalid Aftab

