A STUDY OF GOVERNMENT EXPENDITURE WITH SPECIAL REFERENCE TO ECONOMIC DEVELOPMENT IN PAKISTAN

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Thesis Presented for the Degree of

Master of Letters

at the

University of Glasgow

October 1971

ACKNOWLEDGEMENTS

I am greatly indebted to Mr. J.B.K. Hunter for his constant guidance and valuable suggestions throughout the course of this work. I also wish to express my gratitude to Professor T. Wilson for his invaluable advice in the course of my study and for his helpful comments in the preparation of the text. Thanks are also due to Mr. K.J. Allen, Miss M. Hewitt and Mrs. I. Buchanan who helped me in some way in my research.

In response to my requests for statistical data and other information, I have received the co-operation of a number of individuals, institutions and government departments. I am indebted to all of them.

Many of my colleagues in this country and at home assisted me in my study and I wish to thank them all.

Last but not least, my wife Kumkum has suffered a lot during my long absence from home. I do not know how to express my gratitude to her.

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ABBREVIATIONS AND EXPLANATORY NOTES

CSO	=	Central Statistical Office
DGA	=	Direct Government Assistance
DGU	=	Direct Government Undertaking
DPA	=	Directly Productive Activities
G_d	=	Government Development Expenditure
G_n	=	Government Non-development Expenditure
GDP	=	Gross Domestic Product
GRP	=	Gross Regional Product
INFA	=	Government Expenditure for Infrastructural Facilities or Development
K_r	=	Regional Multiplier
MF	=	Ministry of Finance
Neg.	=	Negligible
N.A.	=	Not Available (Also expressed by -)
PC	=	Planning Commission
SOC	=	Social Overhead Capital
T_g	=	Total Government Expenditure

One lakh = 1,00,000 = One hundred thousand (100,000)

One crore = 1,00,00,000 = Ten million (10,000,000)

Rs. = Rupees

Estimates of Gross National Product (GNP) as shown by the CSO are in current and 1959-60 factor cost. GNP is equal to GDP plus net factor payments from abroad. GDP at factor cost is equal to GDP at market prices minus indirect taxes and inclusive of subsidies.

ABSTRACT

The main object of the present research has been to carry out a study of government expenditure policy in the context of an underdeveloped economy. What has been attempted is not an abstract study of government expenditure nor an exhaustive study of economic development, but a study of government expenditure with special reference to economic development in Pakistan. The main hypothesis of the study is that in a mixed and underdeveloped economy like that of Pakistan, government expenditure policy - if properly formulated and implemented - can help not only to raise the investment-ratio but also to achieve a higher rate of growth, given the investment-fund.

The approach of the study may be presented in question-form, as follows: What should be the proper role of government expenditure policy given the development strategy of the economy? In an attempt to answer the question we have first examined the development strategy of Pakistan and the theoretical rationale of investment allocation. Next, we have tried to see the growth of government expenditure. The effectiveness of government expenditure policy is then viewed in relation to other policies such as direct administrative controls and taxation policy. A three-fold classification based on government development expenditure is of use in illustrating the three main facets of government expenditure policy - infrastructural development, direct undertaking and direct assistance. The three functional groups have been dealt with in some detail. The main aim has been to examine conditions and measures which will produce self-sustained growth. In this connection we have examined the role of private investment. The relationships thus found enable an analysis to be made

of the role that government expenditure policy can play in achieving the objectives of the economy.

A basic assumption of the study is that there exists some form of central authority and planning. Such an assumption will undoubtedly invite criticism, particularly when the "one-country-one-economy" approach has already faced a serious challenge in Pakistan. In the present thesis it is not implied that there is no basis for such a challenge. Instead, the growth process has been examined, taking the central pattern as it has been working since Independence in 1947. It is true that if the "one-country-one-economy" approach is abolished, most of the regional and part of the sectoral aspect of the study will break down. But this does not invalidate the basic criterion of investment allocation - that resources be allocated on the basis of social profitability and not on private profitability.

A note on the time period of the study may be added. Although 1949-50 is taken as the start, 1950-51 makes a convenient beginning when talking in terms of the 1950's as well as the pre-First Plan period (1950-55). In an attempt to make the study as up-to-date as possible we have tried to extend it, where possible, to 1969-70 which is the last year of the Third Five-Year Plan. This gives us two decades - 1950's and 1960's - and four five-year periods - the pre-First Plan (1950-55), the First Plan (1955-60), the Second Plan (1960-65) and the Third Plan (1965-70) - which form the basis of the study.

Pakistan being a very poor country, the Government has resorted to economic planning in an attempt to raise the standard of living of the people in the

shortest possible time with the minimum possible sacrifice. The present study tries to view the role that government expenditure policy can effectively play in achieving this aim, given the development strategy of the economy.

Chapter 1

THE STRATEGY OF DEVELOPMENT

From the growth rates observed during the 1960's Pakistan emerges as a rapidly growing underdeveloped country.[1] From 1959-60 to 1969-70, the economy recorded an average annual growth rate of over 5.5 per cent.[2] This is in comparison to the stagnant economic situation of the 1950's when the average annual rate of growth was only 2.5 per cent - barely enough to maintain the increase in population. Thus one can regard the history of Pakistan of the 1950's and 1960's as a period of two decades with two different stories. To its credit it may be said that the military regime of Ayub Khan which took over in 1958 provided stability, but for an understanding of the growth mechanism we should look beyond this and see the implication of the development strategy which has been followed in the course of development. A study from this angle has three main advantages. Firstly, it can serve as a background to our proposed

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1 The following Table may give an idea of the rate of growth of Pakistan in comparison to that achieved in some of the neighbouring countries.

(Average annual growth rate of GDP in %)

	Burma	Ceylon	India	Indonesia	Iran	Pakistan	Turkey
1959-60	5.8	3.2*	3.5	2.3**	-	2.5	5.8
1960-67	3.4	3.7	2.8	2.2	7.6	5.6***	5.8

Source and Note: UN Statistical Yearbook 1969, pp. 553-54. * For 1956-60, ** For 1958-60. *** For 1960-68.

2 The annual rate of growth from 1950-51 to 1969-70 is shown in Background Table 8.

study. Secondly, it can provide us with essential information on the economy of Pakistan. Thirdly, it may indicate the areas where the strengths and weaknesses of the economy lie.

It should be mentioned that this Chapter deals briefly with the development strategy from aggregative aspects only. Questions relating to allocative aspects will be taken up in Chapter 4 where the discussion will centre round the role of government expenditure vis-a-vis the other main policies directed towards the allocation of resources. It is true that there is an 'egg-and-chicken' relationship between the aggregative and allocative aspects and it is very difficult to judge each of them in complete isolation. Our approach, however, should be considered as a matter of convenience.

The present Chapter consists of three Sections. In Section I, the strategy of development is dicussed from the point of view of public-sector and private-sector investment-share in the development process. Section II deals with the investment growth strategy as it refers to achieving the target rate of growth. Section III takes up the regional growth strategy; East and West Pakistan are treated as two regions and intra-regional considerations remain untouched.

I Model of Development

The framework within which the economic development of Pakistan has taken place presents a model where both private and public sectors took part in the development activities of the country. At 1959-60 factor cost, total investment increased from Rs. 99 crore in 1949-50 to Rs. 278 crore in 1959-60, and further to Rs. 788 crore in 1968-69 (Background Table 20). As may be seen

from Table 1.1, both public and private sectors have played an active role. In the early years, the relative share of public investment was much lower than that of private investment. In 1950-51, of the total investment the share of public sector was only 31 per cent. It increased to 46 per cent in 1954-55, and to 60 per cent in 1957-58. Thereafter, the relative share of public sector shows some decline , but still it has on the whole remained higher than the private sector.

Table 1.1

Relative Shares of Public and Private Sectors

	1949-50 (1)	1950-51 (2)	1954-55 (3)	1957-58 (4)	1960-61 (5)	1966-67 (6)	1968-69 (7)
Public Investment	35	31	46	60	47	55	56
Private Investment	65	69	54	40	53	45	44
Total	100	100	100	100	100	100	100

Source: Computed from Background Table 20.

The large role played by the public sector in the total investment should not be interpreted as meaning that, like India, Pakistan aims towards a socialistic development. On the contrary, Pakistan has put much emphasis on the growth of private enterprise. There have been 'no grand experiments in nationalization,' 'no fancy slogans about socialism' and the declared objective is 'to give all

possible incentives for the stimulation of private initiative'.[3] Only a few fields such as (i) arms and amunitions of war, (ii) atomic energy, and (iii) railways, air transport and telecommunications are reserved for state ownership and state management.[4] Public investment in other fields should be considered as an attempt to boost private enterprise or as a stop gap arrangement due to the lack of private investment.[5] The strategy is to give maximum scope to private enterprise in the development of the resources of the country within the framework of the National Five-Year Plans.[6] In other words, the role of the state is to help, assist and induce the private sector. For example, the Pakistan Industrial Development Corporation (PIDC) was set up by the Government with the intention of providing leadership by opening up projects (to be handed over to the private sector, when completed) where private enterprise is not forthcoming for reasons such as long gestation period, lower profit expectation and apparent risk.[7] As will be seen in Chapter 5, some three-quarters of total public

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3 President Ayub Khan's observation in the Forward to the Third Plan as quoted in GOP, PC, Socio-Economic Objectives of the Fourth Five Year Plan, November 1968, pp. 20-1.

4 Statement of Government Industrial Policy issued on February 20, 1959. Reproduced in Appendix I in Tax in Pakistan: A Brief Outline, issued by the Central Board of Revenue. Karachi, September 1961, p.32.

5 As observed in the Second Plan: "there should be no public industrial sector in the sense of reservation of complete industries for public enterprise, but that the Government should remain generally responsible for promoting all industries by providing the required facilities, and should directly participate only in those enterprises which are essential for overall development and where private capital is not forthcoming or high considerations of national security intervene." GOP, PC, The Second Five Year Plan, June 1965 pp.225-26.

6 Statement of Government Industrial Policy, ibid., p.32.

7 See Chapter 6 for further discussion on the PIDC.

development expenditure is invested to promote the development of infrastructural facilities which are believed to generate external economies and thereby encourage private investment. In order to encourage private enterprise, funds have also been channelled towards direct government assistance in the form of subsidies, loans, etc.[8]

Thus it appears that in the context of Pakistan, the term "public-versus-private" needs to be understood in a complementary sense.[9] It is true that the rate of growth of public investment has been faster (Chart 1.1), but it does not imply stagnancy of the private sector. On the contrary, as may be seen from Table 1.2, both public and private investment have grown as a percentage of GNP.

Table 1.2

Growth of Public and Private Investment

(As Percentage of GNP)

	1949-50 (1)	1955-56 (2)	1960-61 (3)	1964-65 (4)	1968-69 (5)
Public Investment	1.5	3.2	5.3	7.8	8.7
Private Investment	2.6	3.9	6.0	7.5	6.7
Total	4.1	7.1	11.3	15.3	15.4

Source: Background Table 21.

8 Direct government assistance is dealt with in Chapter 7.

9 In Asian Drama, Myrdal observed: "Successful operation of the public sector would normally increase opportunities for private enterprises. Only in one sense is there real competition: in regard to funds and, in particular, foreign exchange ..... Yet even this is not an inevitable rule. For example, the foreign capital that the Indian government was able to acquire for its three big steel mills would hardly have been available for private ventures in other fields." Myrdal, G., Asian Drama: An Inquiry into the Poverty of Nations, Vol. II, Allen Lane, London 1968, p.819.

Chart 1.1 shows the growth of both public and private investment as a percentage of GNP. In each case, there are 21 observations from 1949-50 to 1969-70, as shown in Background Table 21. The trend linear equation of public investment is

$$P_t = 0.8685 + 0.3929t$$

where, P_t is public investment as a percentage of GNP in year t; the correlation coefficient is 0.9729 ($R^2 = 0.9465$). The corresponding equation for private investment is

$$p_t = 2.1808 + 0.2459t$$

where, p_t is private investment as a percentage of GNP in year t; the correlation coefficient is 0.8590 ($R^2 = 0.7379$).

Looking at the trends observed, it appears that both public investment and private investment have increased as a percentage of GNP. Whether the growth of public investment is a cause or effect of the growth of private investment is not very easy to answer. In Chapter 4, an attempt will be made to quantify the relationship while viewing the effectiveness of government expenditure policy in Pakistan. It will probably suffice here to mention that public investment has remained an important factor in raising the ratio of private investment.

Before concluding this section it may be noted that in our future analysis we shall assume the development strategy which has laid emphasis on the growth of private enterprise. By this, we do not however imply that the alternative strategy of state ownership has no advantages. On the contrary, as has been observed by Griffin,[10] a strategy of State-ownership could have been advant-

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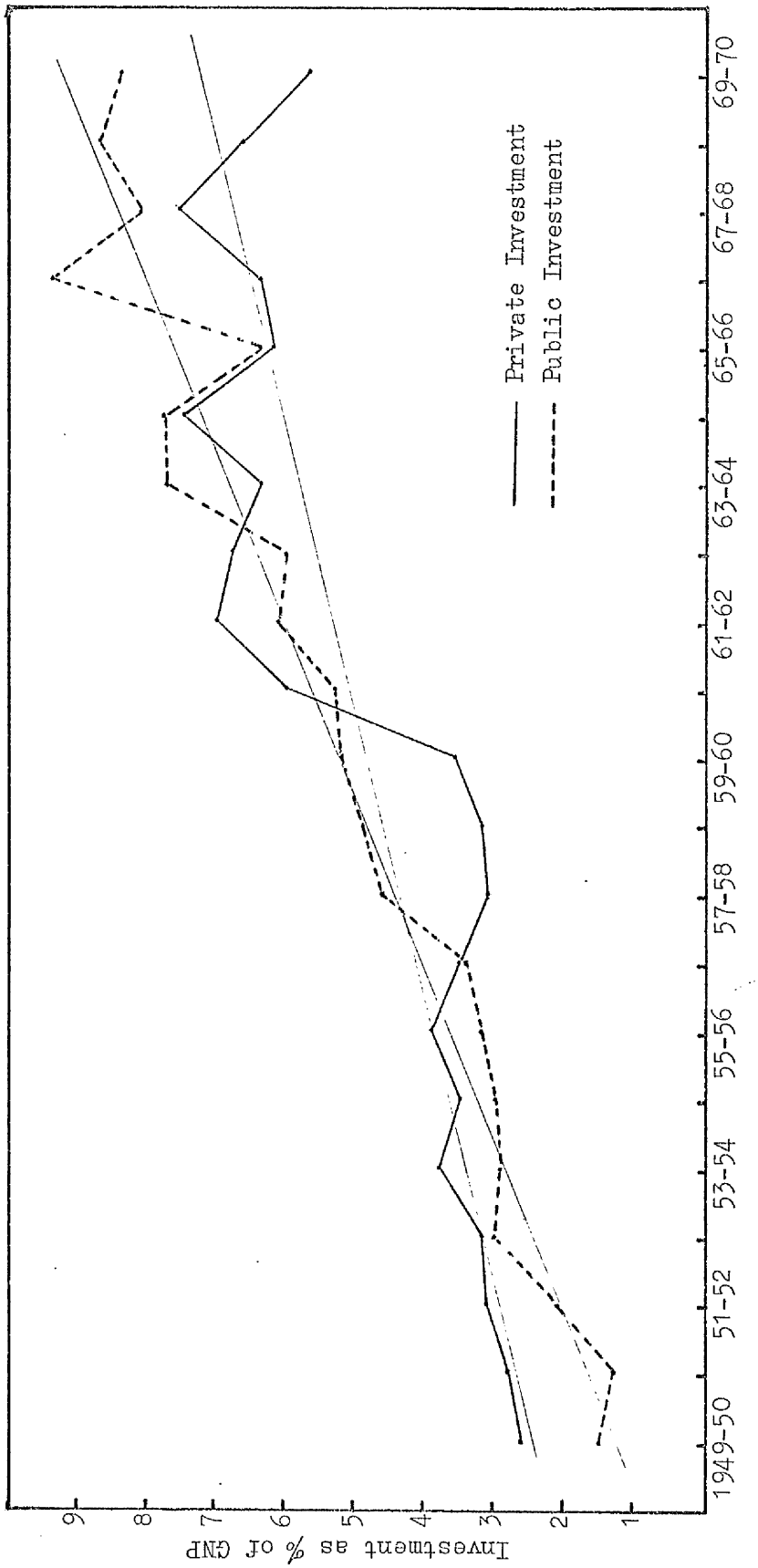
10 Griffin, K.B., "Financing Development Plans in Pakistan," Pakistan Development Review, Winter 1965, p.605.

Chart 1.1

Growth of Public and Private Investment: As % of GNP



ageous at least for two reasons. First, since the marginal propensity to consume of State-owned enterprises is zero, while that of private enterprise is positive the reinvestment quotient of the former would be higher than that of the latter.[11] Second, a model encouraging State-ownership could have avoided the high degree of concentration of income and wealth which is considered to have emerged as a very serious problem.[12]

II Investment Growth Strategy

One of the basic assumptions in Pakistan's development strategy is to raise the investment ratio to achieve the target rate of growth, g. Given g, the amount of investment that will be required will depend on the capital-output ratio, k. The investment growth strategy thus follows from the Harrod-Domar growth model[13] which implies that the required investment programme (I)

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11 The argument, which may be termed as an alternative version of the Galenson-Leibenstein stand of reinvestment of the entire profits earned, assumes equal profitability in State-owned enterprises as in private enterprises.

12 It should be mentioned that data on income distribution are not available. Remarks from different sources, however, have already revealed the severity of the problem. In his Budget speech, the Finance Minister observed in 1965 that "there is a growing discontent about increasing concentration of income and wealth and economic power in the hands of a relatively few." Cf. Shoaib, M., 1965-66 Budget Speech as quoted in Griffin, K.B., ibid, p.609. In 1968 the Chief Economist of the Planning Commission, Dr. Mahbub Ul Haq, observed that about 20 families controlled 66 per cent of industrial assets, 79 per cent of total insurance funds and 80 per cent of total bank assets. Cf. The Financial Times, London, 2nd May 1968.

13 Harrod, R.F., Towards a Dynamic Economics: Some Recent Developments of Economic Theory and their Application to Policy, Macmillan & Co. Ltd. London, 1948. Domar, E.D. "Capital Expansion, Rate of Growth and Employment," Econometrica, April 1946, pp.137-47; reprinted in Domar, E.D. (ed) Essays in the Theory of Economic Growth, Oxford Univ. Press, 1957, pp.70-82. See also Kindleberger, C.P. Economic Development (Second ed.) McGraw Hill Book Co., 1965, pp.45-49.

will be equal to the change in GNP (ΔY) times the capital-output ratio (k).

$$I = \Delta Y k \quad \ldots\ldots\ldots\ldots\ldots\ldots \quad (1.1)$$

In the context of economic planning in Pakistan the required amount of I to achieve g may be written, assuming constant k, as

$$\sum_{i=1}^{5} I_i = (Y_5 - Y_o)k \quad \ldots\ldots\ldots\ldots\ldots \quad (1.2)$$

where Y_5 is GNP in the terminal year of the Plan and

Y_o is GNP in the year preceding the start of the Plan.

$\Delta Y = Y_5 - Y_o$ will determine the rate of growth, g. That is

$$Y_i = Y_o (1 + g)^i \quad \ldots\ldots\ldots\ldots\ldots \quad (1.3)$$

For a given k, the higher g is the higher will be Y and the higher should be I.

In order to see the required I in Pakistan we can try the Perspective Plan objective which aims for an average annual 7.2 per cent growth rate over the twenty years 1965-66 to 1984-85.[14] The capital-output ratio for the period from 1950-51 to 1969-70 is found to be 2.675 (Background Table 25). It therefore follows that if the value of k remains constant at 2.675, Pakistan will need on average an investment ratio of 0.1926 to GNP over the Perspective Plan period.

It is true that Pakistan has succeeded in raising the investment ratio from a low figure of about 0.05 in the early 1950's to around 0.15 in the late 1960's (Background Table 21). But the problem still remains as one of raising I.

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14 The breakdown of the annual growth rate in the Five-Year Plans covering the Perspective Plan is as follows: 6.5 per cent in the Third Plan (1965-70), 7.3 per cent in the Fourth Plan (1970-75); 7.5 per cent in the Fifth Plan (1975-80); and 7.5 per cent in the Sixth Plan (1980-85). Cf. Rasul, G., "The Long-Term Perspective for the Economy of Pakistan" in Review by Panel of Economists, Planning in Pakistan, Karachi (Undated, seems 1967) p.40.

Equation 1.2 may be written as

$$\sum_{i=1}^{5} I_i = \sum_{i=1}^{5} S_i + \sum_{i=1}^{5} F_i \quad \ldots\ldots\ldots\ldots\ldots (1.4)$$

where S is domestic savings and

F is foreign assistance.

Assuming that F is exogenously determined, the only variable which can be manipulated is S. In fact, this has been the strategy of investment in Pakistan. The planners have aimed at keeping a higher $\frac{\Delta S}{\Delta Y} = \alpha$. If $\frac{S_o}{Y_o} = \beta$, the strategy demands that $\alpha > \beta$

The strategy of maintaining a higher marginal rate of saving is reflected in the sectoral growth strategy of Pakistan. The industrial sector, which is considered to have a higher $\frac{\Delta S}{\Delta Y}$ than the agricultural sector, has been encouraged.[15] As has been remarked in the Third Plan: "There was a considerable transfer of income from the agricultural to the industrial sector during the 1950's as terms of trade were deliberately turned against agriculture through such policies as licensing of scarce foreign exchange earned primarily by agriculture to the industrial sector, compulsory procurement of foodgrains at low prices to industrial, subsidize the cost of living of the urban workers, generous tax concessions to

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15 "The strategy for development in Pakistan has been to channel resources to those groups in the community whose average and marginal savings rates are thought to be relatively high. In practice, this has meant that income should be redistributed away from the massive agricultural population and in favour of the small class of wealthy, urban, industrial entrepreneurs. The surplus thus accumulated and available for investment would be guided into high-priority projects through the use of indirect (monetary and fiscal) controls." Griffin, K.B., "Financing Development Plans in Pakistan," op. cit., (also reprinted in A.R. Khan (ed.), The Strategy and Technique of Development Planning, Pakistan Institute of Development Economics, Readings in Development Economics No. 1, p.27).

industry and lack of similar incentives for commercial, agricultural investment."[16] It is true that some of the policies have been changed since 1959 and incentives have also been given to agriculture, but it is also true that the large-scale industrial sector still continues to enjoy the privilege of becoming the leading sector of the economy.[17]

Since foreign assistance is exogenously determined we prefer to manipulate $\sum_{i=1}^{5} S_i$, keeping aside $\sum_{i=1}^{5} F_i$ in equation 1.4. This should not, however, underestimate the role which has been played by foreign aid in the development process of Pakistan (Background Table 19). Of the total investment, $\sum_{i=1}^{5} F_i$ held a share of about 50 per cent in the First Plan (1955-60). The corresponding figures for the Second (1960-65) and Third (1965-70) Plans are 40 per cent and 34 percent, respectively.[18] In fact, a large inflow of foreign assistance enabled the economy to maintain a high rate of investment during the Second Plan. During the period of the Third Plan, the availability of foreign aid has been much lower than expected. The shortfall seems to appear

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16 GOP, PC, The Third Five-Year Plan, Karachi, June 1965, p.7.

17 The strategy follows from the Lewis-model of growth which aims at altering the distribution of income in favour of the saving class. Cf. Lewis, W.A., "Economic Development with Unlimited Supplies of Labour." Manchester School, May 1954. Reprinted in A.N. Agarwala and S.P. Singh (eds.), The Economics of Underdevelopment, Oxford University Press, 1958, pp.406-20.

18 GOP, PC, The Fourth Five Year Plan, p.40. In absolute figures Pakistan received foreign assistance totalling $372 million in the Pre-First Plan period (1950-55); $990 million in the First Plan; $2,365 million during the Second Plan; and $2,306 million for the Third Plan (July 1965 to December 1969). Cf. GOP, MF, Pakistan Economic Survey 1969-70, p.185.

as a major cause of the failure of the Third Plan.[19] This is also the reason why the planners have considered self-reliance as the guiding principle for the Fourth Plan (1970-75). It is proposed that by the end of the Fourth Plan about 80 per cent of the development effort of the economy will have to be made by the country itself.[20] It will also pave the way for complete elimination from dependence on foreign assistance by 1985 - an objective of the Perspective Plan.[21] This would undoubtedly necessitate a tremendous effort not only to raise $\sum_{i=1}^{5} S_i$ in terms of equation 1.4, but also to strengthen the balance of payments position by increasing exports and reducing imports. In the face of the balance of payments deficit, it will also mean that the domestic production of the manufactured goods, especially intermediate products and capital goods, will have to be considerably increased.

It should be mentioned however, that the strategy as outlined above is based on several implicit assumptions which make it liable to criticism.

It assumes implicitly that despite a higher $\frac{\Delta S}{\Delta Y}$ than the average

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19 "Decline in the flow of aid after 1964-65 had an adverse effect on savings and investment. The impact was compounded by the unavoidable increase in defence expenditures. The average rate of saving fell below 10 per cent in 1969-70 and the marginal rate of saving was halved from about 15 per cent in the first fifteen years to 7.5 per cent in the next five years." Cf. The Fourth Five Year Plan, ibid, p.9.

20 GOP, PC, Socio-Economic Objectives of the Fourth Five Year Plan, p.16.

21 Rasul G., "The Long-Term Perspective for the Economy of Pakistan," p.40. See also Chapter II in the Third Five Year Plan, op. cit.

rate of savings, a large portion of increase in income (say, 75 per cent) will remain for consumption and the standard of living of the people will increase. Regression of consumption on GNP tried in Background Table 7 shows that consumption is an increasing function of GNP. But in practice, as may be seen from Table I.3, while the GNP per capita has steadily increased this is not the case for rural income per capita and foodgrains per capita. In a country where about 90 per cent of the total population live in the rural areas, it means that the cost of development is being borne by the poor rural masses while the comparatively prosperous urban dwellers enjoy the benefit.

The assumption of a higher marginal rate of savings assumes that the present benefit of future cash flows would be higher than the present costs. It is true that a quantification of the benefits and costs is difficult and a political decision is necessary. But it leaves the problem under attack if the strategy of development allows a widening of the consumption gap between rich and poor. This is probably the main reason why Ayub Khan was considering

Table I.3

Per Capita Income and Consumption

	GNP per capita (Rupees) (1)	Rural per capita (Rupees) (2)	Foodgrains per capita (Ounces per day) (3)
1948-49	-	-	16
1949-50	311	207	15(15)
1954-55	316	201	13(13.3)
1959-60	318	194	14(14)
1964-65	360	207	-

Source and Note: Griffin, K.B., "Financing Development Plans in Pakistan" in A.R. Khan (ed). The Strategy and Technique of Development Planning, op cit., p.31. Figures in parenthesis are three-year moving averages.

to extend the Third Plan from five to six years because his own feeling was that the burden of the people was enormous.[22]

The strategy supporting the transfer of income from the agricultural to the non-agricultural sector is also questionable. With the rapid rise of the share of income in the non-agricultural sector one might have expected a higher marginal saving and reinvestment mechanism to emerge. Such an expectation follows naturally from the Lewis-model of development as practised. Unfortunately, however, while the transfer of income has been substantial the propensity to save has not risen noticeably.[23]

Finally, the strategy of raising the investment ratio to achieve the target rate of growth assumes that the absorptive capacity of the economy is elastic. However, this may not always be true. For example, there may lie ahead a serious foreign exchange earning and expenditure gap which may make the utilization of domestic savings difficult.[24] How far the export expansion and import-substitution drive can succeed ultimately in eliminating dependence

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22 The Financial Times, London, 28th January 1969.

23 The observation was made by J.H. Power in 1963. Cf. "Industrialization in Pakistan: A case of Frustrated Take Off?" Pakistan Development Review, 1963, p.199. Similar views have been expressed by K.B. Griffin and A.H. M.N. Chowdhury. Griffin estimated that at least 63 to 85 per cent of the savings transferred from agriculture are dissipated in higher consumption in urban areas. Cf. "Financing Development Plans in Pakistan," in A.R. Khan (ed) op. cit., pp.36-37. The study made by Chowdhury shows that income redistributive method is not a powerful device to contribute to aggregate savings. Cf. "Some Reflections on Income Redistributive Intermediation in Pakistan," Pakistan Development Review, Summer 1969, pp.96-101.

24 For a good theoretical discussion on this topic see Chenery, H.B. and Strout A.M., "Foreign Assistance and Economic Development," American Economic Review, September 1966. pp.681-691. In the context of Pakistan it has been found that as percentage of GNP, gross domestic savings have declined from 11.7 per cent in 1964-65 to 9.7 per cent in 1969-70. The decline in the flow of foreign aid is considered to be the most important factor. Cf. GOP, PC, The Fourth Five Year Plan, pp.8-9.

on foreign assistance and in removing the foreign exchange constraint will be a source of future interest.

III Regional Growth Strategy

A primary objective of the economic development in Pakistan is that inter-regional disparity in per capita incomes between East Pakistan and West Pakistan must be removed over the Perspective Plan period, that is by 1985.[25] The Constitution of 1962 made it obligatory for the country to allocate resources in such a way that disparity is removed in the shortest possible time.[26] In order to achieve the objective, different target rates of growth for East Pakistan and West Pakistan were put forward in the Third Five Year Plan of Pakistan - 40 per cent in East Pakistan and 35 per cent in West Pakistan.[27] Since the Third Plan marks the beginning of the Perspective Plan (1965-85), separate regional growth rates as conceived in the Plan is a reasonable approach if the parity in per capita incomes between East and West Pakistan is to be achieved in an economic system with a 'one-country-one-economy' approach.

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25 GOP, PC, The Third Five Year Plan, p.35

26 Article 145, Clause 4 of the Constitution of the Republic of Pakistan 1962, states that in formulating the economic plans it will be the responsibility of the National Economic Council "to ensure that disparities between the Provinces, and between different areas within a Province in relation to income per capita, are removed and that the resources of Pakistan (including resources in foreign exchange) are used and allocated in such a manner as to achieve that object in the shortest possible time, and it shall be the duty of each Government to make the utmost endeavour to achieve that object." Cf. The Constitution of the Islamic Republic of Pakistan, Government of Pakistan, Karachi, 1964, p.82.

27 GOP, PC, The Third Five Year Plan, p.39.

To an observer not fully acquainted with the economy of Pakistan the regional growth strategy, as adopted by the country, may seem strange. The two regions of Pakistan - East and West - are geographically separate. The shortest sea-route is 3,000 miles. East Pakistan is more populous and poor. West Pakistan is less populous and comparatively prosperous (Background Tables 1 and 12). There is also a big difference in the rate of unemployment. Estimates available indicate that unemployment as a percentage of the total labour force would be much higher in East Pakistan than in West Pakistan (Background Table 4).[28] It therefore seems that factors like geographical situation, lower income and much higher unemployment in the region which has the majority of the population might have influenced the country to adopt a rigid regional growth objective.

Before one can begin to discuss reducing disparity, one first of all needs some information concerning the extent of disparity. It should be mentioned however that reliable data are not available. Although most estimates indicate a high degree of disparity, there are marked divergences as to its exact magnitude.[29]

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28 A recent study by Robinson on the unemployment situation in East Pakistan covering the period from 1951 to 1961 shows that in the period there was an "incremental" surplus of about 20 per cent of the labour force, in addition to whatever degree of surplus which was existing prior to 1951. Cf. Robinson, W.C., "'Disguised Unemployment' Once Again: East Pakistan, 1951-61," American Journal of Agricultural Economics, August 1969, pp. 601-602. Considering that in 1950 there was already unemployment to the extent of about 25 per cent of the labour force the situation appears as really desperate.

29 Rahman, M.A., East and West Pakistan: A Problem in the Political Economy of Regional Planning, Harvard University, Occasional Papers in International Affairs, No. 20, July 1968, p.3.

Table 1.4

Extent of Disparity at 1959-60 Factor Cost

	Estimate I			Estimate II		
	Per Capita in Rs.		Disparity	Per Capita in Rs.		Disparity
	E.P.	W.P.	E.P. = 100	E.P.	W.P.	E.P. = 100
	(1)	(2)	(3)	(4)	(5)	(6)
1949-50	293	342	117	287	338	118
1954-55	290	354	122	-	-	-
1959-60	278	366	132	278	366	132
1964-65	307	434	141	293	426	145
1968-69	328	492	150	311	491	158
1969-70	-	-	-	314	507	161

In Table 1.4, an attempt has been made to measure disparity in per capita income as a percentage by which West Pakistan's figure of per capita exceeds that of East Pakistan. Both the alternative estimates of GRP per capita shown in Background Table 12 have been used for measuring disparity. It is found that according to Estimate I, the extent of disparity has increased from 17 per cent in 1949-50 to 50 per cent in 1968-69; but according to Estimate II, it is from 18 per cent in 1949-50 to 61 per cent in 1969-70.

The regional growth objective of Pakistan demands that measures be undertaken to remove disparity by 1985. Since East Pakistan has lower per capita income it means that GRP per capita in East Pakistan should grow at a faster rate than that in West Pakistan. This leads us directly to an investigation of the investment growth strategy as found in Section II, now of course on a regional basis.

Equation 1.1 which forms the basis of causing ΔY may imply three alternative sizes of I depending on k.

(1): Given a higher k in East Pakistan than in West Pakistan, a higher g will require a higher I in East than in West Pakistan.

(2): Given an equal k in both Provinces, a higher g will require a higher I in East than in West Pakistan.

(3): Given a lower k in East Pakistan, a higher g in East Pakistan may be achieved with equal or lower I than in West Pakistan.

The three alternatives of k are interpolated in Table 1.5 taking three alternative growth rates to show the investment required in East Pakistan.

Table 1.5

Investment Required for East Pakistan under Alternative Assumptions of Growth Rate (g) and Capital-Output Ratio (k)

	k = 2.0 (1)	k = 3.0 (2)	k = 4.0 (3)
g = 7 per cent	14%	21%	28%
g = 8 per cent	16%	24%	32%
g = 9 per cent	18%	27%	36%

The Perspective Plan growth objective was found as 7.2 per cent. This is an annual average for the whole country. If East Pakistan should grow at a higher rate than West Pakistan, a growth rate of 8 to 9 per cent does not seem an overestimate. So far as the value of k is concerned, data at regional level are not available. National data for k estimated for the period from 1950-51 to 1969-70 shows a figure of 2.68. Period-wise it appears as follows.*

* Background Table 25.

Pre-First Plan period (1950-55)	2.22
First Plan period (1955-60)	3.27
Second Plan period (1960-65)	2.58
Third Plan period (1965-70)	2.71

How far the national data can be used for East Pakistan is subject to controversy. Traditionally in the past the Planning Commission supported the higher allocation of investment to West Pakistan on the ground of maximizing the national growth rate.[30] This implies that the capital-output ratio was lower in West Pakistan than in East Pakistan. On the other hand, when different growth rates for East Pakistan and West Pakistan were determined in the Third Plan, the investment allocations for the regions implied a lower capital-output ratio for East Pakistan and a higher capital-output ratio for West Pakistan, as may be seen from below:[31]

Capital-coefficient for the East	3.28
Capital-coefficient for the West	3.58

Instead of entering into the controversy of the size of k in East Pakistan and West Pakistan, it may be argued that an assumption of k = 3.0 to 4.0 for East Pakistan implies that in order to achieve a growth rate of 8 to 9 per cent, an investment in the range of 24 per cent to 36 per cent of GRP will be necessary.

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30 GOP, PC, The Second Five Year Plan, June 1960. The Chapter on Regional Development.

31 The estimates are shown by A.R. Khan, "The Framework of Planning in Pakistan with special reference to the Third Five Year Plan (1965-70)", Oxford. Oxford Economic Papers, March 1966, p.125.

But the estimates as shown in Background Table 23 are not found to be as near the range as would be required. It is true that the total investment as a percentage of GRP has increased over the period, but it should not conceal the fact that even in the late 1960's the figure has not reached 15 per cent. The corresponding figure for West Pakistan during the same period is around 18 per cent (Background Table 24).[32]

Chart 1.2 shows the growth of investment as a percentage of GRP in East Pakistan and West Pakistan. There are 19 observations for the period from 1950-51 to 1968-69 as found from Background Tables 23 and 24. The trend linear equation for East Pakistan is

$$E_t = 0.8194 + 0.6049t$$

where E_t is investment as a percentage of GRP in year t; the correlation coefficient (R) is 0.9718 ($R^2 = 0.9444$). The corresponding equation for West Pakistan is

$$W_t = 5.8318 + 0.7526t$$

where, W_t stands for investment as a percentage of GRP in year t: R = 0.9251 ($R^2 = 0.8558$).

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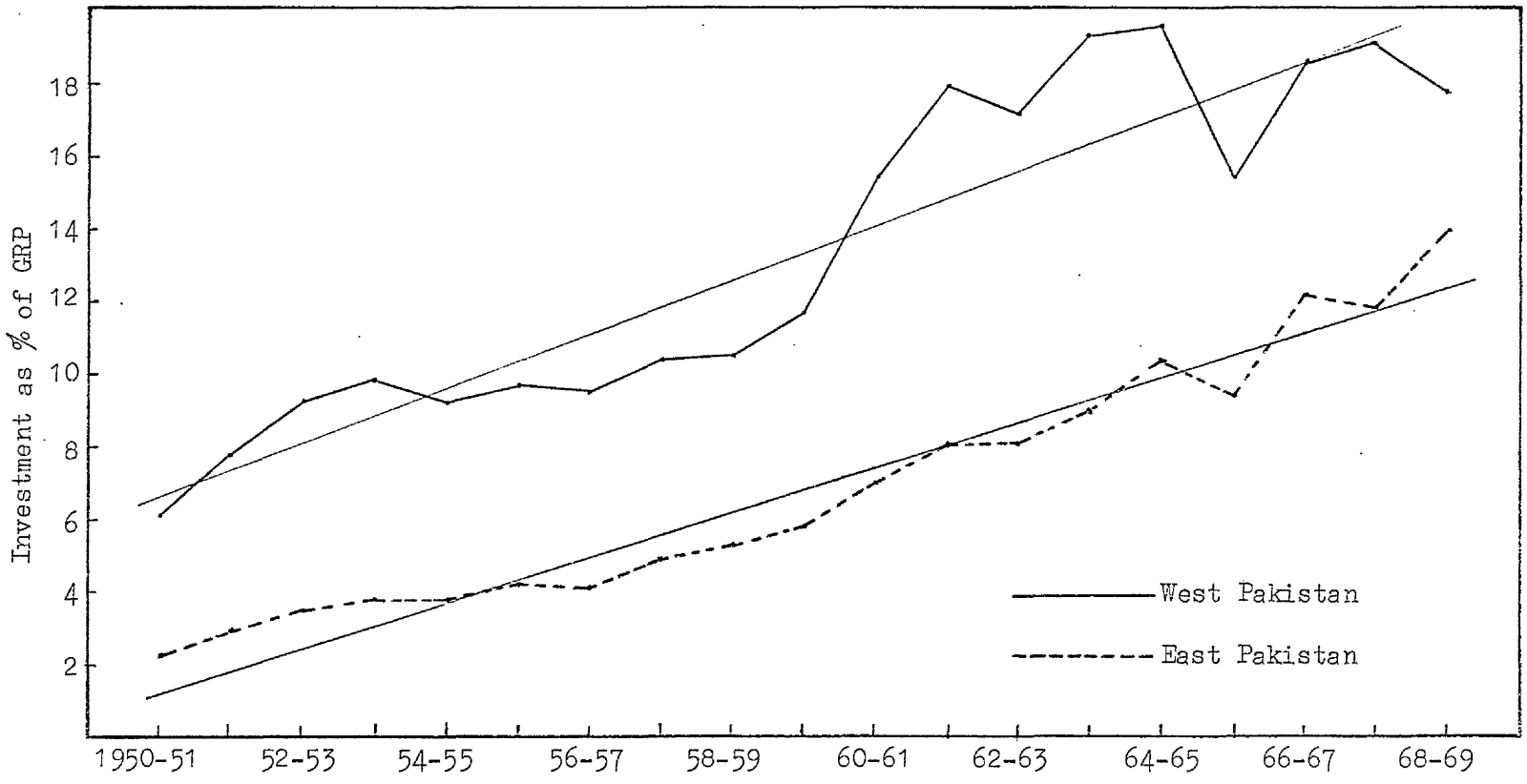
32 The Estimates of investment as percentage of GRP as shown in Background Tables 23 and 24 may be compared with those in S.R. Lewis, Pakistan: Industrialization and Trade Policies, Oxford University Press, 1970 p.146. The comparison is shown in the following Table; our estimates are mentioned under 'Huq.'

	1955-56		1960-61		1962-63		1964-65		1968-69	
	Lewis	Huq	Lewis	Huq	Lewis	Huq	Lewis	Huq	Lewis	Huq
East Pak.	-	4.2	7.8	7.0	9.4	8.1	12.7	10.4	-	14.0
West Pak.	-	9.7	17.0	15.4	21.1	17.2	21.5	19.5	-	17.8

Chart 1.2

Growth of Regional Investment: As % of GRP



Given the trends, it is obvious that East Pakistan will never be able to have an equal growth rate to West Pakistan under alternatives (1) and (2). This is because the rate of growth of the investment ratio is faster in West Pakistan than in East Pakistan. Calculation shows that if the trends continue, investment as a percentage of GRP at the end of the Perspective Plan will be 32.9 per cent in West Pakistan, as against only 22.6 per cent in East Pakistan. The conclusion is that if alternative (3) does not hold good not only will the Perspective Plan objective of removing disparity by 1985 remain unfulfilled, but also the extent of disparity will widen.[33]

In Chart 1.3 the growth of investment in East Pakistan is shown by dividing the total into public investment and private investment. The trends observed are shown below:

	N	Y_t = Investment as % of GRP in year t.	R^2 ($\bar{R}^2$)
Public Investment	13	1.4276 + 0.552lt	0.9759 (0.9524)
Private Investment	13	1.9004 + 0.1428t	0.8387 (0.7034)
Total Investment	13	3.3273 + 0.6950t	0.9807 (0.9618)

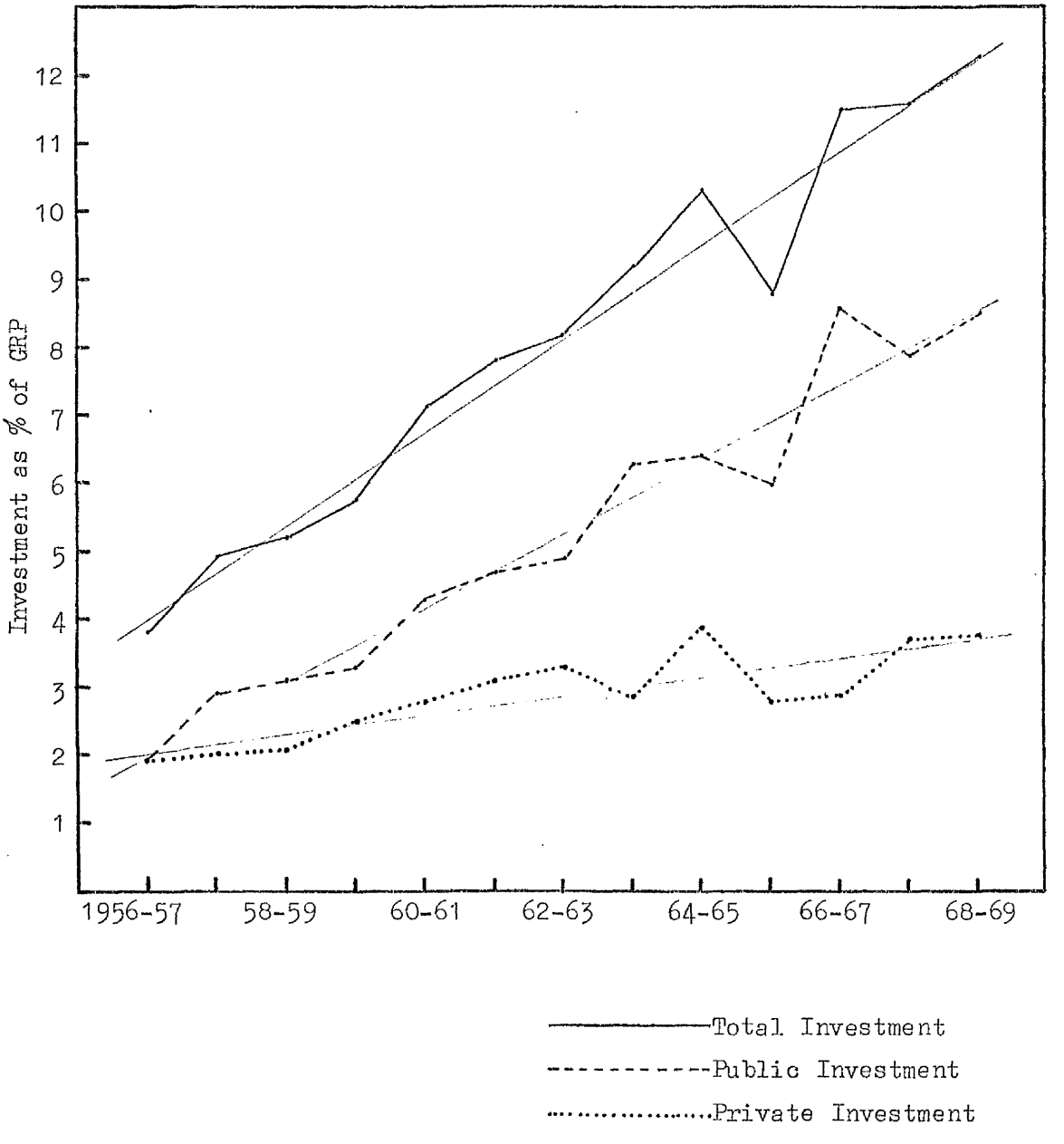
Source of data: Investment figures from 1956-57 to 1958-59 as estimated by using East Pakistan's price index (Background Table 23).

33 The factor which can stop the extent of disparity in per capita income widening is a much lower rate of population growth in East Pakistan than in West Pakistan. But there is no reason to assume that population growth rate will be significantly different between the two regions.

Chart 1.3

Growth of Investment in East Pakistan

(As % of GRP)



It appears that in East Pakistan, while public investment has increased at a comparatively fast rate, private investment has increased at a very slow rate. In Section I, it was found that the development model of the economy is one of assisting and inducing private enterprise. Given the regional growth objective, the problem therefore is not only one of raising the investment ratio of East Pakistan to a level higher than that of West Pakistan, but also of raising the private investment in East Pakistan to a significantly higher level.

Prior to concluding an important question may be touched upon: Does the higher target rate of growth for East Pakistan mean a transfer of savings from West Pakistan? The question may be examined by rewriting equation I.4, as follows:

$$\sum_{i=1}^{5} I_i = \sum_{i=1}^{5} S_i + \sum_{i=1}^{5} R_i + \sum_{i=1}^{5} F_i \quad \text{.....(I.5)}$$

Here, I, S, and F are are to be interpreted in the regional sense and the new factor R refers to the transfer of savings from the other region. If $\sum_{i=1}^{5} I_i$ through $\sum_{i=1}^{5} S_i$ and $\sum_{i=1}^{5} F_i$ is not adequate to achieve the target rate of growth, $\sum_{i=1}^{5} R_i$ may help to cover the gap in the required investment. Such a transfer to the poorer region (in the present case to East Pakistan) may seem probable in the context of the regional growth objective of Pakistan. But the studies made so far indicate that there has been a significant amount of resource transfer in the opposite direction, that is from East Pakistan to West Pakistan,[34] and the signs are that "the poorer province was quite possibly financing the development of the richer province."[35] In other words, $\sum_{i=1}^{5} R_i$ has not been positive for East Pakistan.

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34 See below in Appendix to Chapter I(p.

35 Lewis, S.R., (Jr.) Pakistan: Industrialization and Trade Policies op. cit. p. 147.

Another important question in the context of the regional growth is whether the objective is a serious constraint towards maximizing national growth and, if so, how far can we suggest the pursuit of this policy. The point involves some theoretical considerations and it would be preferable to delay such discussion until Section III (Regional Allocation Criterion) of Chapter 2, due to the inter-relationship of these topics.

Appendix to Chapter I

THE REGIONAL MULTIPLIER IN EAST PAKISTAN

I

Pakistan has adopted a clear-cut regional growth strategy which puts 1985 as the deadline by which the present disparity in per capita income between East Pakistan and West Pakistan should be removed. In Section III of Chapter I, discussion centred mainly around finding ways for higher growth rates in East Pakistan through increasing the investment-ratio to GRP (Gross Regional Product.) It appeared that in order to achieve the regional growth objective, East Pakistan's investment as a percentage of its GRP will have to be raised much higher. In the context of a mixed economy this means that merely raising the public sector investment is not enough; the private sector must also play a significant role.

In this Appendix, the development problem of East Pakistan will be viewed from the point of an expenditure model based on a regional multiplier estimate. In the United Kingdom, with Government emphasis on regional development, a number of economists [1] have already shown an interest in the regional multiplier with

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1 Archibald, G.C., "Regional Multiplier Effects in the United Kingdom," Oxford Economic Papers, March 1967, pp. 22-45; Allen, K.J., "The Regional Multiplier Some Problems in Estimation," in J.B. Cullingworth and S.C. Orr (eds.) Regional and Urban Studies: A Social Science Approach, George Allen & Unwin Ltd., London 1969, pp. 80-96; Steele D.B., "Regional Multipliers in Great Britain," Oxford Economic Papers, July 1969, pp. 268-92. Wilson, T. "The Regional Multiplier - A Critique," Oxford Economic Papers, November 1968, pp. 374-393. Greig, M.A., "The Regional Income and Employment Multiplier Effects of a Pulp Mill and Paper Mill," Scottish Journal of Political Economy, Feb. 1971, pp. 31-41. Brownrigg, M. "The Regional Income Multiplier: An Attempt to Complete the Model," mimeo (Univ. of Stirling Discussion Paper No. 3).

reference to the 'Development Areas' of the country. Our estimate of the regional multiplier may be considered as the result of recent interest in this topic.

Two important conditions for a meaningful regional multiplier are that the region concerned should not be very small and that it should not be completely disintegrated from the rest of the country.[2] With these two conditions, East Pakistan provides an ideal region for estimating the multiplier. On the basis of population, East Pakistan forms the larger part of the country. The region also provides a good case if the total income is taken into consideration. At the time of Independence in 1947, East Pakistan's GRP was higher than the rest of the country (Background Table II). Although the GRP of West Pakistan has surpassed that of East Pakistan since 1954-55, the latter is still large enough to make the regional multiplier a significant estimate.

The growth model of Pakistan provides the case of a centrally-controlled pattern. It is true that geographically the two regions (East Pakistan and West Pakistan) are separated by more than one thousand miles of foreign territory, but they form parts of the same country with a strong central administration. Thus, if the large size of the region and an integrated economic system can assist in improving the significance of the regional multiplier, East Pakistan undoubtedly provides a good case.

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2 In a disintegrated system, the question of the regional multiplier does not arise since it can act as an independent country.

II

The significance of an expenditure model is that it helps one to see the quantitative implication of an initial injection of money - say in the form of investment for road-building, factories etc., - into an economic system. An initial injection of Rs. 100 into the system may lead to an increase of Rs. 100, more or less. The regional multiplier (Kr) quantifies the value of the multiple by which change in income (ΔY) will take place. The regional multiplier helps in estimating ΔY by discovering the leaks. The lower the leakage the higher will be the multiplier. In other words, the extent to which Y will change will depend on the value of the leakage.

It, therefore, follows that in estimating Kr, we must calculate the leakage. Following Allen's estimate we shall take the following three co-efficients of leaks:[3]

(i) s = marginal propensity to save = $\frac{\Delta S}{\Delta Y}$ = $\frac{\text{Change in Saving}}{\text{Change in Income}}$

(ii) t = marginal propensity to pay taxes (both direct and indirect)

= $\frac{\Delta T}{\Delta Y}$ = $\frac{\text{Change in Tax Proceeds}}{\text{Change in Income}}$

(iii) m = marginal propensity to import from the rest of the country and abroad =

$\frac{\Delta M}{\Delta Y}$ = $\frac{\text{Change in Import}}{\text{Change in Income}}$

$$Kr = \frac{1}{s + t + m}$$

Before proceeding to estimate Kr it should be mentioned that our estimate of the regional multiplier will be based on the implicit assumption that expenditure

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3 Allen, K.J., "The Regional Multiplier: Some Problems in Estimation," p.84.

is not a function of s, t, or m. The basis of the assumption is that Kr deals with the short-term income and employment effects of the initial injection of money. It is true that there may be (or will be) long-term effects involving secondary responses through further investments. Such long-term effects are, however, handled by the accelerator - another economic tool. Thus, any feedback is ignored on the basis of the implicit assumption involving our use of the concept of the regional multiplier.[4]

III

An attempt will now be made to determine values for each of the co-efficients s, t, and m. For a correct estimate we need data based on marginal terms and for the region in which we are interested (in the present case, East Pakistan). However, this is a field where one can easily enter into a debate. While we would try, as far as possible, to find out the representative estimate for each co-efficient, caution will have to be exercised before taking them as being one hundred per cent accurate. At the outset, three points need to be mentioned. Firstly, while it is possible to find an estimate of m directly from regional data, that does not hold for s and t, and the help of national data is necessary. Secondly, instead of taking a single year, we have preferred to base our estimate on a period

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4 It should be admitted that the restrictive assumptions may not allow the tool to be of great use for policy formulation. This is why Professor Wilson emphasised the need for some form of 'super-multiplier' which can handle secondary changes in investment. Cf. Wilson, T., "The Regional Multiplier - A Critique," p.376.
In an unpublished article, Brownrigg, has extended the simplified regional multiplier model by incorporating the multiplier-accelerator relationship of a feed-back effect from induced investment. Cf. Brownrigg, M., "The Regional Income Multiplier: An Attempt to Complete the Model," op.cit.
It may, however, be mentioned that if the first-round effects are dominant, no substantial change of Kr can be expected by introducing super-multiplier effects.

of years (for example, the Second Plan period 1960-65 has been taken for estimating s). Thirdly, instead of a single estimate of Kr, three alternative estimates will be put forward.

i) Marginal Propensity to Save (s). Data for s at the regional level are lacking in Pakistan. Even at the national level, the data available fail to give adequate information. According to the Third Five-Year Plan, $\frac{\Delta S}{\Delta GNP}$ as a percentage was 22.7 in the pre-Plan period (1950-51 to 1954-55). The corresponding figure for the First Plan period (1954-55 to 1959-60) is shown as - 1.4 per cent.[5] The divergence is very wide. Further in the absence of annual data of $\frac{\Delta S}{\Delta GNP}$ it is difficult to view the fluctuation carefully.

In the Evaluation of the Second Five Year Plan (1960-65)[6], GNP and gross savings have been shown annually from 1959-60 to 1964-65. The figures given in this document are used to compute s, as shown in Table IA.1.

Table IA.1

Marginal Propensity to Save

(Rs. in Million)

	GNP	ΔGNP	Gross Savings = S	Δ S	$\frac{\Delta S}{\Delta GNP} = s$ (In percentages)
	(1)	(2)	(3)	(4)	(5)
1959-60	31,439	-	2,130	-	-
1960-61	34,786	3,347	3,087	957	28.59
1961-62	36,485	1,699	4,232	1,145	67.39
1962-63	38,642	2,157	4,295	63	2.92
1963-64	41,515	2,873	4,487	192	6.68
1964-65	45,680	4,165	5,077	590	14.17
Total		14,241		2,947	27.05

5 GOP, PC, The Third Five Year Plan, p.7.

6 GOP, PC, Evaluation of the Second Five Year Plan, May 1966, p.11.

The Table helps to show the value of s for a reasonably long period. Unfortunately, the divergence is so wide that it becomes difficult to select a single estimate of s even at the national level. Moreover, there is also the question of whether or not the national data for s can be taken without criticism for East Pakistan. As mentioned earlier, data for s at the regional level are not available. Of course, a few studies have been made to show the rate of savings in East and West Pakistan. Although they are not adequate for present purposes, they do help us to see the variation in the regional rates of savings. Haq estimated that in 1959-60 the gross domestic savings rate was 8 per cent for East Pakistan and 5 per cent for West Pakistan.[7] The same view of a higher savings rate in East Pakistan has been held by Bergan, according to whose estimate in 1963-64 gross private savings as a percentage of gross private income was 12.2 in East Pakistan and 10.5 in West Pakistan.[8] Considering the fact that the rate of growth of GRP has been lower in East Pakistan than in West Pakistan, the above estimates indicate that a figure of s taken for East Pakistan from national data may be criticised on the grounds that we have taken a lower estimate, and not the other way round.

Once we have decided to take national figure for s for East Pakistan, we again enter into the problem of having to select a single estimate in the face of the wide

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7 The Strategy of Economic Planning: A Case Study of Pakistan, Oxford Univ. Press 1963, p.112. Higher inflow of external resources to West Pakistan and the sanctioning of the scarce foreign exchange earned by East Pakistan to West Pakistan have been considered by the source as important reasons for lower savings rate in West Pakistan.

8 Bergan, A., "Personal Income Distribution and Personal Saving in Pakistan 1963/64," Pakistan Development Review, Summer 1967, Table XIV p.186. Quoted in Lewis, S.R., Pakistan: Industrialization and Trade Policies, OECD 1970, p.147.

divergence which exists between different years, and even periods. The best approach here, according to our view, is to take a range of estimates. Leaving aside the extreme figures we find values of s in the region mostly around 20 per cent, and considering the divergence, a range from 15 per cent to 25 per cent may be a good estimate. Thus, it would seem safe to take the following three estimates for s:

First Estimate = 0.15

Second Estimate = 0.20

Third Estimate = 0.25.

ii) Marginal Propensity to Pay Taxes (t). In an attempt to find the value of t we can try the tax receipts shown for East Pakistan.[9] An estimate of the change in tax receipts for the five-year period 1960-61 to 1964-65 gives a total of Rs. 386 million. Converting the figure into 1959-60 prices by using the General Price Index in East Pakistan (Background Table 10) we get a total of Rs. 368 million. The figure of the change in GRP for the corresponding period is Rs. 3,848 million (Background Table 11).

$$t = \frac{\Delta T}{\Delta GRP} = \frac{368}{3848} = 0.10 \text{ (approx.)}$$

How far the above estimate of t is an exact representation of East Pakistan is questionable because of the overwhelming importance of the Central Government in the tax receipt of the country. It is true that the Provincial Governments get some share of the Centrally collected taxes, but even after including this the total

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9 Government of East Pakistan, Finance Department, Civil Budget Estimates 1967-68. Quoted in CSO, 20 years of Pakistan in Statistics, Karachi, 1968, p.286.

tax-receipt of the Provinces is much lower in comparison to that of the Centre.[10]

Table IA.2 gives some idea of the national data of $\underline{t}$. For the period 1961-62 to 1964-65, the value of $\underline{t}$ is 14.53 per cent. This figure is much higher than the estimate of $\underline{t}$ found above for East Pakistan.

The divergence of $\underline{t}$ between the national level and East Pakistan may be due largely to the greater amount of taxes collected in West Pakistan. However, our earlier approach of taking a range for the co-efficient may be helpful.

Table IA.2

Marginal Propensity to Pay Taxes

	ΔGNP	Total Taxes $= T$	ΔT	$\frac{\Delta T}{\Delta GNP}$ (In percentage)
	(1)	(2)	(3)	(4)
1960-61	-	2,425	-	-
1961-62	1,699	2,749	324	19.07
1962-63	2,157	2,950	201	9.31
1963-64	2,873	3,441	491	17.09
1964-65	4,165	4,008	567	13.61
Total	10,894	-	1,583	14.53

Source: Col. (1) Table IA.1 Col. (2) - GOP, Evaluation of the Second Five Year Plan, p.182. Rest - Computed.

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10 A distribution of tax receipts for the period from 1949-50 to 1966-67 shows that the central government alone has taken a share around 60 per cent of the total and at times, particularly in the early years, the share of the central government was even higher than 75 per cent. Cf. GOP, CSO, Twenty Years of Pakistan in Statistics, pp. 278-79, 286-87, 294-95. The figures in the source have been shown in absolute figures as quoted from the Ministry of Finance.

Thus, as in the case of s, we take the three estimates of t for East Pakistan:

First Estimate = 0.08

Second Estimate = 0.10

Third Estimate = 0.12.

The second estimate represents t as found for East Pakistan, while the other two estimates are taken to safeguard any over-estimation and under-estimation of the value of t in the region.

iii) Marginal Propensity to Import (m). So far as data of imports by East Pakistan are concerned, the position is much better. Figures for imports from both West Pakistan and abroad are available (Background Tables 14 and 18).

A discrepancy arises however, concerning the exact estimate of ΔGRP. As may be seen from Background Table 11, two estimates of GRP are shown. In order to avoid criticism both these estimates may be used in calculating the value of m. Table 1A.3 has been prepared accordingly.

Table 1A.3

Imports and GRP: East Pakistan

(Rs. in Crore)

	Imports of East Pakistan			GRP of E. Pak. (1959-60 prices)					
	From W.P.	From Abroad	Total = (1) + (2)	Total = M 1959-60 Prices	ΔM	Estimate I GRP	Estimate I ΔGRP	Estimate II GRP	Estimate II ΔGRP
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1959-60	57	66	123	123		1,497		1,495	
1966-67	132	157	289	409		2,024		1,876	
Total					286		527		381

Sources: Col. (1) Background Table 18; Col. (2) Background Table 14; Col. (4) - Computed from Col. (3) by using general wholesale price index shown in Background Table 10; Cols. (6) and (8) Background Table 11. Rest - Computed.

By using GRP Estimate I we get $\frac{\Delta M}{\Delta GRP} = \frac{286}{527} = 54.27$ per cent.

By using GRP Estimate II we get $\frac{\Delta M}{\Delta GRP} = \frac{286}{381} = 75.07$ per cent.

Since we have decided to try a range of estimates, each of the above values found for $\frac{\Delta M}{\Delta GRP}$ can be taken as the lower and upper limites and a value between the two can be taken as another estimate. Thus, we take the following three estimates for m.

First Estimate = 0.54

Second Estimate = 0.65

Third Estimate = 0.75

IV

The estimates of s, t, and m found for East Pakistan can now be used to calculate Kr. This is shown in Table IA.4.

Table IA.4

Alternative Estimates of the Regional Multiplier in East Pakistan

	Estimate I	Estimate II	Estimate III
s	0.15	0.20	0.25
t	0.08	0.10	0.12
m	0.54	0.65	0.75
s + t + m	0.77	0.95	1.12
$\frac{1}{s+t+m}$ =Kr.	1.30	1.05	0.89

From Table IA.4 we get three alternative estimates of the regional multiplier for East Pakistan. Such an approach of finding alternative estimates allows us to show a range of Kr. One may expect that given the data, the regional multiplier

in East Pakistan should lie between 0.89 and 1.30.

It may be interesting to compare Kr for East Pakistan with those found for Zonguldak (Turkey) and Scotland. Like East Pakistan, Zonguldak and Scotland are considered as less-developed regions in their respective countries.[11] The comparison is shown in Table IA.5. An obvious implication of the comparison is that of the three regions, East Pakistan appears as the area with the highest leakage, thereby giving rise to the lowest estimate of Kr. Even the highest estimate of Kr in East Pakistan (1.30) turns out to be lower than the regional multiplier found for Zonguldak and Scotland.

Table IA.5

Estimates of Regional Multiplier in East Pakistan, Zonguldak and Scotland

		Kr
East Pakistan	Estimate I	1.30
	Estimate II	1.05
	Estimate III	0.89
Zonguldak		1.47
Scotland	Estimate I	1.80
	Estimate II	1.89
	Estimate III	1.70

Sources: (a) E.P. Table 4; (b) Zonguldak: C. Karatas, "A Study of Turkish Planning with particular reference to project evaluation in technique," Ph.D. Thesis (unpublished) University of Glasgow 1970, p.292. (c) Scotland: Estimate I, Allen, K.J., op.cit., p.92; and Estimates II and III Steele, D.B. op.cit., p.281.

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11 It probably needs no mention that Scotland is much more developed than Zonguldak or East Pakistan.

Estimate III shows that the regional multiplier is less than 1 in East Pakistan. The implication of such a low Kr is that the region fails to increase its income even to the amount of the initial injection of money. In other words, if Kr = 0.89. an injection of Rs. 100 will cause ΔY = Rs..89 only. It is not difficult however, to determine the reason for such a low Kr in East Pakistan. As may be seen from Table 1A.4 Marginal Propensity to Import makes a big difference in the total leaks and is mainly responsible for the regional multiplier being so low.[12] Of the total leaks, m occupies70 per cent in Estimate 1,68 per cent in Estimate II and 67 per cent in Estimate III. By comparison, in the case of Zonguldak, m occupies only 44 per cent of the total.

V

From the point of view of an expenditure model, a low multiplier as found for East Pakistan is not very encouraging so far as ΔY is due to an initial injection of money is concerned. If one considers seriously the regional growth objective which makes it binding for the economy to remove the regional disparity by 1985, a very low Kr in East Pakistan may even tempt one to question the effectiveness of the regional policy as it has been carried out in Pakistan on the basis of an integrated one-economy model. At the outset however, it should be mentioned that such thinking is automatically ruled out once we have taken a model of centrally-

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12 For a similar view see Brownrigg, M., "The Regional Income Multiplier: An Attempt to Complete the Model," p.4. He observes that "if there is a significant import leakage in the injection, then the final multiplied expansion of income could be less than the original expenditure of investment that gave rise to it."

controlled economy for our analysis. Moreover, it is also not our intention to make any policy implication on the basis of our estimate of the regional multiplier. As shall be shown, it is necessary to observe such a restraint when one considers the dangers involved in laying great stress on the concept of the regional multiplier.

However, it may be observed that the achievement of the regional growth objective in Pakistan appears as a very difficult job in the face of such a low regional multiplier in East Pakistan. As already mentioned, $\frac{\Delta M}{\Delta GRP}$ is exceptionally large. This leakage probably has been the most important factor in the transfer of income from East Pakistan to West Pakistan. What is surprising is the magnitude of the transfer. Power has estimated that between 1948 and 1961 there has been a transfer of resources to the value of about Rs. 2,500 million, or about Rs. 180 million per year. In terms of East Pakistan's GRP the transfer has taken away 2 per cent of the annual income.[13] Recently, Islam has estimated the transfer of resources covering the period from 1948 to 1965. By using accounting prices he has found that the transfer would be equal to Rs. 448.7 million per annum.[14]

The above observation may help to justify the existence of a multiplier that is low or even a less than unity. By this, we do not imply however that one should put heavy emphasis on the concept of the regional multiplier. How far the tool is helpful as a guide for policy measures is still doubtful. Professor Wilson has already drawn attention to the danger of depending heavily on this tool.[15]

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13 Power, J.H., "Industrialization in Pakistan: A Case of Frustrated Take-off?" Pakistan Development Review, Summer 1963, p.205.

14 Islam, A.9.A., "Regional Development in Pakistan with Special Reference to the Effects of Import Licensing and Exchange Control," Unpublished Ph.D Thesis submitted to London University 1969 pp.210-24.

15 Wilson, T., "The Regional Multiplier - A Critique," op.cit.

For example, one may infer that in order to raise Kr efforts should be made to raise the marginal propensity to consume and to reduce the marginal propensity to save (MPS) and/or to reduce the marginal propensity to pay taxes (MPT). Such a policy will, of course, be dangerous for a developing country like Pakistan which has successfully used MPS and MPT to raise the investment-ratio. It may also prove dangerous if attempts are made to introduce labour-intensive techniques or to encourage investment in the labour-intensive sectors merely for the sake of raising Kr. Thus, it follows that it will be unwise to rely heavily on the multiplier only, as has been remarked by Professor Wilson: "One of the less happy consequences of devoting too much time to the multiplier is that questions relating to effective demand begin to acquire excessive importance. Development policy in a region, as in an underdeveloped country, is much concerned with changes in products and in production-functions. This is not, of course, to say that expenditure models are unimportant but their role in this field is subsidiary." [16]

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16 Ibid, pp. 392-93.

Chapter 2

GOVERNMENT EXPENDITURE: SOME THEORETICAL ASPECTS

In Chapter I we tried to analyse briefly the development strategy which has been followed in Pakistan. It appears that the public sector has played a substantial role in the economic development of the country. There is, therefore, a good case for looking at the role of government expenditure in the growth process. We propose to analyse the growth and effectiveness of government expenditure in Chapters 3 and 4 respectively. In the present Chapter we would like to discuss some theoretical aspects of government expenditure dealing with the size and allocation of such expenditure.

It should be mentioned at the outset that in our discussion we shall concentrate mainly on government or public development expenditure. Such concentrated attention has a disadvantage in that it limits the area of discussion which has a wider applicability. For example, much of the discussion of this Chapter can be significantly applied to the study of non-development expenditures as well. The main reason for concentrating attention on government development expenditure is that it is in line with the scope of our intended study. It has some advantages. Firstly, it will provide us with a theoretical background. Secondly, it can help to analyse systematically the public development expenditure of an underdeveloped country. Thirdly, it will help to test our hypothesis and provide a strong basis for our conclusions.

The Chapter consists of three Sections and an Appendix. In Section I, an attempt is made to find an optimum mix between public investment and private investment. The main intention is to see how far the growth of government development expenditure can be economically justified. Section II deals with the criteria

for determining an efficient allocation of government development expenditure. The discussion is based on a sectoral viewpoint. The Allocation criterion from a regional point of view is dealt with in Section III; this Section is advanced mainly because in our country-study the regional issue is so apparent that regional balance forms one of the important objectives of government development expenditure. Section III can give some theoretical idea in this connection.

How investment criteria can be a guide to project selection is explained in an Appendix to the Chapter. The Appendix deals briefly with the components of investment, two approaches of the Discounted Cash Flows Method, and the selection of discount rate.

I Size of Public Development Expenditure

Data available for the United Kingdom show that as a percentage of GNP, government expenditure declined very slowly from 11 per cent in 1841 to 9 per cent in 1890. But since the turn of the century, things started moving differently. As a percentage of GNP, government expenditure increased from 12 per cent in 1905 to 24 per cent in 1923, and further to 37 per cent in 1955.[1] In the USA, the corresponding increase was from 8 per cent in 1890 to 20 per cent in 1942.[2] Recent statistics available for some underdeveloped countries indicate a fast growth of government expenditure. As will be shown in the next Chapter, as a percentage

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1 Peacock, A.T., and Wiseman, J., The Growth of Public Expenditure in the United Kingdom, George Allen & Unwin Ltd., 1961 (Revised Edition 1967) p.38.

2 Musgrave, R.A., and Culbertson, J.M., "The Growth of Public Expenditure in the USA," National Tax Journal, June 1953, p.98. Quoted in Ahmad, K.U. "Expenditure Classification and Investment Planning" Unpublished Ph.D. Thesis, University of London, 1964 (1966?).

of GNP, government expenditure in Pakistan increased from 11.36 per cent in 1950-51 to 20.24 per cent in 1968-69. The corresponding increase in India was from 8.59 per cent in 1950-51 to 23.92 per cent in 1966-67.[3]

There is, however, a difference in the composition of expenditure in the developed and underdeveloped countries. In the developed countries, defence absorbs a higher percentage; social welfare expenditure in the form of unemployment insurance, old age insurance, health services, etc., are also higher.[4] On the other hand, the share of development expenditure in the total budget is much higher in the underdeveloped (developing) countries. In these economies, increased government development expenditure in the absence of sufficient private capital formation is considered as an important cause of economic development.[5]

From the theoretical context, two extreme views on State participation in economic activities can be observed. At one extreme there is the view of free enterprise suggesting least State intervention and at the other extreme there is the view of State participation in economic activities.

The main arguments put forward by the advocates of free enterprise may be mentioned briefly as follows.[6] Firstly, in a free enterprise system each and every

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3 Reddy, K.N., "Growth of Government Expenditure and National Income in India: 1872-1966," Public Finance, No. 1/ 1970, pp. 92-93.

4 Martin, A, and Lewis, W.A., "Patterns of Public Revenue and Expenditure," The Manchester School, 1956, pp.211-13.

5 Horowitz, D., "Government Expenditure in Countries of Accelerated Growth," in A.T. Peacock and G. Hauser (eds.) Government Finance and Economic Development, OECD 1963, pp. 59-74.

6 For a good discussion see Johnson, H.G., Money, Trade and Economic Growth, George Allen & Unwin Ltd., London 1962. Chapter VII.

one tries to maximize his own advantage and thereby social production will be maximized. Secondly, through market mechanism the equilibrium price for each factor and commodity will be determined at a point where demand and supply are equal. Investment decisions based on prices equal to marginal costs will lead to an optimum allocation of resources. Thirdly, in this system only efficient units of production can survive. Inefficient firms will incur losses and will have to quit. Finally, market forces will determine the pattern and location of production. It is the force of demand and supply which will determine what, how, and where to produce. This can assure efficiency of production.

The arguments put forward by the advocates of State participation are briefly these: firstly, it is argued that in the real world in most cases there is a divergence between private and social costs and benefits. As a result, the market gives wrong signals and any decision based on market forces cannot be efficient.[7] Secondly, there are goods and services where "the exclusion principle" cannot be applied.[8] The Market mechanism cannot be expected to reveal true individual preferences, because the nature of these commodities is such that it is difficult to exclude potential consumers from consuming the commodity if they refuse to pay. Thirdly, the nature of the investment may be such that competition will create duplication

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7 There is good literature on this topic centring round external economics. For example, see Rosenstein - Rodan, P.N., "Problems of Industrialization of Eastern and South Eastern Europe," Economic Journal, June - Sept. 1943. Reprinted in A.N. Agarwala and S.P. Singh (eds.) The Economics of Underdevelopment. Oxford Univ. Press pp.245-255 Skitovsky, Tibor, "Two Concepts of External Economics," Journal of Political Economy, April 1954, Reprinted in The Economics of Underdevelopment, op.cit. pp.295-308.

8 Samuelson, P.A., "The Pure Theory of Public Expenditure, Review of Economics and Statistics, Nov. 1954, pp. 387-89; also "Aspects of Public Economic Theory," Same Review, Nov. 1958, pp. 332-38. See also Musgrave, R.A. The Theory of Public Finance: A Study of Political Economy, McGraw-Hill, Book Co. Ltd. 1959, pp. 9-10, 73-83.

and inefficiency. Gas, electricity, water-supply, etc., are examples. Finally, the socially desirable pattern of investment may differ from that indicated by the market forces. For example, the society may put much importance on the development of the backward regions and/or the production of goods at low cost for the poor. Market forces need not necessarily determine investment in these fields and State participation may become necessary.

Instead of entering into the controversy between free enterprise and State intervention, it is probably sufficient for our purpose to mention that in the real world what we mostly find is some form of mixed economies. Here the main task is to find out an optimum mix between private and public investment. Theoretically, given the total size of investment, such an efficient allocation will be determined by marginal productivity considerations. Investment in both private and public sectors should be expanded in such a way that marginal productivity of investment becomes equal in each sector. In other words, at equilibrium

$$R_p = R_g$$

where R_p and R_g represent productivity of the marginal unit of investment in the private and government sectors, respectively. If $R_p > R_g$, investment funds should be transferred from the government sector to the private sector and vice versa.

A note on the rate of return assumed in R_p or R_g is necessary. It is the social and not the private rate of return that is important. If market prices are in equilibrium there will not be any deviation between social and private rates of return. But if market prices are different from social prices, necessary corrections will have to be made in order to estimate the social rate of return. A correct estimate will need an exact idea of the deviation between market prices and social or accounting prices. Once the accounting prices are known, the following formula used in a UN study may help to give an idea of the calculation of the social

rate of return.[9]

$$\text{Social return on Investment(I)} = \frac{(XP_x - LP_l - MP_m) + (X\Delta P_x - L\ \Delta P_l - M\Delta P_m)}{I}$$

Where X = output, L = labour, and M = purchased materials plus maintenance and depreciation, P_x, P_l and P_m represent market prices in each. The difference between accounting and market prices in each are represented by ΔP_x, ΔP_l and ΔP_m.

In considering $R_p = R_g$, it was assumed that the one competes with the other. That is, an increase in government investment takes place at the expense of an equal decrease in private investment. But in practice this need not be so. An increase in the amount of public investment may also take place due to a decrease in government non-development expenditure, or due to a decrease in private consumption or due to financing from abroad.[10] In these cases the assumption of the given investment size no longer exists and we are faced with the problem of maximizing total investment. This is the objective now being advanced by the underdeveloped economies with inadequate investment-ratio. In these economies, private savings and investment are hardly sufficient to provide for the increasing population, not to mention raising the real per capita income. In the context of

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9 UN, Report by a Group of Experts. Formulating Industrial Development Programmes (with special reference to Asia and the Far East). Economic Commission for Asia and the Far East, Bangkok 1961, p.22.

10 How far the increase in total investment is justified would, of course, need a thorough calculation of the social time preference rate, particularly if the level of consumption is curtailed. If the society's discount rate is very high, an additional income say in the tenth year, may show a negative net present value (net of costs). However, in practice, what a planner aims is not the reduction of the level of consumption but the reduction of the increase in additional consumption. If income increases by say, Rs. 100, assuming 25 per cent marginal rate of saving, the society will be allowed to increase consumption by Rs. 75 only and not by Rs. 100.

Pakistan it is found (Chapter 4) that public investment has a distinctive role to play not only in encouraging private savings and investment but also in directing them in the fields and regions which are considered socially desirable.

Thus, one may view the growth of public investment as supplementary, complementary and directive to private investment.[11] As long as the government development expenditure fulfils this criterion its expansion is desirable. This is the consideration upon which many economists strongly advocate the growth of government expenditure in the underdeveloped countries.[12]

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11 It should not, however, imply that there will not be any competition whatsoever. Even when the public sector works as complementary with the private sector there may be competition, e.g., in the demand for resources like technical knowhow, managerial skill, etc. public enterprise may also compete with private enterprise in selling the goods and services produced.

12 According to Professor Lewis, in the underdeveloped countries Government Expenditure (taking central and local governments together) should comprise 20 per cent of gross domestic product in order to provide the services demanded. This is excluding defence and debt charges. The sectoral breakdown is shown as follows: General and Economic Administration 6 per cent, Education 3 per cent, Health 2 per cent, Welfare services 2 per cent, Capital expenditure on Public Works (including roads, schools and hospitals) 3 per cent, and at least 4 per cent for capital expenditure by enterprise in the public sector or by the Government's financial Corporations which lend to the private sector through agricultural and industrial banks etc. Cf. Lewis, W.A., Development Planning, The Essentials of Economic Policy, George Allen & Unwin Ltd., London, 1966, pp. 115-16. A similar view is held by Adler who would like to argue that "government expenditure is inadequate in countries in which the ratio of government revenue and expenditure is less than 10 per cent of GNP, and the optimum ratio of revenue to GNP for the low income countries may be substantially above that figure, notwithstanding, the limitations on the organizational and administrative ability of the governments of low income countries to make effective use of fiscal measures." Cf. Adler, J.H., "Fiscal Policy in Developing Countries," in K. Berill, London, 1964, p.290.

II Sectoral Allocation Criterion

The preceding Section considered the theoretical justification of public development expenditure. Now given the size of the fund, what should be the criterion of allocation? Theoretically, the ideal principle is to push expenditure to each sector in such a way that the marginal benefit of the last rupee spent is equal everywhere. In other words, the principle of equi-marginal benefits should form the basis of allocation. If the benefit of the marginal unit of investment is higher in education than in industry, the society will benefit if funds are transferred from industry to education. In this way total benefits from the marginal rupee of investment will be equal in all sectors.

The above allocation criterion is based on the assumptions that there exists unlimited productive opportunities of investment and that there is capital constraint. If we can remove the capital-constraint assumption, the criterion needs to be interpreted in terms of equality between marginal costs and benefits. Under such circumstances, the ideal allocation principle is to push investment to each sector as long as the marginal benefit of the last rupee is higher than the cost. This principle may be explained with the aid of the following figure.

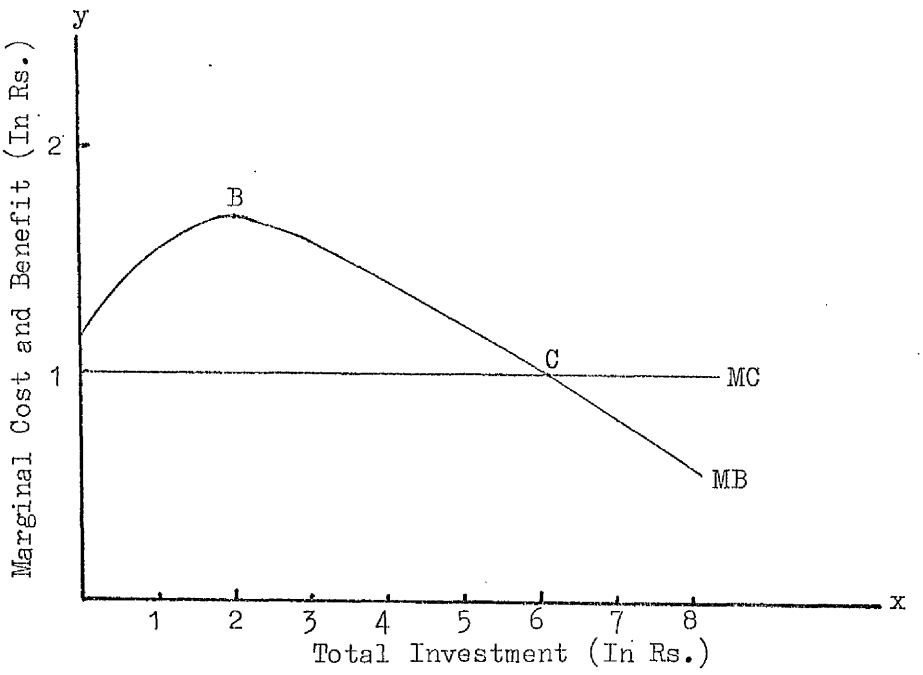

Figure 2.1: Equating Marginal Costs and Benefits.

The MC - curve represents marginal cost. The curve is drawn parallel to x-axis because each point on the curve represents MC due to an extra rupee of investment. The MB - curve shows marginal benefit. The curve is drawn in such a way that at the start marginal benefit due to an extra-rupee of investment is rising. Marginal benefit is highest at point B. As investment continues after point B, the marginal benefit continues to decline. At point C, MC = MB. Any investment beyond C will bring a benefit lower than cost and will not be economically justified. Similarly, any investment less than C would mean less total benefit for the society, say from education. Only if investment is pushed up to point C will benefits be maximized. The same investment criterion can be applied for other sectors of the economy.

Considered theoretically we thus have an ideal allocation criterion. But difficulty arises when we come to apply it in practice. Application of the criterion needs proper measurement of all costs and benefits. Unfortunately, the technique is not yet known for quantifying everything. For example, what price tag can be

put to the life saved by constructing a dam which controls flooding? Evaluation of benefits demands that it should properly represent the social welfare function of the society. In practice, however, not only is it difficult to quantify things properly but it is also impossible, as observed by Professor Tinbergen "to construct a social welfare function obeying all criteria that would seem palusible to a democratic society." [13] A cursory glance at any of the Development Plans of the under-developed countries will show that the country has a multiplicity of objectives which at times may conflict with each other. [14] Further as mentioned in Section I, if the market prices differ from social prices any calculation based on the former will not be correct. For a proper evaluation of benefits and costs we will then have to apply accounting prices.

Instead of enumerating the difficulties [15] it may be concluded that investment allocation based on marginal costs and benefits cannot be expected to be of much help to broad choices. [16] It does not, however, mean that in broad choices, policy decisions should not take account of any comparison of alternatives. It

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13 Tinbergen, Jan. "The Relevance of Theoretical Criteria in the Selection of Investment Plans," In MIT, Investment Criteria and Economic Growth, Asia Publishing House, 1961, p.7.

14 For example, output growth objective may come into conflict with the employment creation objective; the objective to maximize investment may conflict with the equity of income objective. It is true that an econometrician may help to solve the problem with more than one objective (constraint) through linear programming technique. But it should be remembered that it is possible for an innocent looking problem to contain mutually contradictory conditions which will make it insolvable in practice.

15 For a discussion on the difficulties, see Prest, A.R. and Turrey, R., "Cost Benefit Analysis: A Survey," Economic Journal, Dec. 1965, pp.687-702,728-31.

16 The criterion can be significantly applied in narrow choices where the alternatives are close substitutes. If the benefits to be received are same from different projects one can easily apply the cost-effectiveness criterion.

should always be remembered that resources are scarce and difficult choices will have to be made among competing programmes. If the decisions are based on the pursuit of blind requirements regardless of costs, they cannot be expected to be economic. As has been remarked by McKean, "to think systematically about the costs and gains from alternative policies is surely more sensible than to rely on haphazard thought or intuition."[17]

As a practical guideline, public sector allocation for higher level choices may be conveniently conceived in terms of broad sectoral classification as[18]

$$G_d = SOC + DPA$$

where G_d is public or government development expenditure, SOC is social overhead capital and DPA is directly productive activities. Once we accept such a twofold classification, the allocation decision can be viewed as an optimum-mix between SOC and DPA. Here one encounters the debated issue of balanced versus unbalanced growth. We do not, however, intend to enter into the controversy,[19] and we would like to pass over the issue by merely viewing the expansion path from two angles.

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17 McKean, R.N., Public Spending, McGraw-Hill Book Co., 1968, p.145.

18 A classification on this basis was advanced by Hirschman to develop his hypothesis of unbalanced growth in the context of allocation of the total investment fund. Cf. Hirschman, A.D., The Strategy of Economic Development, Yale University Press, 1958, pp. 83-89.

19 In fact, the controversy cuts very little ice. As has been observed by Professor Youngson, "Although much has been written about the merits and demerits of 'balanced growth' it is becoming more and more obvious that this is an armchair argument, and that it does not focus upon an issue of first-rate practical importance." Cf. Youngson, A.J., Overhead Capital, op.cit. p.157

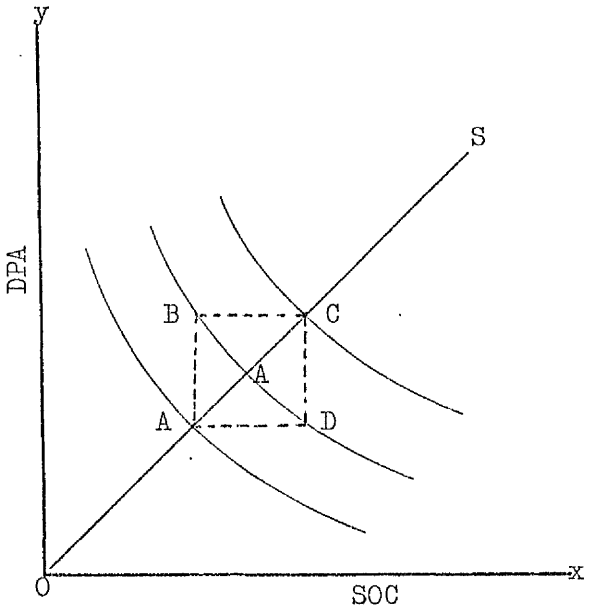

Figure 2.2A

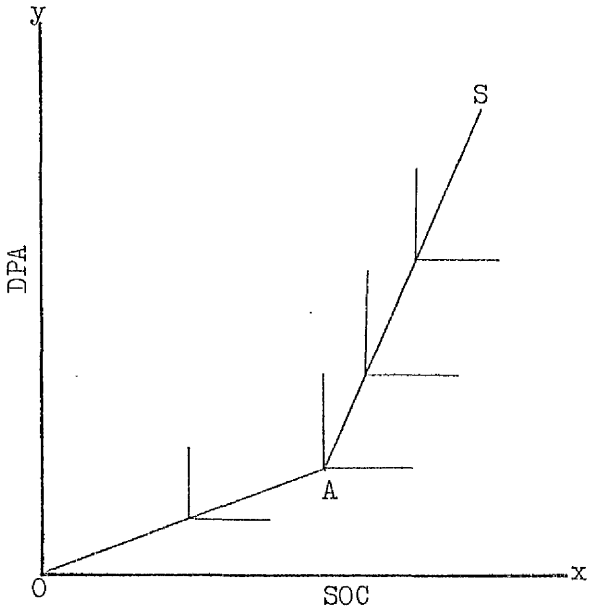

Figure 2.2B

Figure 2.2: Sectoral Allocation between SOC and DPA with and without room for Substitution

The figures show a very simple case of two-sector, one-output production function The expansion paths are drawn in such a manner that in figure 2.2A substitution between SOC and DPA is possible, whereas in figure 2.2B no such substitution is possible. The isoquants in 2.2A suggest that the same output can be produced by varying combinations of SOC and DPA. Figure 2.2B, on the other hand, represents a case of kinked expansion path and fixed-factor proportions. How far the real world situation is analogous to 2.2A or 2.2B is an empirical point. If the economy concerned is representative of 2.2A, a strict discipline in investment allocation between SOC and DPA is not essential, for any inbalance will be corrected in the next period. But if the economy is representative of 2.2B higher growth can be achieved only through an exact allocation of investment between SOC and

DPA. For example, up to point A more investment will be necessary for SOC; here a higher allocation for DPA will be wastage since it will result in under-utilization of capacity in DPA. Similarly, after point A a higher allocation will be necessary for DPA; here a higher allocation for SOC will result in wastage in the form of surplus capacity.

If there is any lesson to be learnt from the above illustration it is that investment allocation decisions should be made according to the economic condition of the country concerned. Government development expenditure can greatly assist in achieving a higher growth rate by removing the bottlenecks in the expansion path. If ex ante investment by the private sector, say during the next five years, shows a shortage of SOC, public investment can be directed to meet the shortage. Similarly, if ex ante investment by the private sector in DPA falls short of the projected amount, public development expenditure can be directed to expand investment in DPA. [20]

We are thus now in a position to lay down a guide-line for the allocation of government development expenditure. [21] Conceived in terms of a planning framework it is the duty of the planning authority to make an estimate of the ex ante demand for SOC in the Plan period. Estimates in the form of an input-output table covering the whole Plan period can help us to ascertain the required SOC, say x

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20 Here it is assumed that other policies are also in operation to achieve the objective.

21 For obvious reasons it is not assumed that the amount of fund is given.

unit of electricity, $\underline{y}$ unit of transport and $\underline{z}$ unit of technical personnel.[22] Once a decision is made as to the size of G_d for SOC, the rest of the decision follows. That is, the residue of the fund should be devoted to DPA. Whether the government undertakes personally the productive investments or gives the money as loans to private investors, or jointly undertakes the activities is a matter of political philosophy, productivity and convenience.

So far as intra-sectoral allocation of investment is concerned, things become easier. Within a sector, production alternatives are close substitutes and cost-benefit calculations become comparatively easy. If the alternatives provide equal benefits, the problem is to select that alternative which provides the output with minimum cost by applying the cost-effectiveness approach as mentioned earlier.[23] If the benefits are different the problem can be handled by applying the Internal Rate of Return or the Net Present Value criteria, as explained in an Appendix to this Chapter, taking both cost and return streams into consideration.

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22 In practice, however, the problem is a complicated one. For a further discussion see Section II of Chapter 5.

23. Alternatively, given equal costs the projects providing higher benefits may be selected by making a benefit-effectiveness analysis.

III Regional Allocation Criterion

In any study of the regional allocation criterion, one must consider the optimum allocation of economic activities based on location or 'optimal dispersion of economic activities' as the regional economists would like to call it. Until recently, space economics was not given serious consideration by economists because of their emphasis on time as the most critical factor in economic analysis. But the practical considerations of market imperfections with almost immobility of factors of production even within a single country have brought classical economic thinking, not based on any considerations of space, under serious attack. In fact, as has been observed by Richardson, " Market forces do not lead inevitably to equality of regional per capita incomes or to the optimal spatial allocation of resources, and in some circumstances may operate in a disequilibriating manner." [24] Hence one faces the necessity of making some regional allocation considerations. This is particularly important if the economy concerned has a distinctive regional growth objective, as is found in the case of Pakistan.

From the allocation criterion discussed in Section II it follows that national growth will be highest if investment is pushed to the sectors or projects which are most productive. Here it is assumed that the country has only one objective, that is, to maximize the return from investment. Investment decisions will reflect the objective when marginal productivity of capital is equal in all sectors. But a constraint may be imposed the moment the regional balance objective is put forward. The society is now faced with two distinct objectives: it wants to maximize the growth rate as well as to reduce the disparity of income among the regions. The

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24 Richardson, H.W., Regional Economics: Location Theory, Urban Structure and Regional Change, Weidenfeld and Nicolson, London, 1969, pp.3-4.

allocation criterion is now asked to take account of both these objectives.

How far the regional balance objective appears as a constraint on the national growth objective needs careful study. Let us suppose that there are two regions: 'A' and 'B'. 'A' represents an advanced region and 'B' represents a relatively backward region. In region 'A', infrastructures are already developed. All such facilities as power, transport, banking, insurance, supply of trained personnel in this region are available and it is more profitable to invest in 'A'. On the other hand, in region 'B' adequate infrastructural facilities are not available; entrepreneurs face difficulties in transporting goods, or else power facilities are not available, or there is the problem of getting trained workers. As a result, marginal productivity of capital is lower in region 'B'. Under these circumstances, it is not possible to say exactly whether region 'A', though giving a higher productivity in the short-term, is the region with higher development potential. As has been remarked by Professor Lewis: "The richest areas are not necessarily those with the best prospects. Some of the poorer areas may be poorer only because they have been neglected, and it is possible that if now helped they will develop so rapidly that they more than justify economically the diversion of resources to their needs."[25] Thus, seen from a long-term point of view, it is difficult to say whether the regional growth objective conflicts with the national growth objective. For a definite conclusion we must know the development potential of each region. But this is not an easy task. It is difficult to say with certainty which regions of the economy are likely to succeed.

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25 Lewis, W.A., Development Planning: The Essentials of Economic Policy, op. cit., pp. 69-70.

With respect to regional growth it may be interesting to note the probable effects on a backward region due to the development of an advanced region. Myrdal has observed two types of effects: "Backwash" and "Spread".[26] Backwash effects refer to those forces which operate to cause a net transfer of resources from the backward to the advanced region. In Chapter I we found that there was a net transfer of resources from East Pakistan to West Pakistan. This may provide an example of the transfer of resources from the poorer to the richer region.[27] Spread effects, on the other hand, refer to those market forces which will cause a higher development of the backward region due to the expansion of the advanced region. It should be mentioned however, that the forces of spread effects will be weak in poor countries. This implies that "as a rule the free play of the market forces in a poor country will work more powerfully to create regional inequalities and to widen those which already exist."[28]

If the "Spread" or "trickling down" effects can ultimately overcome the "Backwash" or "polarization" effects,[29] the development process itself will take care of the backward regions, and policy measures will not be necessary. Not only is it a lengthy process, but it is also entirely dependent on the effectiveness of market forces. In the real world, what we find is that free market forces are not always

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26 Myrdal, G., Economic Theory and Underdeveloped Regions, Methuen & Co. Ltd., London, 1957, pp.27-32.

27 The statement, however, needs to be qualified. Since free play of market forces has not been allowed the transfer need not entirely be due to backwash effects only.

28 Myrdal, G., ibid, p.34.

29 "Trickling down" and "polarization" effects are the terminologies used by Hirschman, Cf. The Strategy of Economic Development, op.cit., pp.187-190. Hirschman seems to have changed his position which he originally took in emphasising the "trickling down" effects. In a Preface to the Paperback Edition of his book (p. ix) he pleads for a correction because according to him the questions like regional transmission of growth require much further investigation.

allowed a free hand. There is also the moral and political pressure of developing the backward regions which does not allow the planners to wait long. Further, in a geographically non-integrated country like Pakistan with two regions separated by a great distance, many of the arguments of "trickling down" effects do not apply, and deliberate economic policy becomes necessary.

Rather than pursue the discussion, it may be worth mentioning that the question of finding an allocation criterion on a regional basis is not as simple a task as in the case of sectoral or project allocation. The problem is further complicated due to the political and social pressure involving the regional growth objective. The complexity of the problem has been well revealed in the following remark by Professor Wilson: "The economist has no peculiar right to prescribe the ends that public policy should serve; his particular concern is rather with the means. The strengthening of national unity may be deemed to be at least as important as a further raising of the standard of living and, for the sake of unity, a country may be ready to accept a somewhat slower growth of output."[30]

So far as the inter-regional allocation of government development expenditure is concerned it is probably sufficient to mention that if the country concerned has a distinctive regional growth objective, as we find in the case of Pakistan, the allocation should reflect the regional growth objective.[31] If a separate growth

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30 Wilson, T., Policies for Regional Development, Oliver and Boyd Ltd., Edinburgh and London, 1964, p.11.

31 An argument for an inter-regional allocation of the total government expenditure (and not merely G_d) including both development and non-development expenditure seems a strong one. Cf. Huda, M.N., "Planning Exercise in Pakistan," Pakistan Development Review, Autumn, 1968, p.345. The speech-article was delivered when Professor Huda was the Minister of Finance and Planning, Government of East Pakistan. He observed that "it may be necessary in the Fourth Plan to determine the intewing allocation in view of the total public expenditure - Central and provincial, recurrent and capital - incurred in the two provinces."

rate is determined for each region, the regional allocation of government development expenditure will be called upon to help in achieving the target.[32] Once we have got a regional breakdown of the total government development expenditure we can return to the sectoral allocation aspect of the problem as discussed in Section II. Now our task is to allocate fund to those sectors or projects within a region, that provide a higher return.

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32 Here we assume that G_d has an effective role to play. In its aggregative role G_d will help in raising the investment ratio in the region and in its allocative role G_d will help in achieving an efficient allocation of resources in both the public and private sectors.

Appendix to Chapter 2

A NOTE ON PUBLIC INVESTMENT CRITERIA

I

As mentioned in Section II(Chapter 2), the Internal Rate of Return (IRR) or Net Present Value (NPV) methods may be applied to consider the costs and returns of alternative projects. In this Appendix, an attempt is made to show the application of IRR and NPV formulae. At the outset, it should be mentioned that throughout this Note strict assumptions will help us to solve the problem of the large amount of information required for selecting projects. By this, however, we do not intend to ignore the complexities.[1]

Viewed from a time-dimension, an investment project consists of two streams: (i) Cost-stream and (ii) Return-stream.

$$T_c = \sum_{i=1}^{n} F_c + \sum_{i=1}^{n} O_c \quad \ldots\ldots\ldots (1)$$

where T_c is total costs,

F_c is fixed or capital costs in year i ($i = 1, 2, \ldots\ldots n$),

O_c is operating costs in year i ($i = 1, 2, \ldots\ldots n$).

$$T_r = \sum_{i=1}^{n} R_p + S_p \quad \ldots\ldots\ldots\ldots (2)$$

where T_r is total return,

R_p is return from production in year i ($i = 1, 2m \ldots\ldots n$),

S_p is scrap price or value.

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1 In the course of the present research, a 19-page questionnaire was prepared with the object of collecting information for making cost-benefit analysis of public projects. Accordingly, copies of the questionnaire were sent to Pakistan. Unfortunately, we have failed to obtain enough information to undertake studies at project level.

In the real world where market prices do not represent social prices for public investment decisions, costs and returns of a project should be calculated at accounting or shadow prices. For the sake of simplicity we shall however, assume that there is no divergence between market price and social price.

Further, there are difficulties of measurement. Not only are the costs and returns associated with an investment project uncertain, but also sometimes measurement becomes impossible. However, in the following Section we shall assume that costs and returns are known with certainty.[2]

II

Internal Rate of Return and Net Present Value are two different approaches of the discounted cash flow method. It is claimed that the discounted cash flows method is superior to other types of decision methods[3] since it considers

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2 The assumption does not mean that risks and uncertainties should be ignored. On the contrary, emphasis is given to the careful handling of risks and uncertainties. Since no project is free from uncertainties it would be better to show a 'range of outcome.' While discussing the Green River Watershed, McKean suggested such a 'range,' as follows:

> Present worth not likely to fall outside this range:
> $100 to $400 million.
>
> Present worth extremely unlikely unlikely to fall outside this range:
> -$100 to £600 million.

Such a presentation has the advantage of analysing benefits in a form which can show the worst and best of the outcome. Cf. McKean, R.N., Efficiency in Government Through Systems Analysis, New York: John Wiley & Sons, 1958, p.206.

3 Some of the other investment methods are: Pay-off period; Proceeds per rupee of outlay, Average rate of return, etc. Cf. Mishan, E.J., Cost-Benefit Analysis, George Allen & Unwin Ltd., 1971, pp.185-189. See also Bierman, H. Jr. and Smidt, S., The Capital Budgeting Decisions, Economic Analysis and Financing of Investment Decisions, The Macmillan & Co,, New York, (Second edition) 1966, pp.21-25.

the timing of cash flows associated with an investment. The main principle of the discounted cash flows method is to make a comparison between T_c and T_r (both of which may take place at different times) by bringing them to present level, or at zero time-level. Money has a time value. One rupee in year-1 and one rupee in year-2 are not of the same value. If the costs are incurred in different years they should be brought back to the present at a chosen discount rate.[4] Similarly, the returns occurring in different years should be brought back to the present.[5] Only when we have been able to do so, will a proper comparison between T_c and T_r be possible.

Internal Rate of Return (IRR). The IRR of an investment-project is the rate which will make the present worth of the cash proceeds equal to the present worth of the cash outlays. Thus, it is the rate for which the present discounted value of net returns is zero. Such a rate can be determined by a process of trial and error. This determined rate is the rate of return, r, of the investment.

In order to determine r it is necessary to know: (i) the cost-stream and (ii) the return-stream. First, the cost-stream must be discounted at the chosen interest rate in order to determine the present worth of the total investment spread over a number of years.[6] The following formula may be used to discount the cost stream.

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4 The question of selecting discount rate will be discussed in Section III.

5 The calculation is conveniently done if one follows the conversion Tables at various rates of interest shown in many text books dealing with investment decisions.

6 If the cash outlays required for the investment take place only once in the beginning, the present worth of the total cost will be equal to that sum, that is j will be equal to O (equation 3) and there will be no necessity of discounting.

$$C_p = \sum_{j=1}^{n} \frac{C_j}{(1+i)^j} \quad \ldots\ldots\ldots\ldots\ldots\ldots \quad (3)$$

where C_p is the present worth of the total costs,

C is cost incurred at the end of the year j and

i is the rate of interest.

Once the value of C_p is known, the second step is to discount the return-stream at a rate which will make the present worth of the returns just equal to R_p, the present worth of the total returns. That is,

$$R_p = \sum_{j=1}^{n} \frac{R_j}{(1+r)^j} \quad \ldots\ldots\ldots\ldots\ldots\ldots \quad (4)$$

where R is the cash flow at the end of the year, j,

r is the rate of return.

The above decision formula may be explained with the aid of a very simple exercise. Let us consider a project with costs and returns spread over three years.

Cost-stream: First year Rs. 800
Second year Rs. 200
Third year Rs. 200.

Expressing the cost-stream in terms of equation 3 at an interest rate of 10 per cent, we get

$$\frac{800}{(1+0.1)} + \frac{200}{(1+0.1)^2} + \frac{200}{(1+0.1)^3} = \text{Rs. } 1,043 \text{ approx.}$$

Once C_p is known, we need to discount the return-stream at a rate of return, r, which will make it equal to Rs. 1,043. Suppose the returns, spread over three years, are as follows.

First year	Rs. 300
Second year	Rs. 710
Third year	Rs. 400

The stream may be written in the form of equation 4, as shown below.

$$\text{Rs. } 1{,}043 = \frac{300}{(1+r)} + \frac{710}{(1+r)^2} + \frac{400}{(1+r)^3}$$

By process of trial and error r will be found approximately 0.16. Discounted at this rate, R_p will be approximately Rs. 1,043 which is equal to C_p.

If there is no capital-constraint, the best course is to undertake all projects with $r > i$. In the presence of capital-constraint, it will be necessary to consider a number of alternative projects and make a ranking-list, as shown in the following Table.

Investment	i = rate of Interest	r = rate of return	Ranking
A	0.10	0.08	4
B	0.10	0.22	1
C	0.10	0.16	2
D	0.10	0.10	3

Given a rate of interest 0.10, the correct course is to undertake project B first. If funds are greater, undertakings of C and D will follow in order of merit. At the present rate of interest, project A is not acceptable as it gives a rate of return lower than the interest rate.

Net Present Value (NPV). The NPV criterion makes a direct comparison between costs and returns by bringing the streams to present worth. It is not necessary to

determine r, the rate of return. What is required is to compute the present values of the cash proceeds and cash outlays at the given rate of interest, i, and compare the cash flows. Expressed formally, the NPV criterion may be shown as follows.

$$NPV = R_p - C_p \quad \ldots\ldots\ldots\ldots\ldots\ldots \quad (5)$$

where, as before, R_p is the present worth of the total returns and C_p is the present worth of the total costs.

In order to calculate C_p, the same formula as shown in the IRR criterion may be used. The calculation of R_p, however, is different in the NPV approach since it is no longer necessary to find out r, the rate of return. As in the calculation of C_p, the return stream must be computed by using the rate of interest, i, as shown in equation 6 below:

$$Rp = \sum_{j=1}^{n} \frac{R_j}{(1+i)^j} \quad \ldots\ldots\ldots\ldots \quad (6)$$

The notations are the same as in (4) with the change of i in place of r. Here i indicates the rate at which the present value of the cash proceeds, R_p, is computed.

The NPV criterion may be illustrated by taking an investment-project with a cost-stream as shown on page 62 with a present value of costs, C_p = Rs. 1,043. Let us suppose that the return-stream is as follows:

First year	Rs. 200
Second year	Rs. 800
Third year	Rs. 300

Applying equation 6 and assuming i = 0.10, we may write the cash proceeds as

$$R_p = \frac{200}{(1+0.1)} + \frac{800}{(1+0.1)^2} + \frac{300}{(1+0.1)^3} = \text{Rs. } 1,068.39.$$

Once C_p and R_p are known, NPV can be calculated.

$NPV = R_p - C_p$ ..... (5)

$= Rs. 1,068 - Rs. 1,043$

$= Rs. 25.$

Here the project shows a positive NPV and is acceptable. In the absence of capital-constraint, the correct course would be to undertake all projects with a positive NPV. As in the IRR-approach, in the presence of capital-constraint it would be necessary to determine the suitable alternative through project-ranking.

Investment	R_p = Present worth of total returns in Rs.	C_p = Present worth of total costs in Rs.	NPV in Rs.	Ranking
A	1,000	1,043	-43	4
B	1,100	1,043	57	1
C	1,068	1,043	25	2
D	1,043	1,043	0	3

If there is capital-constraint, project B will be undertaken first. If more funds are available, project C will be chosen. So far as project D is concerned, $R_p = C_p$ and the undertaking of the project is neither beneficial nor harmful. Project A cannot be undertaken at the given rate of interest, 0.10. However, if the rate of interest falls, project D will show a positive NPV and project A may also appear acceptable. The opposite will occur if the rate of interest rises.

It may be observed that both IRR and NPV criteria will give the same result in normal cases. But if the return-stream changes sign frequently from

negative to positive and back to negative, then more than one internal rate of return will be found.[7] Further, as has been observed by Turvey, if the IRR-method fails to use a "discount rate representing our relative evaluation of current and postponed returns and costs," it will be the wrong criterion.[8] In order to avoid this confusion, we have assumed that in using both the methods - Internal Rate of Return and Net Present Value - a discount rate representing a social rate should be used, and if it could be done the IRR-method may, in most cases, give correct signals. Moreover, if both IRR and NPV are used it may be a useful comparison to observe how far the project-ranking is justified, viewed from both decisions formulae.

III

In the above discussion it was assumed that not only the cash-outlays and the cash-proceeds are known but also that the rate of interest, i, is given. In reality, however, selection of an interest rate is not a simple task. One often comes across suggestions in the form of social time preference rate[9] and social

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7 Cf. Henderson, P.D., "Notes on Public Investment Criteria in the United Kingdom," Bulletin of the Oxford University Institute of Economics and Statistics, Vol. 27, 1965, p.61. See also Mishan, E.J., "A Proposed Normalization procedure for Public Investment Criteria," Economic Journal, December, 1967, p.777.

8 Turvey, R., "Present Value versus Internal Rate of Return - An Essay in the Theory of Third Best," Economc Journal, March 1963, p.96.

9 As has been observed by Feldstein: "For public investment decisions we may wish to reject the market-determined evaluation of future consumption in favour of a politically determined social time preference function." "The Social Time Preference Discount Rate in Cost Benefit Analysis." Economic Journal, June 1964, p.364.

opportunity cost rate[10] as measures of the social rate of interest. But the information required for estimating social time preference or social opportunity cost rate relates to many aspects of the economy, most of which may not be available.[11]

In the underdeveloped countries where the capital market is highly imperfect, one can observe market rates of interest ranging from less than 3 per cent to more than 50 per cent. Here, the problem of selecting an interest rate for discounting is extremely difficult. It is true that exercises in the form of Linear Programming can help to determine the intrinsic value of capital. But, as will be shown in Appendix A, it has not yet been possible to apply an overall programming approach in the context of economic planning in Pakistan. The best that could be done is to select a range of alternative rates applying some partial criteria.

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10 Social opportunity cost rate of a public investment has been defined by Henderson "as the value to society of the use of which the resources employed in the project would otherwise have been put - in other words, the value to society of whatever it is that the project precludes." Cf. "Notes on Public Investment Criteria in the United Kingdom," op. cit., p.66.

11 See, for example, Prest, A.R., and Turvey, R., Cost-Benefit Analysis: A Survey," Economic Journal, December, 1965, pp. 697-99 and 729.

Chapter 3

GROWTH OF GOVERNMENT EXPENDITURE

The main object of this Chapter is to give some idea of the growth of government expenditure in Pakistan. In recent years, a number of country case-studies have been made in this field.[1] But no study has yet been made to analyse the growth of government expenditure in Pakistan, though several partial attempts to measure government development expenditure are to be found. In this Chapter, we shall try to analyse the growth of total government expenditure and government development expenditure in Pakistan. An attempt will also be made to show the regional growth of government development expenditure. It probably needs no mention that in keeping in line with our study, the main emphasis of this Chapter will be on government development expenditure.

The chief source of information is the Ministry of Finance of the Government of Pakistan, which compiles data of government expenditure by the Central and Provincial Governments of Pakistan. The data available have been used to estimate first, total government expenditure and second, government development expend-

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1 Professor A.T. Peacock has emerged as a pioneer in this field. Along with Professor Jack Wiseman he studied the case of the U.K. for the period from 1890 to 1955. Cf. Peacock, A.T., and Wiseman, J., The Growth of Public Expenditure in the United Kingdom, George Allen & Unwin Ltd., London 1961. Some other important studies are: Andic, S., and Veverka, J., "The Growth of Government Expenditure in Germany since Unification," Finanzarchive, January 1963/64, pp. 169-237. Gupta, S.P., "Public Expenditure and Economic Growth - A Time Series Analysis," Public Finance, No. 3/1967, pp. 423-53. Reddy, K.N., "Growth of Government Expenditure and National Income in India: 1872-1966," Public Finance, No. 1/1970, pp. 81-95.

iture from 1949-50 to 1969-70. A cautionary word, however, is necessary concerning the last two years of the study. While it was possible to collect data of actual government expenditure up to 1967-68, this was not so for 1968-69 and 1969-70, for which periods we have taken the figures of the Budget estimates available.

A note on the price level of the data may also be mentioned. The source information is in current prices and does not allow us to make an inter-period comparison of the absolute figures. So, in order to convert them at 1959-60 factor cost, the National Income Deflator implicit in the GNP estimates of Pakistan (Background Table 9) has been used for comparison.

The Chapter is divided into three Sections. In Sections I and II, we shall measure the growth of total government expenditure and government development expenditure, respectively; the measurement is carried at aggregative level only. The growth at per capita level is analysed in Section III.

I Total Government Expenditure

Our estimate of government expenditure in Pakistan is based on the Budgets of the Central and Provincial Governments of the country. Thus, the estimate of government expenditure will exclude expenditure made by the Local authorities. This approach however is similar to that adopted in some other studies.[2]

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2 For example, in measuring government expenditure in India for the period 1872-1966, Reddy has adopted the same approach. Cf. Reddy, K.N., "Growth of Government Expenditure and National Income in India: 1872-1966," op. cit., p.84.

Before proceeding, a note on the Provincial Governments of Pakistan is necessary. At the time of Independence (1947), the whole of East Pakistan comprised one Provincial unit, while in West Pakistan there were a number of Provincial bodies.[3] In 1955, the different Provincial organizations within West Pakistan were merged into 'one unit' which created one single Provincial Government for West Pakistan. The 'one unit' system remained in operation for fifteen years and since July 1970 West Pakistan has been divided into four Provinces.[4] The administrative shuffle in West Pakistan may tend to create problems for data collection. Fortunately, data are available on the basis of the following: 1. The Government of Pakistan; 2. The Government of East Pakistan; and 3. The Government of West Pakistan. Accordingly, in our measure of government expenditure in Pakistan the following procedure has been adopted:

$$T_g = G_p + G_e + G_w \quad \ldots\ldots\ldots\ldots\ldots (3.1)$$

where T_g is total government expenditure in Pakistan,

G_p is expenditure by the Government of Pakistan, that is by the Central Government,

G_e is expenditure by the Government of East Pakistan, and

G_w is expenditure by the Government of West Pakistan.

Background Table 27 shows in some detail both Revenue and Capital expenditures by the Government of Pakistan, the Government of East Pakistan and the Government of West Pakistan for the period 1947-48 to 1969-70. As may be seen

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3 Andrus, J.R. and Mohammed, A.F., The Economy of Pakistan, Oxford University Press, 1958, p. 356.

4 The Provincial Governments are: 1. Government of Punjab, 2. Government of Sind, 3. Government of the North West Frontier Province, and 4. Government of Baluchistan.

Table 3. 1

Total Government Expenditure in Pakistan

(Rs. in Crore)

	Current Prices (1)	1959-60 Factor Cost (2)	As % of GNP (3)
1949-50	270	332	13.57
1950-51	236	289	11.36
1951-52	297	335	13.18
1952-53	304	364	13.95
1953-54	300	382	13.74
1954-55	260	343	12.28
1955-56	277	340	12.22
1956-57	297	329	11.17
1957-58	376	393	13.23
1958-59	371	399	13.24
1959-60	450	450	14.33
1960-61	466	443	13.39
1961-62	518	498	14.21
1962-63	567	532	14.68
1963-64	746	710	18.07
1964-65	781	704	17.15
1965-66	10,33	893	20.78
1966-67	12,26	951	21.07
1967-68	12,10	953	19.64
1968-69*	13,83	10,38	20.24
1969-70**	14,48	10,48	19.31

Sources and Notes:

Col. (1) - Background Table 27.

Col. (2) - Computed by dividing the figures of Col. (1) with the National Income Deflator shown in Background Table 9.

Col. (3) - Computed by using the GNP figures shown in Background Table 8.

Figures have been rounded off.

* Revised Estimate.

** Budget Estimate.

from the Table the Central Government gives financial assistance to the Provincial Governments. So, to avoid double counting the amount given as financial assistance has been subtracted from the gross total expenditure of the Central Government. The net total expenditure of the Government of Pakistan thus found has been added to the expenditure by the Governments of East and West Pakistan. This gives the total government expenditure in Pakistan.

As already mentioned, the source information is in current prices and a direct comparison is not possible. By using the National Income Deflator the source figures have been converted at 1959-60 factor cost, as shown in Table 3.1. It is found that at 1959-60 factor cost, total government expenditure has increased from Rs. 332 crore in 1949-50 to Rs. 10,48 crore in 1969-70. The increase in GNP in the corresponding period was from Rs. 24,47 crore to Rs. 54,28 crore.

Chart 3.1 shows the growth of total government expenditure and GNP. Looking at the Chart it is apparent that although total government expenditure and GNP have increased in absolute terms in the whole period, the growth of the former has been faster than that of the latter. One may also mark two important features of the growth of total government expenditure. First, it is since 1956-57 in particular that the growth of total government expenditure has almost been continuous. This time coincides with the beginning of the First Five-Year Plan.[5] Second, there are three distinct periods - 1956 - 57 to

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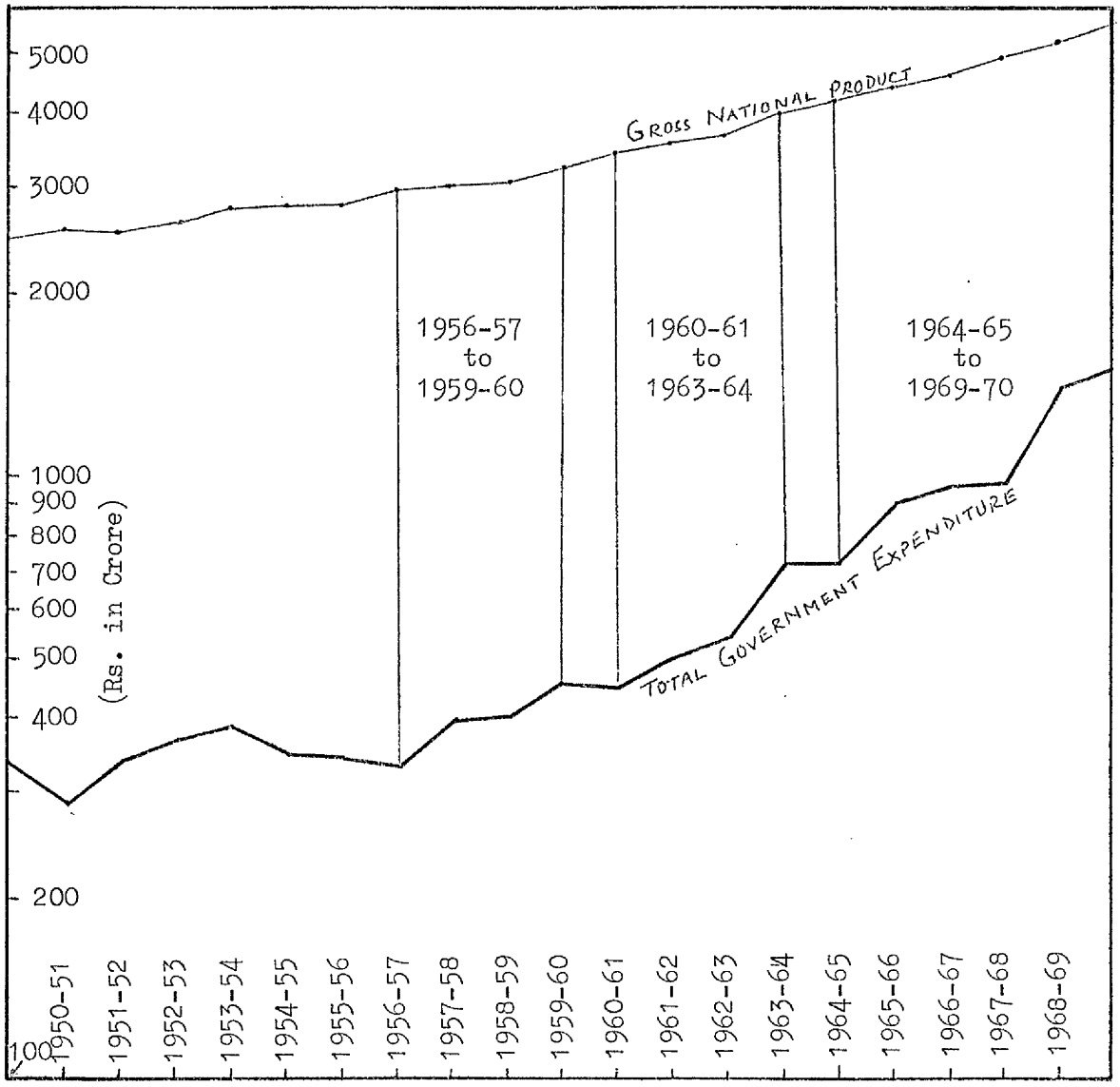
5 The Plan, of course, covers the period from June 1955 to July 1960, but as has been observed by the Chairman of the Planning Commission, "the preparation of the First Plan was not completed until near the middle of the five-year period which it covered." Cf. GOP, PC, The Second Five Year Plan, p. xiii.

Chart 3.1

Total Government Expenditure and Gross National Product
(1949-50 to 1969-70 at 1959-60 Factor Cost)



to 1959-60, 1960-61 to 1963-64, and 1964-65 to 1969-70 - of significant increase of total government expenditure with a gap of one year between each of the three periods. In the two gaps, while there was an increase of GNP, total government expenditure declined. This may be due to the 'two steps forward and one step backward' policy deliberately followed for raising total government expenditure. Alternatively, one may associate the three periods with the special happenings such as the First, Second and Third Five-Year Plans and the 1965 war with India.[6] However, considering that the whole period from 1949-50 to 1969-70 is not very long, it is safe not to isolate this or that part of the period for any particular study. The best that can probably be said is that the growth of government development expenditure over the period considered is in line with the hypothesis of increasing government expenditure.[7]

Table 3.1 shows also the growth of total government expenditure as a percentage of GNP. It is found that in 1949-50 total government expenditure as a percentage of GNP was 13.57. The figure declined to around 12 per cent in the mid-fifties. Some increase is noticeable after 1956-57. It is in the 1960's however, that a marked and fast growth took place: from 13.39 per cent in 1960-61 to 21.07 per cent in 1966-67. In later years, there has been some decline from the 1966-67 figure, but it has never gone below 19per cent. How the growth of total

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6 It should be mentioned that the first two periods do not cover the whole First and Second Plans, that is the first period is short of one-year from the beginning of the First Plan and the second period is short of one-year at the end of the Second Plan.

7 The hypothesis is associated with the name of Wagner. Cf. Wagner, A., "The Nature of Fiscal Policy" in Musgrave, A.R., and A.T. Peacock (eds.) Classics in the Theory of Public Finance, Macmillan, 1967, pp.1-8.

government expenditure as a percentage of GNP in Pakistan compares with that in neighbouring India is shown in Table 3.2. From the Table it follows that although total government expenditure as a percentage of GNP has increased in Pakistan, the growth rate has not been as fast as in India.[8]

Table 3.2

Government Expenditure as % of GNP in Pakistan and India

	Pakistan (1)	India (2)
1949-50	13.57	-
1950-51	11.36	8.59
1952-53	13.95	10.50
1955-56	12.22	12.30
1956-57	11.17	13.38
1959-60	14.33	-
1961-62	14.21	17.60
1964-65	17.15	-
1966-67	21.07	23.92
1968-69	20.24	-

Sources: Col. (1) - Table 3.1. Col.(2) - Reddy, K.N., op. cit., pp. 92-93.

8 The faster growth rate of total government expenditure in India may be partly explained as the result of the socialistic pattern of development which demands that a large portion of the GNP should be managed by the State. In order to test the hypothesis it would, of course, be necessary to see the growth of government development expenditure since a large part of the total government expenditure may be in the form of non-development expenditure which may imply wastage.

In order to measure the income elasticity of government expenditure in Pakistan the following formula may be used.[9]

$$\eta = \frac{dG}{G} \Big/ \frac{dY}{Y}$$

where η is income elasticity of government expenditure,

dG is change in government expenditure,

G is government expenditure in the first year,

dY is change in GNP, and

Y is GNP in the first year.

η has been computed at two levels: firstly, for the period 1949-50 to 1969-70; secondly, four five-year periods were taken. η for the whole period is 1.77. Estimates at the five-year levels show some divergence, however, as shown below.

Period Considered	η = Income Elasticity of Government Expenditure
1950-51 to 1954-55	0.24
1955-56 to 1959-60	2.47
1960-61 to 1964-65	1.84
1965-66 to 1969-70	1.52

Considered in the five-year periods, it is found that in the pre-First Plan Period (1950-55) η was less than one, while in the First, Second and Third Plan periods η has been more than one. The highest η is observed in the First Plan

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9 There is nothing new in the formula. The familiar elasticity approach has been used to measure η. See for example, Ryan, W.J.L., Price Theory, Macmillan & Co., London, First Published 1958. Reprinted 1967, pp.34-39.

period (1955-60). Since then there has been some decline, but the figure has not declined to less than one.

II Government Development Expenditure

In Section I, an attempt was made to estimate the growth of total government expenditure in Pakistan. Such a measurement, although useful, is not adequate for an understanding of the role of the government sector in the economic development of the country. For this we need to measure that part of total government expenditure which is channelled as development expenditure. In other words, we implicitly consider a classification of total government expenditure, as follows:

$$T_g = G_d + G_n \quad \ldots\ldots\ldots\ldots \quad (3.2)$$

where G_d is government development expenditure, and

G_n is government non-development expenditure.

While equation 3.1 (page 71) is helpful in showing that part of GNP being channelled through the government exchequer, equation 3.2 is useful for understanding the part being played by the Government with reference to economic development. In fact, it is government development expenditure which gives rise to what was called 'public sector investment' in Chapter I.

The above classification (3.2) assumes that total government expenditure can be clearly differentiated into development and non-development expenditure. Such a distinction, however, is not easily made in practice. For example, it is difficult to determine how much of the expenditure on civil administration (which also takes part in development activities) is G_n or G_d. Notwithstanding this

difficulty, the above classification is useful for analytical purposes, at least for two reasons. Firstly, for a developing economy like that of Pakistan where the public sector takes an active part in development planning, a classification in the form of equation 3.2 is more logical than the conventional classification of the administrative budgets into capital account and current account. [10]

Secondly, as will be seen in Chapters 5 and 7, economic planning involving the whole of government development expenditure is more advantageous as it allows the planners to allocate the total fund in accordance with the development objectives. Unfortunately, the Plans of Pakistan have not been straightforward in this regard. Instead of considering the entire government expenditure channelled for development, a portion has been kept outside the Plan. The planners, of course, have tried to keep their position safe by advancing some artificial definition of government development expenditure in line with the public sector investment provided in the Plans. [11] But such a definition leaves an important question

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10 As has been remarked by Waterston, "because capital expenditures may be nondevelopmental and current expenditures may be developmental, it is at least as important for effective integration of a plan and budget that development transactions, whether capital or current, be identified and separated from non-development transactions." Cf. Waterston, A., Development Planning: Lessons of Experience, The Johns Hopkins Press, Baltimore, 1965, p.231.

11 The planners of the Second Plan took a definition of government development expenditure which differs from the definition adopted in the First Plan. For the definitions of government development expenditure in the First and Second Plans see GOP, National Planning Board, The First Five Year Plan, p. 131 and GOP, PC, The Second Five Year Plan, p.10. According to the new definition taken for the Second Plan, the entire expenditure for the Indus Basin Development Works has been kept excluded. Moreover, as has been remarked by Professor Parkinson, "The definition of development expenditure adopted for the Second Plan was rather complex, partly because it was designed to serve administrative purposes and by classifying some non-capital-forming expenditure as development expenditure to give this greater priority than the title non-development would have carried." Cf. Parkinson, J.R., "An Alternative Estimate of Development Expenditure during the Second Plan," (Mimeo), Karachi, August 1966, p.2.

unanswered: Whether or not economic planning of government expenditure that excludes a part of development expenditure by the government can be consistent?

In an attempt to measure the growth of government development expenditure, the estimates made by the Planning Commission were consulted in the first place. Either because of the problem of definition and/or the subsequent revision of data, different publications of the Planning Commission show different estimates of government development expenditure and at times the difference is quite marked.[12] Further, no estimates of government development expenditure for the early years are available from the Planning Commission. So, in order to measure the growth of government development expenditure from the early years, development expenditure data were made use of, as shown in the expenditure accounts of the Central and Provincial Governments. The estimate is shown in some detail in Background Table 28. As in the case of total government expenditure, for our estimate of government development expenditure we have taken the Governments of Pakistan, East Pakistan and West Pakistan. Both Capital and Revenue development expenditures by these three Governments have been included. To put it in a different way, in a particular year government development expenditure is equal to the sum of (i) direct capital outlay by the three Governments, (ii) development loans given by these Governments to semi-independent organizations and local bodies, and (iii) their development revenue expenditure.

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12 For example, public sector development expenditure for the year 1965-66 is shown as Rs. 3,113 million in the Mid-plan Review of the Third Five-Year Plan (op. cit., p.13), while a figure of Rs. 2,970 million is shown in the Preliminary Evaluation of the Third Five-Year Plan (op. cit., p.175).

Estimate I in Table 3.3 is taken from the measure of government development expenditure as shown in Background Table 28. An alternative measure taken from Haq[13] for the period from 1949-50 to 1959-60 and from the Planning Commission[14] for the period from 1960-61 to 1969-70 is shown in Estimate II. It seems that Haq followed a similar procedure to the present one, and both the estimates coincide up until 1952-53. After this some variation is observed which is almost certainly not due to a computation error on our part. The estimates shown for the period 1960-61 to 1964-65 in Estimate II are higher than the present estimate except for 1960-61. This may be due to the inclusion in Estimate II of some revenue expenditure which is not shown as development expenditure in the source we have considered. The figures in Estimate II from 1965-66 to 1969-70 are lower than our estimate, probably due mainly to the exclusion of Non-Plan development expenditure from the former. However, instead of going further to deal with the comparison it is probably sufficient to mention that although our estimate of government development expenditure is based on the primary source, it would be safe if it were considered simply as an alternative estimate.

Following the approach taken for total government expenditure, the figures for government development expenditure at current prices have been converted at 1959-60 factor cost by using the National Income Deflator. Thus computed, we see from Table 3.3 that government development expenditure has increased from Rs. 35 crore in 1949-50 to Rs. 457 crore in 1969-70.

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13 The Strategy of Economic Planning, op. cit., p.225.

14 From 1960-61 to 1964-65: Final Evaluation of the Second Five Year Plan, op. cit., p.146. From 1965-66 to 1969-70: Preliminary Evaluation of the Third Five Year Plan, op. cit., p.175.

Table 3.3

Government Development Expenditure in Pakistan

(Rs. in Crore)

	Current Prices		Estimate I in 1959-60 Factor Cost	Estimate I as % of GNP
	Estimate I	Estimate II		
	(1)	(2)	(3)	(4)
1949-50	28	28	35	1.43
1950-51	26	26	32	1.26
1951-52	48	48	54	2.14
1952-53	65	65	78	2.97
1953-54	64	68	81	2.92
1954-55	63	74	83	2.99
1955-56	73	80	90	3.21
1956-57	89	82	99	3.33
1957-58	131	140	137	4.61
1958-59	137	135	147	4.90
1959-60	164	180	164	5.23
1960-61	183	183	174	5.26
1961-62	221	237	212	6.07
1962-63	231	272	217	5.97
1963-64	318	330	303	7.71
1964-65	356 (360)	371	321 (325)	7.82 (7.91)
1965-66	320	297	277	6.44
1966-67	548 (461)	370	425 (357)	9.41 (7.92)
1967-68	501	452	395	8.14
1968-69	593	499	445	8.67
1969-70	631	525	457	8.42

The growth of government development expenditure as a percentage of GNP is shown in Col. (4). It is found that the figure was only 1.43 per cent in 1949-50. It increased to about 3 per cent in 1954-55, and further to 5.23 per cent in 1959-60. The corresponding figure in 1964-65 was 7.82 per cent. There was a sharp decline to 6.44 per cent in 1965-66, due mainly to the Indo-Pakistan war in September 1965. Thereafter the figure increased and remained above 8 per cent in the late 1960's.

Since the 1950's and 1960's provide examples of two distinctive decades with different economic performances, it may be of interest to analyse the growth of government development expenditure in these two periods. The growth of government development expenditure in absolute and relative terms is shown in Chart 3.2, taking the 1950's and 1960's separately. The equations of the trend linear regressions and the correlation coefficients (R) observed in each case are shown below. (Figures in parenthesis show the value of R^2)

Absolute Amount: Rs. in Crore

	N	Y_t = Government Development Expenditure in year t	R
1950's	10	23.3335 + 13.3030t	0.9697 (0.9403)
1960's	10	142.9337 + 32.6666t	0.9541 (0.9103)

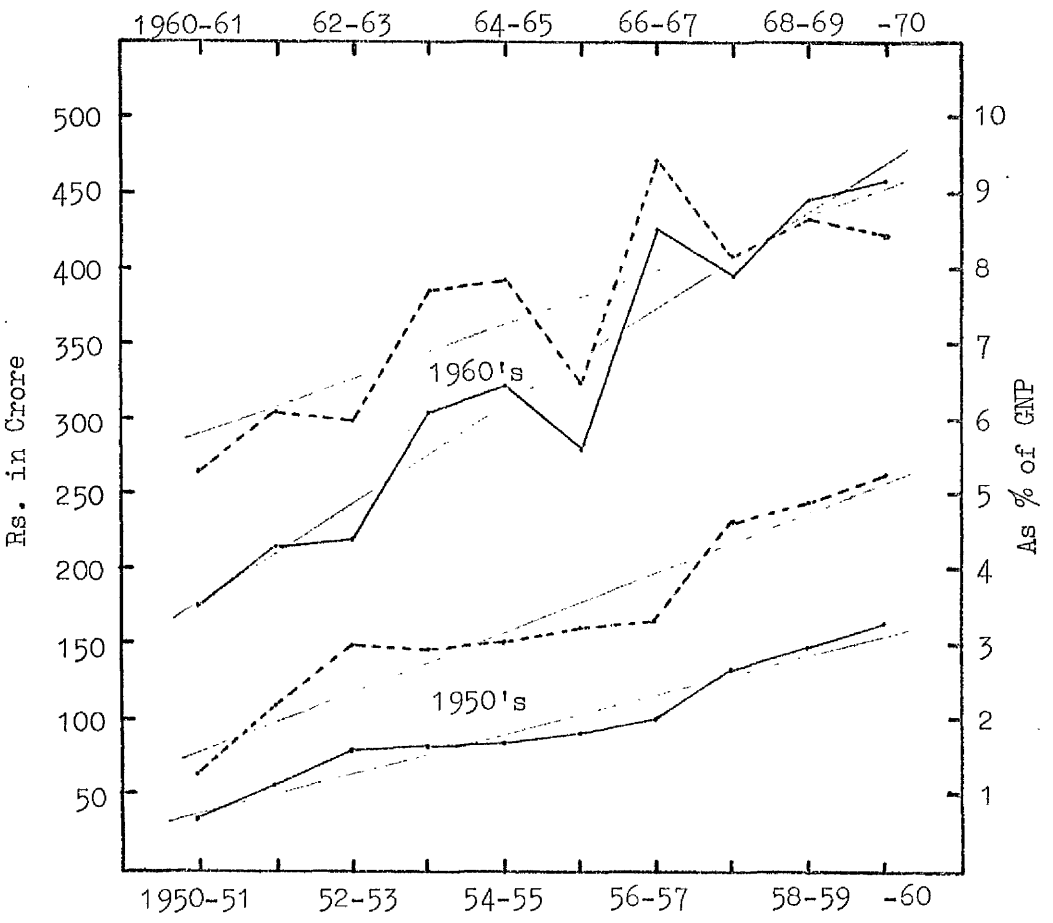
As Percentage of GNP

	N	Y_t = Government Development Expenditure in year t	R
1950's	10	1.1994 + 0.3921t	0.9575 (0.9168)
1960's	10	5.3510 + 0.3709t	0.8213 (0.6747)

Chart 3.2

Growth of Government Development Expenditure

(1950's and 1960's)



From the trend observed, it is apparent that in the 1960's government development expenditure has not only been higher in both absolute and relative terms, but also the absolute rate of growth is much faster than that in the 1950's. How the growth of government development expenditure in the 1950's and 1960's has affected the investment situation in the respective decades does of course, pose an important question in the context of the economic development of Pakistan. However, we prefer to take up this point in the next Chapter when we analyse the growth of private investment as a function of government expenditure.

The formula applied in estimating income elasticity of total government expenditure may also be applied in government development expenditure. Taking the whole period from 1949-50 to 1969-70, income elasticity of government development expenditure (η) is found to be 9.90. The values of η at five year levels are shown below:

Period Considered	η = Income elasticity of government development expenditure
1950-51 to 1954-55	9.76
1955-56 to 1959-60	7.72
1960-61 to 1964-65	3.13
1965-66 to 1969-70	1.32

It therefore follows that the income elasticity of government development expenditure has been greater than one. The growth rate, however, was much faster in the early years when the level of government development expenditure was very low. Over the years, the level has grown and the growth of government development expenditure in relation to that of GNP has been declining. But still the growth

rate of government development expenditure is much faster than that of GNP.

Regional Estimate of Government Development Expenditure. The measurement of government development expenditure as shown in Table 3.3 has been made at national level. In keeping with the regional approach of the present work, an attempt may be made to see the growth of government development expenditure in East Pakistan and West Pakistan. At the outset, it should be mentioned that in order to make an exact measurement of government development expenditure at a regional level one must have a reliable estimate of the distribution of Central Government expenditure between East Pakistan and West Pakistan. It is here that one often faces difficulties, and one probably cannot avoid having to make some assumptions. As a result, there may be some discrepancy between alternative estimates. For example, Haq [15] and Rahman [16] have made estimates of public development expenditure. Data for the period 1955-56 to 1959-60 are common to both estimates. A comparison, however, shows that not only do they differ in absolute amount, but also the percentage of regional distribution is not the same. Haq's estimate shows a share of 30 per cent for East Pakistan, while it is only 21 per cent in Rahman's estimate. From 1960-61 to 1969-70 estimates at the regional level are available from the Planning Commission. But, as mentioned earlier, there are difficulties in accepting Planning Commission's estimate.[17]

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15 Haq, M., The Strategy of Economic Planning, op. cit., p.254.

16 Rahman, M.A., "The Role of the Public Sector in the Economic Development of Pakistan, op. cit., p.70.

17 At regional level, there is the further problem involving the non-Plan development expenditure. As mentioned earlier, according to the definition of government development expenditure adopted for the Second Plan the Indus Basin Development Programme in West Pakistan has been kept excluded from Plan expenditure. An estimate by the Planning Commission showing the regional distribution of government development expenditure on the basis of the Plan expenditure will, therefore, give a wrong idea.

Regional distribution of government expenditure may be measured in either of two ways:

1. By adding the Central Government expenditure for East Pakistan and West Pakistan to the respective expenditures by the Governments of East and West Pakistan.

2. By dividing the total government expenditure, as found for the Central and Provincial Governments together, on the basis of the percentage of the known total.

Both these methods will give equal figures if adequate information is available. Lack of such information, however, creates problems. Considering the difficulty involved, we preferred to make our regional estimate on the basis of the percentage distribution. That is, the second method will be followed. Estimates of government development expenditure, shown at national level in Table 3.3, will be taken as the total for the whole country. Data thus found will be divided between East Pakistan and West Pakistan. It need hardly be mentioned that although it will help us to see the trend of growth of government development expenditure at the regional level, the estimates cannot be considered exact. The main argument in favour of our measurement is that, given the basis of the estimate, the data are representative enough to provide an idea at the regional level.

Table 3.4 shows the regional distribution of government development expenditure. Four five-year periods have been covered in the Table to coincide with the pre-Plan period (1950-51 to 1954-55) and the subsequent periods of the three Plans. Thus conceived, the regional distribution as found overleaf has been used to show government development expenditure in East Pakistan and West Pakistan, taking Estimate I of Table 3.3 as the total known for the whole country.

	Rs. in Crore: Current Prices		% Distribution	
	E. Pak. (1)	W.Pak. (2)	East (3)	West (4)
Pre-Plan period (1950-51 to 1954-55)	94	205	31	69
First Plan period (1955-56 to 1959-60)	197	463	30	70
Second Plan period (1960-61 to 1964-65)	670	1080	38	62
Third Plan period (1965-66 to 1969-70)	1130	1370	45	55

Sources: Absolute figures for the first two periods from Haq, M. The Strategy of Economic Planning, p.254 and for the last two periods from GOP, PC. The Fourth Five Year Plan, p.26. Rest: Computed.

It should be evident that the estimates of government development expenditure as shown in Table 3.4 neglect the likely annual fluctuation in the context of the five-year periods considered. Another important point is the use of the National Income Deflator. As may be seen from Background Table 10, changes in the price level are not the same for East Pakistan and West Pakistan. Use of the same National Income Deflator forthe two regions is therefore subject to criticism. However in Estimate II we measure the growth of government development expenditure based on the wholesale price index of East Pakistan and West Pakistan, as shown in Background Table 10. A comparison between the two estimates will show that except in the last few years the amount of deviation, if any, is almost negligible.

Gross Regional Products (GRP) found for East Pakistan and West Pakistan (Background Table 11) have been used to measure the relative growth of government development expenditure at regional level. In East Pakistan, as percentage of GRP, government development expenditure has grown from less than one per cent in 1950-51 to 10 per cent in 1968-69; in absolute figures the growth as measured at 1959-60 prices is from Rs.10 crore to Rs. 200 crore in the corresponding period. In West

Table 3.4

Regional Estimates of Government Development Expenditure

(Rs. in Crore: 1959-60 Prices)

	Estimate I		Estimate II		Est. I as % of GRP	
	E. Pak.	W. Pak.	E. Pak.	W. Pak.	E. Pak.	W. Pak.
1950-51	10	22	-	-	0.8	1.8
1951-52	17	37	-	-	1.3	3.0
1952-53	24	54	-	-	1.8	4.4
1953-54	25	56	-	-	1.8	4.1
1954-55	26	57	-	-	1.9	4.0
1955-56	27	63	-	-	2.0	4.3
1956-57	30	69	27	69	2.1	4.6
1957-58	41	96	41	96	2.9	6.2
1958-59	44	103	43	103	3.2	6.3
1959-60	49	115	49	115	3.3	7.0
1960-61	66	108	68	108	4.2	6.3
1961-62	81	131	79	131	4.8	7.3
1962-63	82	135	83	139	4.9	7.1
1963-64	115	188	118	185	6.2	9.4
1964-65	122 (124)	199 (202)	121 (123)	195 (196)	6.5 (6.6)	8.9 (9.1)
1965-66	125	152	117	157	6.4	6.5
1966-67	191 (161)	234 (196)	174 (146)	242 (204)	9.4 (7.8)	9.4 (7.9)
1967-68	178	217	173	219	8.1	8.2
1968-69	200	245	189	252	10.0	8.7
1969-70	206	251	194	262		

Pakistan, as a percentage of GRP, government development expenditure has grown from 1.8 per cent in 1950-51 to 8.7 per cent in 1968-69; in terms of absolute figures it is from Rs. 22 crore to Rs. 251 crore in the same period.

Regional growth of government development expenditure is drawn in Chart 3.3. As in Chart 3.2, the 1950's and 1960's have been shown separately. Chart 3.3A shows the growth of government development expenditure in East Pakistan. The growth of government development expenditure in West Pakistan is shown in Chart 3.3B. The growth in both relative and absolute terms have been shown. Thus, we have eight trend lines altogether - four for East Pakistan and four for West Pakistan. All the trend linear regressions have $R^2 > 0.80$ except the one showing the growth of government development expenditure as a percentage of GRP during the 1960's in West Pakistan, which has $R^2 = 0.28$, as may be seen from below.

East Pakistan

	N	Yt = Government Development Expenditure in year t	R^2
As % of GRP			
(a) 1950's	10	0.7003 + 0.2563t	0.9268
(b) 1960's	9	3.1972 + 0.7050t	0.8870
Rs. in Crore			
(a) 1950's	10	7.9336 + 3.8848t	0.9374
(b) 1960's	10	43.1335 + 16.9939t	0.9386

West Pakistan

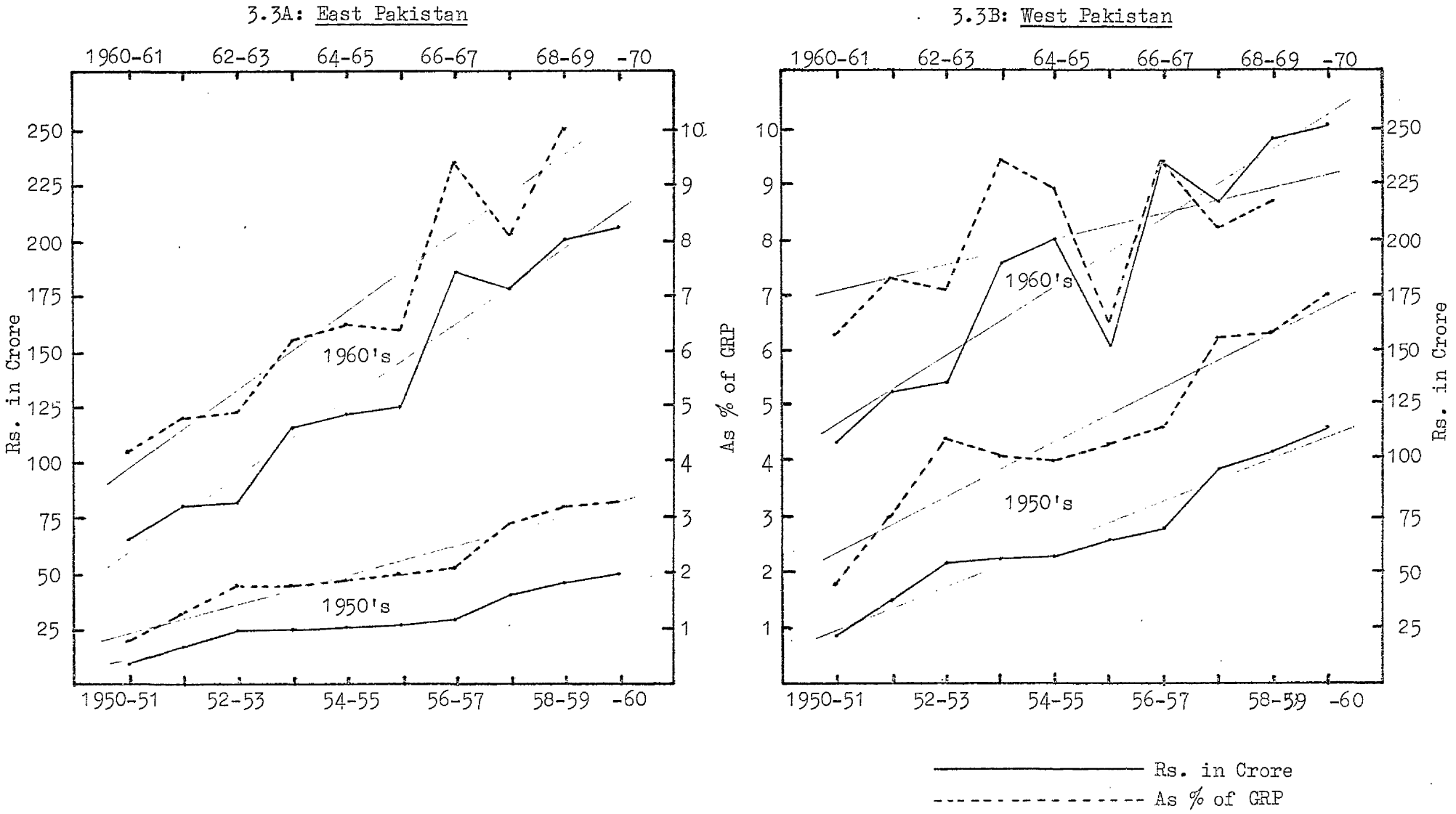
As % of GRP			
(a) 1950's	10	1.8805 + 0.4890t	0.8832
(b) 1960's	9	6.8112 + 0.2332t	0.2792
Rs. in Crore			
(a) 1950's	10	15.4004 + 9.4181t	0.9411
(b) 1960's	10	99.8001 + 15.6727t	0.8440

Looking at the trend lines observed it may be seen that in both East Pakistan and West Pakistan, the rate of growth of government development expenditure in absolute terms has been faster in the 1960's than in the 1950's. As a percentage of GRP such a generalization is not possible. In East Pakistan the rate of growth of government development expenditure as a percentage of GRP has been faster in the 1960's than in the 1950's. So far West Pakistan is concerned the trend observed shows that the rate of growth of government development expenditure as a percentage of GRP has been slower in the 1960's. But since the value of R^2 is very low no firm conclusion can be drawn, as already mentioned.

A comparative study of the growth of government development expenditure at the regional level shows that during the 1950's the rate of growth in both absolute and relative terms was faster in West Pakistan than in East Pakistan. The picture, however, is not the same in the 1960's, when the rate of growth of government development expenditure in absolute terms is almost similar in both regions. So far as the rate of growth of government development expenditure as a percentage of GRP in the 1960's is concerned, a comparison is not safe because while the trend line for East Pakistan is a good fit ($R^2 = 0.89$), it is not so for West Pakistan ($R^2 = 0.28$.)

Chart 3.3

Growth of Government Development Expenditure by Regions



III Per Capita Measure of Government Expenditure

From the preceding two Sections we get aggregate measures of total government expenditure and government development expenditure for Pakistan and government development expenditure for the two regions. The data thus found can be shown in per capita terms by using the population estimates of Background Table I.

Table 3.5 shows the per capita growth of total government expenditure and government development expenditure in Pakistan from 1949-50 to 1969-70. It is found that at 1959-60 factor cost, per capita total government expenditure has increased from Rs. 43 in 1949-50 to Rs. 82 in 1969-70, while per capita government development expenditure has increased from Rs. 5 to Rs. 36 in the same period. In other words, while per capita total government expenditure has less than doubled, per capita government development expenditure has increased by a factor of more than seven. This shows the eagerness of the Government in the development of the economy. Alternatively, one may also argue that Pakistan has been successful in keeping the growth of non-development expenditure in check. In fact, income elasticity of non-development expenditure over the period 1949-50 to 1969-70 is only 0.81, as against the income elasticity of government development expenditure, which has been found to be 9.90.[18]

Table 3.6 shows the per capita growth of government development expenditure at the regional level from 1950-51 to 1969-70. A comparison between East Pakistan

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18 Considered at five-year period level, the income elasticity of government development expenditure has, however, been found as much lower in the later years; in the Third Plan period (1965-70) it is 1.32.

Table 3.5

Per Capita Government Expenditure in Pakistan

(In Rs. At 1959-60 Factor Cost)

	Per Capita Government Development Expenditure	Per Capita Total Government Expenditure
1949-50	5	43
1950-51	4	36
1951-52	7	41
1952-53	9	44
1953-54	9	45
1954-55	9	39
1955-56	10	38
1956-57	11	36
1957-58	15	42
1958-59	15	41
1959-60	17	46
1960-61	17	44
1961-62	20	48
1962-63	20	50
1963-64	28	65
1964-65	29	63
1965-66	24	77
1966-67	36	80
1967-68	32	78
1968-69	36	83
1969-70	36	82

Table 3.6

Per Capita Government Development Expenditure in East Pakistan and West Pakistan

(In Rs. At 1959-60 Factor Cost)

	East Pakistan	West Pakistan
1950-51	2	6
1951-52	4	10
1952-53	5	14
1953-54	5	14
1954-55	5	14
1955-56	6	15
1956-57	6	16
1957-58	8	22
1958-59	8	23
1959-60	9	26
1960-61	12	23
1961-62	14	28
1962-63	14	28
1963-64	19	38
1964-65	20	39
1965-66	20	29
1966-67	30	43
1967-68	27	39
1968-69	29	43
1969-70	29	43

and West Pakistan shows that per capita government development expenditure has always been lower in the former. The difference is particularly striking in the 1950's when the figures for East Pakistan are about one-third of those for West Pakistan.

In order to make a comparative study between the growth of per capita government development expenditure as a function of GNP in Pakistan and the growth of per capita government development expenditure as a function of GRP in East Pakistan and West Pakistan, regression analyses have been tried. The statistical technique used is [19]

$$\log G = \log a + b \log Y$$

where G is per capita government development expenditure at national or regional level; and

Y is GNP or GRP.

The following linear relationships have been found.

	N	Log G	R^2
Pakistan	20 (1950-51 to 1969-70)	-24.0351 + 2.3965 Log Y	0.8683
East Pak.	19 (1950-51 to 1968-69)	-38.9699 + 3.9167 Log Y	0.8855
West Pak.	19 (1950-51 to 1968-69)	-17.6319 + 1.8525 Log Y	0.8055

The trend lines are plotted in Chart 3.4. From the Chart it is apparent that at both national and regional level, G is an increasing function of Y. In Section II, we found that government development expenditure as a percentage

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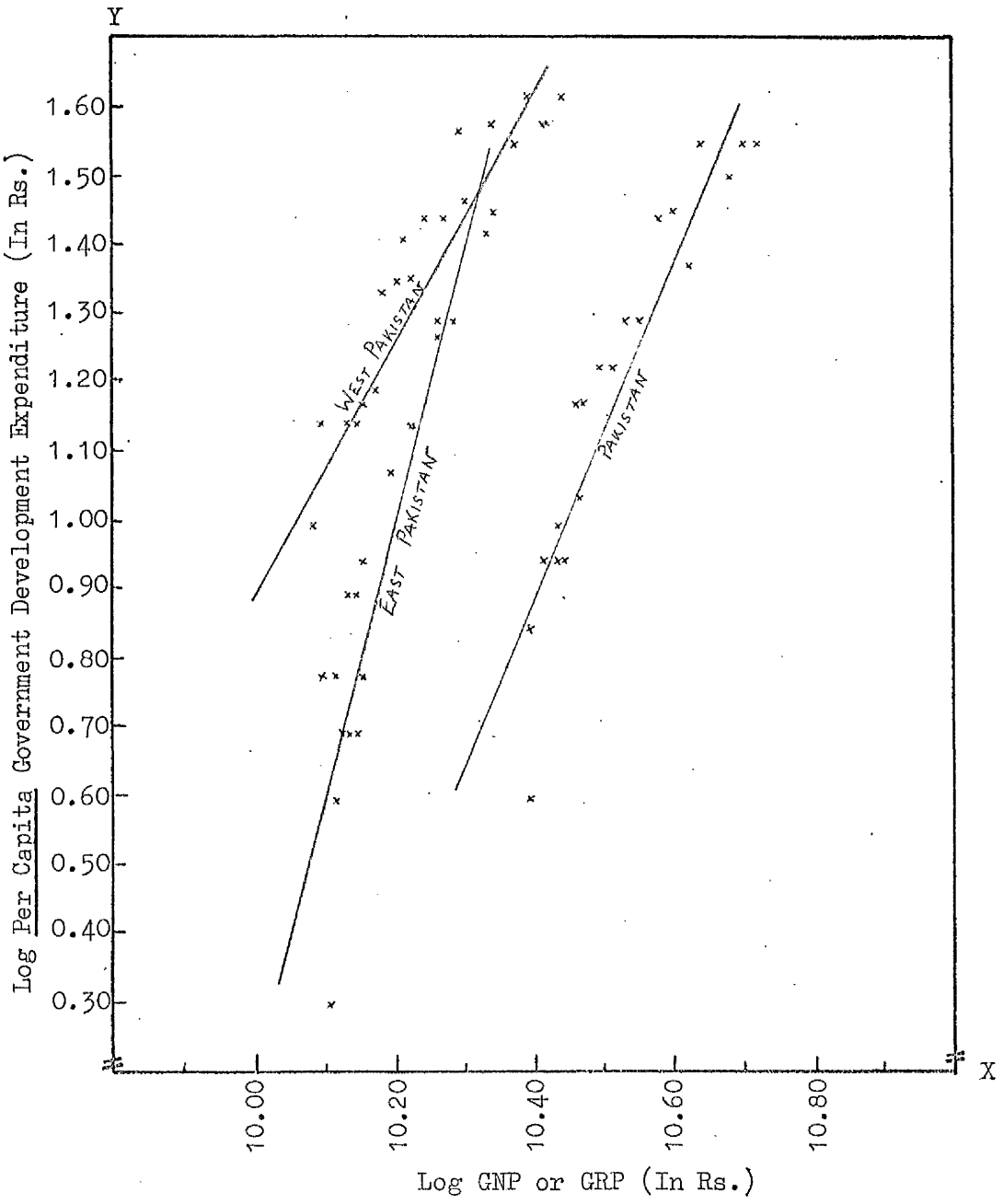
19 Similar technique was used by Gupta to find out the effects of social upheaval on the level and/or rate of growth of government expenditure with relation to economic growth; the countries studied are UK, USA, Germany, Canada and Sweden. Cf. Gupta, SP., "Public Expenditure and Economic Growth: A time Series Analysis," op. cit., pp.430-43. See also Williamson, J.G., Public Expenditure and Revenue: An International Comparison, Manchester School, 1961, pp.48-51.

Chart 3.4

Regression of Per Capita Government Development Expenditure on GNP or GRP



of GNP or GRP has increased. In the present Section the hypothesis is also found to hold when tested with the per capita measure of government development expenditure. In other words, the statistical analysis based on a per capita measure further establishes the hypothesis of increasing government development expenditure as a functional relationship between G and Y. It is true that the total period covered in our study is not very long. But given the data of the last two decades, it is found that the empirical study presents the case of an underdeveloped economy, the Government of which has taken an active part in efforts made to develop the country.

At the regional level, the implication of G as a function of Y is particularly important for Pakistan, considering the regional growth objective as has been adopted by the economy (Chapter I). It is true that per capita government development expenditure has been lower in East Pakistan than in West Pakistan, but as may be seen from the trend lines observed, the growth rate is faster in East Pakistan. It therefore follows that given this trend it will not be long before per capita government development expenditure in East Pakistan will not only equal, but will even surpass that of West Pakistan. Such a trend seems to be an essential requirement on the basis of the regional growth objective of the economy.

Chapter 4

EFFECTIVENESS OF GOVERNMENT EXPENDITURE

The measurement of government expenditure, as shown in Chapter 3, indicates the active role played by the Government in the development process of Pakistan. The rapid growth of government development expenditure has been an important factor in financing development. The Government, of course, also exercised other policies such as taxation, administrative controls, etc. Which of these policies exerted influence (and to what extent) needs to be assessed if the effectiveness of government expenditure policy is to be judged.

At the outset it should be mentioned that controls and policies come to interfere with the free play of market forces. Their operation is justified in so far as they help to enforce any resource allocation that the society aims at. The argument is that free market forces fail to give correct signals or are not fully adequate to allocate resources for achieving the social goals.[1]

In order to keep the discussion brief, a selective approach has been preferred. It is true that a wide and extensive coverage would have been highly informative. Our brief approach, however, is considered useful since it includes

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1 The point was raised earlier in Chapter 2. The hard core of the argument is that free-price mechanism is not always sufficient to guide resource-allocation to achieve the social objectives. Factor-price differential will lead to inefficient use of factor proportions. Return of investment may be low due to lack of complementary investment. Improved prices or direct allocation are, therefore, thought as better mechanism for resource allocation (For a short but good discussion on the defects of free price mechanism in the context of developing countries see Chenery, H.B., "Development Policies and Programmes," Economic Bulletin for Latin America, 1958, pp.52-53)

the most important policies and is found indicative of the hypothesis that government expenditure policy has a very important role to play in Pakistan.

Section I deals with direct control and its effe ctiveness in the context of the economic development of Pakistan. Section II and III deal with taxation policy and government expenditure policy as fiscal measures used to influence the allocation of resources. In these Sections, an attempt is made to find out the individual effectiveness of the policies. The relative effectiveness of different policies is analysed in Section IV; it is found that at the initial stage of development, government development expenditure has an effective role to play.

I Direct Controls

The 1950's saw the operation of a vast number of direct, administrative controls over private decisions in Pakistan.[2] Some of the controls, like price fixation were inherited from the war-time period that preceded Independence. Measures such as controls over imports, investment decisions, etc. were newly imposed. The outcome was that the private enterprise had little scope for free play in investment decisions. Prices and profits of a number of commodities such as food grains, cloth and sugar were fixed by the Government. The items

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2 A recent survey by the U.N. has elaborately discussed the origin and working of direct controls in Pakistan. Cf. "Control and Liberalization in Pakistan," Chapter III in U.N. Economic Survey of Asia and the Far East, 1968, pp.94-106. See also Haq, M. The Strategy of Economic Planning, pp. 49-55 and Papanek, G., Pakistan's Development: Social Goals and Private Enterprise, pp. 111-27.

that should be imported, and who could import them were determined by the administrators. Investment decisions were also subject to strict administrative control. In order to establish a plant it was necessary to obtain permission from different government agencies. Key inputs such as cement, iron and steel were allocated by the Government. Permission had to be obtained for getting power or telephone connections. In the case of jute, the Government even went further by fixing the area of cultivation. In fact, administrative controls were so vast that the Government could take, if it wanted, any decision even though it was outside the jurisdiction of direct control.

The mushroom growth of administrative controls in Pakistan is due partly to an institutional bias and partly to some misunderstanding concerning the role of price mechanism in economic planning. There existed the feeling that the market mechanism was inefficient and that the Government, through its civil service, was competent to make better decisions than private enterprise. It was not appreciated that resource allocation can be implemented through indirect controls without direct intervention. On the other hand, it was taken for granted that the Government had the power and ability to enforce any economic decision it found suitable. Thus, it was too readily assumed by the planners of the First Plan that direct physical controls can help to remove the hardship that was being faced due to the scarcity of goods. So they recommended that "price controls and rationing may become necessary when essential supplies are short and the ordinary price mechanism threatens to cause serious hardships to the more vulnerable elements of the community." [3]

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3 GOP, National Planning Board, The First Five Year Plan, p.88.

There are two main arguments in support of the view that the market mechanism cannot be relied upon for economic development. Firstly, it is argued that in the underdeveloped countries the subsistence sector is tradition-bound and does not respond to economic incentives.[4] In such a situation, the price mechanism cannot be expected to play an effective role in economic development. Secondly, it is argued that in an underdeveloped economy substantial structural changes are necessary for economic development to take place. The price mechanism, by its very nature, is slow in achieving the result. It is believed therefore, that better results will be obtained through direct controls than through the price mechanism.

Whether the above arguments can be accepted is a matter of opinion. The sociological interpretation regarding the behaviour of the private sector has been challenged by Professor Myint on the grounds that the different behaviour of the subsistence sector and the modern sector should be interpreted in terms of the factor-price differentials faced by these factors.[5] The sectors do not find equal factor-prices and consequently they use different factor-

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4 The argument has been expressed in "sociological" interpretation of dualism. Cf. Boeke, J.H., Economics and Economic Policy of Dual Socities as Exemplified by Indonesia. Quoted in Myint, H., op. cit., p.4.

5 Myint, H., "Dualism and the Internal Integration of the Underdeveloped Economies." Paper presented for the Conference on Dual Economy held at the University of Glasgow, September 1969.

proportions.[6] The topic will be taken up for further examination in Chapter 7 when we explain the role of direct government assistance with reference to labour and capital prices in Pakistan.

As to the second argument against price mechanism, it may be mentioned that the resultant structural change achieved through direct controls may not be on the line of the development potential of the economy and may ultimately prove inefficient. If direct controls run contrary to the social price of different factors, factor-use will be different than factor-availability.[7] Further, it may be argued that the price mechanism need not be considered inadequate and slow. Price inducements may be made large enough to bring rapid structural change.[8]

In the context of Pakistan it has been found that the system of direct controls was very costly to operate.[9] The costs appear particularly high when interpreted in terms of the opportunity cost of scarce administrators whose services

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6 Further, it is wrong to think that the dual economic characteristic is a bad case and need necessarily involve direct intervention. On the contrary, the feature may be made a source of development through the efficient use of fiscal policy. Japan is a typical example in the contemporary world. But how efficiently the growth is channelled in a dual economy is a point of consideration. The attitude of the leading sector towards reinvestment is very important. It is through the active role of the leading sector that the relative size of the backward sector will have to be gradually reduced as is theoretically shown by Professor Lewis in his 1954 article, "Economic Development with Unlimited Supplies of Labour," op. cit.

7 Alternatively, it may be argued that direct controls can help in economic development by supplementing indirect policies to maintain a factor-price ratio representing factor-availability.

8 This, however, does not deny the argument that it is liklier that instantaneous reallocation of investment can be brought through State than through price-mechanism.

9 For a further discussion of the costs of direct control in Pakistan see Haq, M. The Strategy of Economic Planning, pp. 50-55; and Papanek, G., Pakistan's Development, pp. 117-27.

are required for the administration of the expanding public sector. The heavy costs which the economy had to bear due to widespread direct controls were realized by the planners of the Second Plan. They proposed "a decisive move towards a more liberal economy, and a bold switch-over from direct controls to a policy of regulation of the economy through suitable fiscal and monetary controls."[10] Accordingly, steps were taken for a gradual withdrawal of direct controls. Since 1959, price incentives as a mechanism of resource allocation has been tried in many fields. Price controls have been withdrawn. As a measure to compensate for the overvaluation of rupee and encourage exports, the Export Bonus Scheme has been introduced. Imports have been liberalized. Imports falling under 'Free List' and 'Bonus Import List' can be imported without requiring a government license.[11] Investment controls have also been relaxed. In 1960 the Government started publishing the Industrial Investment Schedule which shows in advance the different fields of private investment. If the foreign exchange component of the investment can be found by the financing organizations, such as the Industrial Development Bank of Pakistan or the Pakistan Industrial Credit and Investment Corporation, and the investment proposed is within the list of Investment Schedule, prior approval of Government is not necessary. Similarly, if the entire foreign exchange requirement of the investment proposal falling within the Investment Schedule has come from the

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10 GOP, PC, The Second Five Year Plan, op. cit., p.77.

11 Open General Licensing and the original free list were withdrawn in 1967. Cf. Economic Survey of Asia and the Far East 1968, p.99

utilization of Bonus Vouchers, prior approval is not required.[12]

The move towards liberalization of direct controls is now considered to be in the right direction by the planners of Pakistan. The acceleration of private investment in the 1960's is thought to be intimately linked with the adoption of liberal economic policies recommended by the Second Plan and a gradual relaxation and withdrawal of administrative controls on imports, distribution, prices and investment decisions.[13] However, the move towards liberalization should not imply that controls are always bad. As has been remarked by Professor Wilson: "While the disadvantages of controls are large, it must not be implied that industrialists, for their part, will always exercise infallible judgement in their decisions about locations if they are free to choose."[14] For example, considering the distinctive regional growth objective of Pakistan it may be necessary to introduce controls if other policies or measures fail to achieve the goal or are found to be comparatively inefficient.[15]

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12 GOP, PC, The Third Five Year Plan, p.452.

13 Ibid, p.74. According to the Evaluation of the Second Five Year Plan (op. cit., p.3): "It is clear that an important factor in increasing agricultural production was the abundonment of foodgrain rationing, establishment of support prices for wheat, 50 per cent subsidy on fertilizer and a more liberal import of tubewells in the private sector."

14 Wilson, T., Policies for Regional Development, op. cit., p.29.

15 Similar opinion has been expressed in the UN Survey on direct controls in Pakistan, op. cit., according to which, "The problem of income disparities between and within regions has from all accounts assumed greater importance. It is an open question whether price reliant means will prove effective in lessening these disparities. It seems as likely that direct controls and a greater intervention of public investment will be necessary." Cf. Economic Survey of Asia and the Far East 1968, p.106.

II Taxation Policy

Taxation policy is used in many countries as an indirect means of influencing resource allocation. The main object is to direct investment to the regions, sectors and industries of national priority by providing incentives or disincentives.

Tax incentives or disincentives may take different forms, for example, tax holiday, accelerated depreciation allowance, loss offset provisions, import and export duties, sales and excise taxes, etc. In this Section, we shall deal with (a) tax holiday, (b) accelerated depreciation allowance, and (c) import duties which seem important tax instruments in Pakistan.

(a) Tax Holiday. The 1948-49 Budget of the Government of Pakistan announced some form of partial tax holiday.[16] This concession was converted into a full tax holiday measure with the Government announcement that if an industrial undertaking was set up on or after the 1st April, 1959, its income, profits and gains would be exempt from all taxes for a period of two years beginning with the month in which commercial production is commenced. In 1961 the measure was made discriminatory with eight, six or four years of tax holiday depending on the degree of development in a particular region, less developed areas being favoured over the developed ones.[17] In order to keep the incentives

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16 Andrus, J.R., and Mohammed, A.F., The Economy of Pakistan, Oxford University Press. 1958, p.321.

17 For information about tax holiday provisions see Tax in Pakistan: A Brief Outline (Revised Edition), December 1965, pp. 10.-12. It may be mentioned that the provisions of tax holiday have been subsequently changed; The Government announcement of the 9th July 1970 makes provision of three, four and six years tax holiday, depending on the areas. Cf. State Bank of Pakistan Bulletin, August 1970 p. xxix.

under the tax holiday it was also declared that the industrial undertaking, on the expiry of the tax holiday, would be entitled to full depreciation allowances on the full costs of the capital assets (except the special initial depreciation allowance).

The changes introduced in 1961 were significant compared with the previous tax holiday measures. In line with the planning objective of raising the rate of development in the less developed areas, especially in East Pakistan, the tax holiday provision differentiated between developed and underdeveloped regions. But it failed to distinguish between undertakings with different degrees of risks and profits. Nor was it appreciated that complete tax freedom is unnecessary for industries with a higher expectation of profits in the early years of life. Further, the discrimination was not absolute. An undertaking in highly developed areas, like Karachi, was allowed a tax holiday for four years. The same establishment was allowed an extra two or four years if it moved to other areas depending on their degree of development. There is reason to think that the enterprise would prefer an establishment in the highly developed areas and would be happy with the four years' tax holiday, if it is found that the present value of returns is higher with four years' tax holiday in the developed areas than with six or eight years' tax holiday in the less developed areas.

How far has the tax holiday, as introduced, been effective? Information available shows that at 1959-60 factor cost, private investment has increased from Rs. 114 crore in 1959-60 to Rs. 309 crore in 1964-65, and further to Rs. 370 crore in 1967-68 (Background Table 20). But the growth of total private investment does not ensure the success of the tax holiday provision.

Because it is possible that the increase in investment might not take place in the industries or regions where priority was attached. Unfortunately, data regarding those companies that enjoy the tax holiday are not compiled and published by the Central Board of Revenue.[18] Nor does the Planning Commission provide classified sector-wise and region-wise data which could allow one to reach any firm conclusion. Only recently, the CSO has published a study showing the growth of private investment in East Pakistan and West Pakistan for the period 1963-64 to 1967-68, as shown in Table 4.1 below. Of the total private investment, the share of East Pakistan in the period was only 22 per cent as

Table 4.1

Private Investment in East Pakistan and West Pakistan

	Rs. in Million: Current Prices		Percentage Distribution	
	E. Pak. (1)	W. Pak. (2)	E. Pak. (3)	W. Pak. (4)
1963-64	548	2,091	21	79
1964-65	817	2,614	24	76
1965-66	681	2,397	22	78
1966-67	819	2,918	22	78
1967-68	1,038	3,647	22	78
Total	3,903	13,667	22	78

Source: GOP, PC, The Mid-Plan Review of the Third Five Year Plan, p.39, Table VII, as quoted from the CSO-study

18 Nayimuddin, M., "A Study of Fiscal Policy in Pakistan 1950-51 to 1963-64" Unpublished Ph.D. thesis, University of Manchester 1966, p.298.

against 78 per cent in West Pakistan.[19] This is particularly disappointing from the point of view of the Third Plan's objective of a fifty-fifty distribution of private investment between East Pakistan and West Pakistan.[20]

It is of interest to see the reasons for such a disproportionate distribution of private investment between the two regions. The studies undertaken so far indicate that the growth potential of East Pakistan is " no less than that of West Pakistan."[21] Necessary factors for development - capital (both domestic savings and foreign exchange earning), surplus labour, sizeable market, fertile land, etc., - are present in East Pakistan. The reason for the slow growth of private investment should therefore lie somewhere else. Firstly, as we shall see, there exists a wide disparity in infrastructural development between the two regions. The relative absence of infrastructural facilities in East Pakistan and their presence in West Pakistan may have directly influenced the private investors against investment

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19 One may wonder whether there has been some underestimate of private investment as shown for East Pakistan in the CSO-study. The Fourth Five Year Plan (op. cit. p.81) also shows private investment in East Pakistan and West Pakistan. A comparison between the two estimates reveals that although the Fourth Plan estimates give an upward revision of data for both the regions, East Pakistan's share is still around 25 per cent of the total.

20 Rs. 11,000 million of private investment in each wing for the Third Plan period (1965-66 to 1969-70).

21 GOP, PC, Mid-Plan Review of the Third Five Year Plan (op. cit., p.43) which goes to add that "East Pakistan possesses more fertile soil than West Pakistan and, with the introduction of new agricultural techniques, agricultural productivity in East Pakistan can be raised several times with significantly less improvement than would be required in West Pakistan. Larger availability of labour may be another factor favouring East Pakistan's industrial development because West Pakistan may run into the problem of shortage of skilled labour sooner than East Pakistan." The same view of a better growth potential in East Pakistan has been held by Arthur D. Little on the basis of an extensive survey on East Pakistan's economy and M. Haq, The Strategy of Economic Planning, pp.114-15.

location in East Pakistan. Secondly, mere sanctioning of a tax holiday will not work if economic policies such as investment sanctions, foreign exchange allocation and credit supply do not work as complementary factors. Information available shows that, if anything, these latter factors conflicted with the tax holiday provision favouring investment in East Pakistan.[22]

(b) Accelerated Depreciation Allowance. Provisions for accelerated depreciation allowance (ADA) have existed in Pakistan since Independence in the form of a declining balance method, which was introduced in the Indian Income Tax Act in 1939. The 1948-49 Budget announced a number of concessions including an initial special depreciation allowance at the rate of 20 per cent on new machinery and plant and at the rate of 15 per cent on new buildings for industrial purposes.[23] Following the recommendation of the Investment Inquiry Committee (1959) the initial depreciation allowance on machinery was raised to 25 per cent. Provisions were also made for an additional depreciation allowance at the rate of 10 per cent and an extra-shift allowance at the rate of 50 per cent of the normal depreciation allowance. A commercial undertaking in Pakistan could then enjoy initial, normal, additional and extra depreciation allowances.

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22 For example, actual sanctions in the Comprehensive Industrial Investment Schedule for the period from 1965-66 to 1967-68 was only Rs. 1,113 million for East Pakistan, as against Rs. 3,118 million for West Pakistan. Cf. Investment Promotion Bureau, Comprehensive Industrial Investment Schedule, as quoted in the Budget in Brief (Final) 1969-70, op. cit., p.49. It may be mentioned that due to the privilege a private enterprise can enjoy from the sanctioning of foreign exchange, investment demand is reasonably high in both regions.

23 Andrus, J.R. and Mohammed, A.F., The Economy of Pakistan, op. cit., p. 321.

The main aim of the accelerated depreciation allowance in Pakistan seems to be to encourage private investment through allowing the enterprise to recoup the bulk of the original cost of the business asset in the first few years.[24] The provisions do not however, discriminate investment between less and more developed regions, or between less profitable but essential and more profitable but non-essential industries, or between new-coming and old investors. Thus, one may argue that in Pakistan ADA provisions, in their present form, cannot be expected to achieve such social goals as the development of less developed areas, or to provide incentives to the small new-coming entrepreneurs.

As mentioned earlier, the rapid industrial development in Pakistan has given rise to a growing concentration of income and wealth in the hands of a few families. In Chapter 7, the problem will be discussed from the point of view of direct government assistance to private enterprise. It is probably sufficient to mention here that it has not been possible to attack the problem through taxation policy which has been directed to provide investment incentives in the forms of ADA and other measures like tax holiday.

(c) Protective Tariff. In order to influence resource-allocation, import duties have been imposed in Pakistan on a number of goods.[25] An analysis of the import duties reveals that the tariff policy in Pakistan has been influenced

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24 Further, it may be noted that in a capital scarce and labour-surplus economy, the provision of extra-depreciation allowance carries merit in so far as it encourages the intensive use of machinery by employing more labour through double and triple-shift working.

25 The rates of import duties are shown in the Report on Currency and Finance published annually by the State Bank of Pakistan. See also Lewis, S.R., Pakistan: Industrialization and Trade Policies, Oxford University Press, 1970, pp. 67-68.

by two main objectives: Firstly, the rates of duties are determined on the basis of the nature of the goods and from the point of social and economic significance. For example, goods considered as necessities such as drugs and medicines, are taxed at a low rate. Similarly, goods considered as luxuries, for example, big cars, silk fabrics, etc., are taxed heavily. Secondly, since 1961-62 a preferential tariff policy has been in operation for the import of machinery to East Pakistan. Under this provision, import duty on all kinds of heavy machinery imported into East Pakistan will be 5 per cent less than those imported into West Pakistan. The objective is to encourage private investment in East Pakistan.

How far protection as an instrument of taxation policy has been successful is briefly examined below from two main angles:

(i) As an instrument to encourage domestic production; and

(ii) As an instrument to direct investment to East Pakistan.

A study by Lewis and Soligo[26] shows the growth of industrial output in relation to domestic demand under three categories: I Consumption goods, II Intermediate goods, and III Investment and Related goods. It is found that the output of consumption goods has increased with the rise in domestic demand. On the other hand, the growth of output of investment and related goods has failed to keep pace with the growth of demand, and as a result imports in this category of goods have increased from Rs. 571 million in 1954-55 to Rs. 3,003 million in 1963-64. This is in contrast to the rise in imports of consumption goods from Rs. 428 million to Rs.615 million and of intermediate goods from Rs. 344 million

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26 Lewis, S.R. and Soligo, R., "Growth and Structural Change in Pakistan's Manufacturing Industry," Pakistan Development Review, Spring 1965 pp. 122-27.

to Rs. 948 million for the same period.[27]

Two main factors may be responsible for the lack of growth of capital goods industries in accordance with the growth of demand if compared with the consumption goods industries. First, it may be argued that more investment fund was directed towards consumption goods industries than towards capital goods industries because the development potential of the former was higher than that of the latter. Second, it may be argued that the presence of a higher tariff rate attracted more investment in consumption goods industries which were better placed to earn more profits.

The argument for a higher development potential in consumer goods industries is, however, difficult to accept, since the development strategy of the economy, as seen in Chapter I, demands a rapid development of capital goods industries.[28] There is also the implicit idea of obtaining a higher marginal

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27 Since the figures are in current prices the comparison of import figures need to be taken with caution. By deflating them at 1959-60 factor cost the figures would read as follows: Imports of investment and related goods increased from Rs. 754 million in 1954-55 to Rs.2,858 million in 1963-64. The corresponding figures for consumption goods are from Rs. 565 million to Rs. 585 million and for intermediate goods from Rs. 454 million to Rs. 902 million.

28 For a further discussion on this topic see Chapter 5 where the growth of capital goods industries is viewed in the context of direct government undertaking. See also the Third Five Year Plan (op. cit., pp.447-48) which maintains that the "first important element in the strategy of industrialization for the Third Plan is a shift in emphasis from consumer goods to capital goods industry to maintain the contribution of the industrial sector to the savings effort and to extend the import substitution programme over a much wider front. The domestic demand for many capital goods is now large enough to permit domestic production on an economical scale and the country's long term objective of eliminating dependence on external assistance cannot be achieved unless more and more of the capital goods required for development are produced within the country."

propensity to save by laying more emphasis on heavy industries.[29] However, as follows from the Lewis-Soligo study, the rate of growth of output in investment and related goods is quite comparable with that of consumer and intermediate goods. While the growth rate in the first two groups was 59 per cent and 137 per cent each from 1954-55 to 1959-60, for investment and related goods it was 131 per cent. From 1959-60 to 1963-64 the corresponding figures are 53 per cent, 72 per cent and 121 per cent respectively. For a developing economy like Pakistan which practically speaking initiated industrial development in 1947, the growth of capital goods does not seem unsatisfactory.

An important hypothesis regarding inter-industrial growth in Pakistan is the existence of a higher tariff protection for consumer goods industries. By using the criteria of 'nominal' and 'effective' protection, Lewis has found that investment and related goods industries in Pakistan have been discriminated against, the extent of discrimination being higher in the recent period than in the earlier period.[30] If that is the case, it would perhaps not be wrong to argue that the tariff policy in Pakistan has encouraged investment allocation in favour of

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29 As has been observed by an experienced planner of Pakistan: "Past experience shows that it is a fairly difficult proposition to obtain a high rate of saving by concentrating on the consumer goods industries and by hoping to trade the products of these industries against capital goods imports. The limitation is imposed not so much by an uncertain international demand for Pakistani manufacturers as by domestic pressures for higher consumption levels which result in low exportable surpluses." Cf. Haq, M., "Problems of Formulating a Development Strategy in Pakistan," in OECD, Development Plans and Programmes, Studies in Development No. 1, p.117.

30 Lewis, S.R., Economic Policy and Industrial Growth in Pakistan, George Allen and Unwin Ltd., 1969, pp.71-75. "Nominal protection" is due to nominal tariff excluding sales taxes on imported goods. "Effective or implicit protection" is the protection to the value added in the industry which takes into account tariffs on both inputs and the goods itself.

consumer goods industries.[31]

Let us now take up the second point, that is tariff policy as an instrument for directing investment into East Pakistan. As found earlier, available data show that less than one-quarter of the total private investment of the country has taken place in East Pakistan. Thus the preferential tariff policy (or tax holiday) so far applied to direct the flow of private investment to East Pakistan has not achieved its objective. As we shall see shortly, public expenditure policy has a big role to play in this respect. There is, however, an important suggestion regarding taxation policy which is worth mentioning. In order to encourage private investment in East Pakistan, Papanek has argued that a regional tariff policy may be followed for East Pakistan as distinguished from West Pakistan; as the two regions are physically separated, imports into East Pakistan, without much difficul ty, can be specially taxed whether they come from West Pakistan or from another country.[32] Discrimination can also be extended to sales and other tax policies. (Alternatively, one may also argue a case for discriminatory government expenditure policy or for that matter any other policy). The basic point is that for the development of any particular industry, sector or region, the rate of return for private investment will have to be raised in comparison to other industries, sectors or regions.

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31 Here a qualification is necessary. In Pakistan, the role of import licensing system in determining the structure of imports is of tremendous importance. It seems that licensing system might have played a major role in directing resources in Pakistan. Cf. Lewis, S.R., ibid, pp. 75-87.

32 Papanek, G.F., Pakistan's Development, op.cit., p.259.

III Government Expenditure Policy

In Chapter 3, government expenditure for economic development was conceived in terms of a narrow coverage. It refers to that portion of total government expenditure (T_g) which is directed towards development purposes. Thus rewriting equation 3.2 we obtain:

$$G_d = T_g - G_n \quad \ldots\ldots\ldots\ldots (4.1)$$

G_d (government development expenditure) forms the basis of government expenditure policy in the development process. This does not mean that G_n (government non-development expenditure) has no significance at all. On the contrary, as mentioned earlier, one may argue for an allocation taking the whole of T_g. Our approach to government expenditure policy on the basis of G_d, however, follows from the conventional classification of income into consumption and investment. That is, once we start discussing public sector expenditure in economic development we implicitly assume a narrow coverage of T_g in terms of G_d.

It should be mentioned that the formulation of government expenditure policy is not something which is required by Pakistan alone. Rather, such a policy is essential for all developing countries where G_d is asked to play a significant role. Development planning involving a large share by G_d has been almost the accepted approach in many developing countries. For example, of the total outlay of Rs. 24,882 crore in the Fourth Five Year Plan of India (1969-74), the public sector share is as high as Rs. 15,902 crore as against the private sector share of only Rs. 8,980 crore.[33] The Fourth Plan of Pakistan (1970-75)

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33 Government of India, PC, The Fourth Five Year Plan 1969-74, Delhi (Undated, seems 1969), p.51.

has allocated Rs. 49,00 crore in the public sector against Rs. 26,00 crore in the private sector.[34] As a percentage of the total, the public sector will hold a share of 64 per cent in India and 65 per cent in Pakistan in the above Plans.

It should be noted that merely increasing G_d does not guarantee a higher rate of growth. It is true that it may be of assistance to raise the investment ratio. But if the increase in investment ratio is followed by a corresponding increase in capital-output ratio, the country may face a reduction in the level of consumption. So, in order to achieve rapid economic development the increase in G_d should be accompanied by an improved allocation of the investment-fund. In other words, the allocation of government development expenditure should be in terms of a well-formulated government expenditure policy.

The quantitative measurement of government expenditure in Pakistan (Chapter 3) has shown that in the period from 1949-50 to 1969-70, the income elasticity of government development expenditure is 9.90. Since G_d is so important in the development process of the country an important question is: Has a well-formulated government expenditure policy been followed in Pakistan?

From June 1955 to July 1970, there were three five-year Plans in operation in Pakistan. The Plans explain in some detail the allocation of government expenditure. A careful study of the Plans shows, however, that the government

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34 GOP, PC, The Fourth Five Year Plan 1970-75, p.24.

expenditure policy is far from being what may be called a well-formulated one.[35] It does not mean that the planners would not like to think in terms of a consistent policy approach.[36] What has hindered the development of a well co-ordinated government expenditure policy is probably the dominant administrative influence interfering with the planning machinery.[37] However, in the sectoral allocations found in the Plans implicitly lies the format of the government expenditure policy. The planners have allocated resources (a) for infrastructural development, (b) for direct government undertaking, and (c) for direct government assistance. It is obvious that (a), (b) and (c) comprise the total government development expenditure and form three functional aspects of government expenditure. In other words, a classification along these lines provides a functional approach to a study of government expenditure policy. The methodology of analysing G_d on the basis of a three-fold classification (4.2) may, therefore, be applied to a study at the allocative level.

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35 The criticism, however, is not confined to economic planning in Pakistan only. It appears that economic planning in Pakistan has followed the conventional approach of planning now being followed in many countries.

36 For example, in the Annual Plan 1968-69, the planners have emphasised the necessity of designing a balanced and co-ordinated set of policy instruments. However, the approach cannot be called as one of developing a pure government expenditure policy. Cf. GOP, PC, Annual Plan 1968-69 June 1968, pp.30-34.

37 The power-conflict between the Planning Commission on the one hand, and the majority of government bureaucracy on the other seems to have remained a serious problem in Pakistan. Cf. Lewis, S.R., Pakistan: Industrialization and Trade Policies, pp. 35-37.

$$G_d = INFA + DGU + DGA \quad \ldots\ldots\ldots\ldots\ldots \quad (4.2)$$

where INFA is government investment in infrastructural facilities,

DGU is investment in direct government undertaking in productive activities, and

DGA is investment in the form of direct government assistance to private enterprise.

Each of the components of equation 4.2 will be discussed in turn in Chapters 5, 6 and 7, where we shall analyse the need for, and the rationale of, the allocation of each of these in the context of the economic development of Pakistan. Data for the First, Second and Third Five Year Plans will be used to examine the operation of each of the functional groups.[38] It is true that at the present stage of economic planning, an analysis on the basis of our methodology of a three-fold classification presents many difficulties. But, from an objective point of view, such a classification seems to be the logical approach in developing a systematic government expenditure policy in the context of a developing economy like Pakistan. It is helpful in two main ways: Firstly, it allows one to see the relative importance of each component in the process of economic development. Secondly, it helps us to see the rationale of allocation in each category.

It is obvious that the effectiveness of government expenditure policy should be viewed in accordance with the development strategy of the economy. As seen

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38 Our dependence on the Five Year Plans are partly due to our intention to see the rationale of public sector allocation as has been conceived by the planners and partly due to non-availability of disaggregated data from other sources.

seen in Chapter I, Pakistan has laid emphasis on the growth of private enterprise; the growth of public investment is considered as complementary to private investment. Following the classification of equation 4.2, INFA and DGA components of G_d suit the complementary hypothesis well; the former will provide assistance to private enterprise by creating external economies, while the latter will provide direct assistance in the form of subsidies. The DGU component of G_d is, however, mainly supplementary but it is not designed to compete with the private sector, rather it is meant to provide incentives by undertaking projects where private enterprise was reluctant. One may thus consider that DGU is also complementary to private enterprise to some degree.

It therefore follows that the effectiveness of government expenditure policy in Pakistan may be examined by testing the government expenditure complementary hypothesis according to which the growth of private investment in the desired industries, sectors or regions is directly related to the growth of government development expenditure in the respective industries, sectors or regions. Unfortunately, adequate data are not available which permit one to carry out a rigorous test of the growth of private investment as a function of government development expenditure. It is only at the aggregative level that information covering the 1950's and 1960's about the annual growth of G_d and private investment are found (Table 3.4 and Background Tables 20 and 22). Assuming that private investment is directly related to government development expenditure at aggregative level, attempts may be made to determine whether or not there exists some broad relationship.

Thus conceived, regression functions have been tried for Pakistan, East Pakistan and West Pakistan. Statistical tests have been carried out firstly, without considering any time lag and secondly, taking a one-year time lag. The regression of private investment on government development expenditure for the period from 1950-51 to 1969-70 show that the latter accounted for more than 80 per cent of the variation in the former, the relationship being particularly strong in the case of East Pakistan, as may be seen from below.

Regression of Private Investment (Y) on Government Development Expenditure (X): 1950-51 to 1969-70

	$Y = a + bX$	R^2	$\bar{R}^2$
(a) Without Time Lag			
1. Pakistan	43.3850 + 0.6951X (0.0599)	0.8819	0.8754
2. East Pakistan	18.8024 + 0.3327X (0.0235)	0.9174	0.9128
3. West Pakistan	15.4027 + 1.0063X (0.1052)	0.8357	0.8266
(b) With Time Lag			
1. Pakistan	49.7334 + 0.7393X (0.0613)	0.8899	0.8838
2. East Pakistan	19.8014 + 0.3639X (0.0205)	0.9461	0.9431
3. West Pakistan	21.1397 + 1.0547X (0.1055)	0.8473	0.8388

Since the Pakistan of the 1960's is so very different from that of the 1950's, one may object to such an analysis as the above, where both decades have been taken together. It was found earlier (Chapter 3) that not only was the level of government development expenditure as a percentage of GNP higher in the 1960's but also the growth rate of government development expenditure in absolute terms was faster than that in the 1950's. The higher level of G_d contributed towards achieving a higher growth rate of GNP in the 1960's. In an attempt to determine the effectiveness of government expenditure policy in Pakistan, we must examine the contribution of G_d in raising private

investment. A regression analysis in which the 1950's and the 1960's are taken separately may be of assistance in this respect.

As may be seen from below, regression functions tried separately for the 1950's do not show a significant relationship except in the case of East Pakistan. On the basis of this result, the case for a role of government development expenditure in Pakistan and West Pakistan does not appear strong, especially if considered without a time-lag. But it should be realized that the 1950's was a period marked by the large number of direct controls over private investment decisions. Alternatively, one may also argue that for government expenditure policy to be effective a minimum level of G_d should be reached. From the investment ratio found for G_d in the 1950's (Tables 3.3 and 3.4), it seems that the condition was probably not fulfilled.

Regression of Private Investment (Y) on Government Development Expenditure (X) in the 1950's

	$Y = a + bX$	R^2	$\bar{R}^2$
(a) Without Time Lag			
1. Pakistan	73.4655 + 0.2252X (0.0853)	0.4656	0.3988
2. East Pakistan	15.7964 + 0.3790X (0.0765)	0.7542	0.7235
3. West Pakistan	57.4676 + 0.1612X (0.0916)	0.2790	0.1889
(b) With Time Lag			
1. Pakistan	72.0983 + 0.2763X (0.0813)	0.5908	0.5397
2. East Pakistan	16.2821 + 0.4197X (0.0671)	0.8302	0.8090
3. West Pakistan	55.9392 + 0.2120X (0.0924)	0.3971	0.3217

In the 1960's things were different. Since 1959, a move towards liberalization of direct controls has been undertaken (Section I). G_d was also operating at a higher level. These factors may have been responsible for the relative effectiveness of government development expenditure in the 1960's, as may be seen from below.

Regression of Private Investment (Y) on Government Development Expenditure (X) in the 1960's

	$Y = a + bX$	R^2	$\bar{R}^2$
(a) Without Time Lag			
1. Pakistan	149.4504 + 0.4137X (0.0961)	0.6986	0.6610
2. East Pakistan	30.3157 + 0.2605X (0.0538)	0.7453	0.7135
3. West Pakistan	114.7482 + 0.5514X (0.1612)	0.5939	0.5431
(b) With Time Lag			
1. Pakistan	152.9397 + 0.4431X (0.0810)	0.7892	0.7628
2. East Pakistan	31.6704 + 0.2831X (0.0345)	0.8940	0.8807
3. West Pakistan	117.7020 + 0.5777X (0.1586)	0.6240	0.5769

A comparative study of the regression functions tried without lag and with one-year lag for the 1950's and the 1960's separately as well as together shows that the value of R^2 improves when considered with a lag than without. The significance of such an improved relationship with a lag in all cases is that it provides a basis of the government expenditure complementary hypothesis by showing that private investment in the present year is more influenced by government

expenditure in the previous year.

The foregoing findings should be taken with reservation. Firstly, as mentioned earlier, the statistical tests were carried out at an aggregative level only. Such a study at an aggregative level gives no information about the functional relationship of private investment and government development expenditure at sectoral level. Secondly, the regression functions as shown are based on a time-series. In such a time-series study, in order to gain any firm conclusions one should tackle the auto-correlation problem which is likely to emerge. Thirdly, the time-period considered is probably not long enough to allow any firm conclusions to be drawn even at an aggregative level. It therefore follows that given the data and the statistical results the best than can be said is that the government expenditure policy has probably been an important factor in raising private investment. Further tests will be necessary however to provide a firm basis for these conclusions.

An area where an observation is comparatively safe is the contribution of government expenditure policy in raising the total investment. The role of government expenditure policy in this respect may be explained in terms of the gap approach.

In recent economic literature, the gap approach has been analysed from two main angles: (a) Savings-Investment Gap and (b) Foreign Exchange Earning and Expenditure Gap. Given the absorptive capacity, the fulfilment of the target rate of growth may be constrained due to the presence of (a) and/or (b). Ex ante investment aimed at achieving the target rate of growth may be higher than ex ante savings which the economic system will generate without an active participation by the government sector. Similarly, ex ante foreign exchange

expenditure required for achieving the target rate of growth may exceed ex ante foreign exchange which will be earned in the normal process without participation by the Government. In the first case, we have 'Investment Limited Growth' and in the second case, 'Trade Limited Growth.'[39]

Government participation in economic activities greatly helped to narrow down both Saving-Investment Gap and Foreign Exchange Earning and Expenditure Gap in Pakistan. Internally, as may be seen from Table 4.2A, government financing consisted of four sources: surplus on revenue account,[40] net capital receipts, additional taxation and deficit financing. In the early years, the contribution of domestic resources was negligible. In fact, the first four-year total as found for the First Plan period shows a negative contribution. This was mainly because surplus on revenue account was negative and no serious attempt was made to raise revenue through additional taxation. The situation began to improve with the Second Plan.[41] Externally, the Government has been trying

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39 Chenery, H.B. and Strout, A.M., "Foreign Assistance and Economic Development," American Economic Review, September 1966, pp.685-91.

40 It needs to be mentioned that following equation 3.2 which divides total government expenditure into development and non-development expenditure, the term 'surplus on revenue account' as used here may be misleading.

41 The performance of the Third Plan, however, has not been up to expectation. The estimated actual shows a significant shortfall in revenue surplus. This is mainly due to the unanticipated increase in defence expenditure following the 1965 war with India. The Fourth Five Year Plan of Pakistan (op. cit., p.46) estimates that against the projected defence expenditure of Rs. 6,890 million, Rs. 12,384 million was spent by the end of the Third Plan.

Table 4.2

Financing of the Public Sector

Table 4.2A: Financing Through Domestic Resources (First, Second and Third Plans)

(Rs. in Crore)

	First Plan (1)	Second Plan (2)	Third Plan (3)
Surplus on Revenue Account	-430	219	105
Net Capital Receipts	150	200	123
Additional Taxation	-	180	652
Deficit Financing	104	114	264
Total	-176	713	1,144

Sources: Col. (1) - GOP, First Five Year Plan: Preliminary Evaluation Report, Karachi 1960, p.7 (The data show actual financing in the first four years of the Plan). Cols. (2) and (3) - GOP, The Fourth Five Year Plan, p.45 (Second Plan figures are actuals and those of the Third Plan estimated).

Table 4.2B: Financing Through Foreign Loans (As on December 31, 1969)

	Million US $		% Distribution	
	Public Sector (1)	Private Sector (2)	Public Sector (3)	Private Sector (4)
Project Loans	2,148	1,171	65	35
Non-Project Loans	1,398	-	100	-
Total	3,546	1,171	75	25

Sources: Cols. (1) and (2) - GOP, Pakistan Economic Survey 1969-70, Statistical Section) p.117. Cols. (3) and (4) - Computed.

to obtain as much foreign assistance as possible.[42] In this respect, Pakistan is regarded as one of the success stories in aid diplomacy.[43] Most of the foreign loans are not only channelled through the Government Budget, but also a major share goes towards financing the public sector, as may be seen from Table 4.2B.

IV Relative Effectiveness of Different Policies

In the preceding Sections, we have tried to explain direct controls, taxation policy and government expenditure policy as instruments used in achieving the development objectives of Pakistan. We found that since 1959, the Government policy has been towards liberalization of direct controls. Taxation policy provides an important instrument of fiscal measure. The effectiveness of taxation policy in influencing resource allocation has, however, been limited in Pakistan for a number of reasons. One must appreciate that incentives provided through tax measures are rather a delicate instrument of economic policy. Their successful working demands that the general economic climate towards private investment is favourable and other government policies either support the taxation policy or remain neutral. Unfortunately, in Pakistan most other policies did not remain neutral and at times some other policies actually clashed directly with

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42 The main idea was to maintain a higher rate of investment by putting as less hardship as possible on the people. Such a strategy is justified on the ground that the standard of living of the people was very low and once the income increases through early efforts of higher investment, the hardship on the people will not be much even if they are asked to sacrifice a higher percentage from their income.

43 White, J., Pledged to Development, Overseas Development Institute Ltd., London 1967, Chapter 3, especially pp. 58-63.

taxation policy. For example, a longer tax holiday for East Pakistan failed to work as an adequate investment incentive probably because investment in infrastructural facilities was not adequate nor was the importance of direct government assistance in encouraging private investment in East Pakistan fully realized. It may be seen from Table 4.3 that in the First and Second Plans, the allocation of public investment was lower in East Pakistan than in West Pakistan. It is only in the Third Plan that East Pakistan has been allocated a higher share.[44] But so far as the actual outlay is concerned, East Pakistan has always received a lower share for the whole period from 1950-51 to 1969-70, the share being particularly lower in the 1950's.

Table 4.3

Regional Distribution of Public Sector Investment

(In Percentage)

	Plan Allocation		Actual Outlay	
	East Pakistan (1)	West Pakistan (2)	East Pakistan (3)	West Pakistan (4)
Pre First Plan (1950-55)	-	-	31	69
First Plan (1955-60)	46	54	30	70
Second Plan (1960-65)	45	55	38	62
Third Plan (1965-70)	54	46	45	55

Sources: Plan Allocation - (a) First Plan data are computed from the First Five Year Plan (op. cit., p.19). (b) Second Plan data are computed from Highlights of Pakistan's Second Five Year Plan (op. cit., p.21 ; the Central allocation has been distributed between East Pakistan and West Pakistan on a fifty-fifty basis). (c) Third Plan data are computed from Revised Phasing ... of the Third Five Year Plan (op. cit., pp. 15 and32) Actual Outlay - Chapter 3, p.88(Note: Actual outlay shown for the Second and Third Plans includes government investment for Indus Basin Development in West Pakistan.)

44 The allocation fails to give an exact idea since the large Indus Basin Development in West Pakistan has not been included. An estimate made by Griffin and Glassburner shows that the Third Plan provides only Rs. 2,000 million more in East Pakistan than in West Pakistan, but the Indus Basin Works in West Pakistan kept outside the Plan will cost $900 million, that is Rs. 4,284 million at the official rate of about Rs. 4.76 per dollar. Cf. "An Evaluation of Pakistan's Third Five Year Plan," Journal of Development Studies, July 1966, p.438.

It is expected that government expenditure policy can be effectively used as an instrument for resource allocation: INFA can cause external economies and thereby encourage private investment; DGU can come to supplement private investment which is considered deficient in any industry, sector or regions; and DGA can be manipulated to encourage private investment in the fields and ways desired. In a mixed economy like Pakistan where the public sector occupies a large share in the total investment of the country, effectiveness of government expenditure policy should be viewed in the context of the complementarity, as mentioned earlier, between public and private investments. Such a relationship has been strongly emphasised by the Planning Commission according to which: "Public investment is a pre-requisite to private investment, at least in the early phase of development. Until enough has been done to train the rivers and to regulate and distribute water for irrigation, the private farmers are severely hampered. The subsidy on fertilizer is a necessary aid to the farmer to make investment. Investment in land are urgently necessary in order to provide the basis on which to build industrial centres and to create housing facilities for the workers. Construction and improvement of roads, railways, waterways, ports, etc., are indispensable for private enterprise to transport and market their output. Public investments on education and health are required for improving the quality and quantity of manpower needed in the private sector.[45]

The process of economic development in Pakistan provides evidence for such a distinctive role of government expenditure policy. At a time when private invest-

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45 GOP, PC, The Third Five Year Plan, p.102.

ment was negligible and the economic prospect was bleak, it was government development expenditure which helped to raise the ratio of investment to GNP. It was the larger allocation of government development expenditure in West Pakistan which has ultimately brought a dynamic change in the economy of the Province.[46] Such an emphasis on government expenditure policy does not, however, mean that other policies are of no value. On the contrary, we believe that if properly formulated and implemented, other policy measures have also a considerable role to play. The main objective is that, in order to achieve the objective functions of the economy, the different policy measures must work to complement one another.[47] It might also be mentioned that in putting a case for government expenditure policy we do not mean that its role has been efficiently performed in Pakistan. Indeed, as will be seen later on, there were many imperfections in government expenditure policy and there is much room for improvement.

In conclusion it may be said that government expenditure policy in Pakistan is the result of the economy's having taken a pragmatic approach in raising the aggregate investment. As found earlier, Pakistan is fundamentally a private enterprise economy. The role of government expenditure policy, in the context of the development model of Pakistan, is firstly, to raise the total investment ratio, and secondly, given the investment fund, to aim towards a better allocation so that the rate of growth can be maximized. In equation 4.2, we have tried to locate three aspects of government expenditure policy, that is INFA, DGU and DGA. The role of these three aspects in Pakistan will be the subject of discussion in the succeeding three Chapters.

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46 It may be recalled that such a change has taken place in spite of the fact that during the 1950's savings ratio was lower in West Pakistan than in East Pakistan.

47 As has been observed by the Planning Commission: "Tax and expenditure policy combine to form fiscal policy; each is important separately, but perhaps of greater importance for overall economic conditions is the combined effect of the two on the economy." Cf. GOP, PC, The Annual Plan, 1968-69, p.31.

Chapter 5

INFRASTRUCTURAL DEVELOPMENT

The main objective of this Chapter is to analyse that part of government development expenditure which is directed towards the development of infrastructural facilities. In terms of our equation 4.2 it comes to mean the first component of the right-hand side, that is, investment in infrastructural facilities (INFA). At the outset two major limitations of the Chapter should be mentioned. Firstly, in order to restrict the discussion to the basis of equation 4.2, it is essential that the analysis of the Chapter should comprise strictly what is INFA. It must be admitted that such a strict coverage will not be possible. This is partly the result of difficulties concerning the proper definition of INFA, and partly the result of having to depend mainly on the data from the Pakistan Planning Commission. However, this will not seriously affect the analysis. Secondly, in order to keep the discussion brief, a selective approach has been preferred.

The Chapter is divided into four Sections. A short introduction is given in Section I. In Section II, criteria of allocating investment between social overhead capital (SOC) and directly productive activities (DPA) are discussed. Sections III and IV respectively dealwith sectoral and regional allocations of investment for infrastructural facilities.

I Introduction

The Third Five Year Plan has divided infrastructure into two broad groups; Physical Infrastructure and Social Infrastructure. Physical Infrastructure, as contained in the Plan, comprises the following: Water and Power, Transport and Communications, and Physical Planning and Housing. Social Infrastructure comprises Education and

Training, Health and Family Planning, Manpower Training and Labour, and Social Welfare.[1] It cannot be claimed that the above is the only scientific approach. As shall be seen later, there is some doubt whether all of these can be called infrastructure or whether the list is fully exhaustive of all INFA. It should be mentioned that infrastructure is a 'set of properties' not a 'set of things' and it is not easy to find a proper definition of the term.[2]

The basic principle inherent in government investment in infrastructural facilities is that private enterprise is not generally encouraged in these fields, partly because the amount of investment required is very high and partly because the prospect of private return is low. The second point leads directly to the question of the divergence between social and private profitability. In some cases like power, transport, etc. the private investor can charge for the service and may find it profitable to supply the service. But in other cases, for example, education, roads, etc., it may not be easy to charge full prices or the cost of collection may be too high.[3] Herewe find a case for government investment, particularly if it is found that marginal social benefits are much higher than marginal social costs.

In Pakistan, as in many other countries, the Government has taken the responsibility of supplying infrastructural facilities. Three main reasons may be advanced for

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1 GOP, PC, The Third Five Year Plan, pp.185-387.

2 For a discussion of the difficulties of defining infrastructure see Youngson, A.J., Overhead Capital: A Study in Development Economics, Edinburgh University Press 1967, pp.34-72.

3 Musgrave, R.A., The Theory of Public Finance: A Study in Public Economy, McGraw-Hill Book Co., 1959, pp.61-89, see also Samuelson, P.A., "The Pure Theory of Public Expenditure," Review of Economics and Statistics, November 1954, pp.387-89. The Musgrave-Samuelson approach however, is mainly concerned with the difficulty of applying the 'exclusion principle.'

government participation in these activities. Firstly, private sector investment in infrastructure is not only confined to a few activities, but also the amount of private investment is considered to be highly inadequate. Secondly, the provision of minimum infrastructural facilities is considered a prerequisite for initiating a self-sustaining growth. In the next Section, we shall have more to say on this point. Thirdly, as mentioned earlier, through investment in infrastructural facilities, government expenditure policy may be effectively used for allocating resources (Chapter 4). For example, a relatively higher investment for INFA in a region can raise the marginal productivity of investment and attract the flow of investment into that region.

II Investment Allocation between SOC and DPA

As mentioned in Chapter 2, an investment programme can be broadly divided into social overhead capital (SOC) and directly productive activities (DPA). In order to maximize the rate of growth, it is not enough for the ratio of savings-investment to GNP to be at a maximum. It is also essential that SOC-DPA allocation becomes optimum. Unfortunately however, there is no general criterion which can show an underdeveloped country the amount of SOC it needs to initiate self-sustaining growth. Given the amount of resources, the problem is to quantify the discounted marginal benefit from investment in SOC and DPA and thereby allocate resources in such a way that total benefits are maximized. As was seen earlier (Chapter 2), it is not a simple task to apply the principle in practice.

It is often argued that in underdeveloped countries investment is not attracted due to the absence of proper amount of SOC. The argument further suggests that SOC 'must precede the more quickly yielding, directly productive

investments.'[4] This is what is known as the 'building ahead of demand' argument of SOC. Available evidence from underdeveloped countries shows that a major portion of investment is directed for SOC. For example, India's Second Five Year Plan (1956-61) allocated 61 per cent of total investment for the development of infrastructural facilities; in the Third Five Year Plan (1961-66), the corresponding figure was 57 per cent.[5] In Pakistan, about 60 per cent of the total investment has been allocated for SOC in the Second and Third Five Year Plans (Table 5.2).

How far the 'building ahead of demand' argument is valid needs to be examined. The argument contains truth in so far as it refers to the choice of location by the entrepreneurs who "are not likely to choose sites where, by reputation or established policy, there is a chronic shortage of basic facilities."[6] The case of East Pakistan and West Pakistan may be cited as an example. East Pakistan has a reputation for chronic shortage of basic facilities. Other things remaining neutral, entrepreneurs would have a tendency to concentrate in West Pakistan.[7] Thus, viewed from this context, building ahead of demand may be essential for initiating growth in East Pakistan.

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4 Rosenstein-Rodan, P.N., "Notes on the Theory of the 'Big Push'", in Ellis, H.S. (ed.) Economic Development for Latin America, St. Martin's Press, New York, 1961, pp.60-61.

5 Government of India, P.C. The Third Five Year Plan, 1961, p.59, Table 3. (For calculating SOC, investment for agriculture and industries has been subtracted from the total investment).

6 Lewis, W.A., Development Planning, op. cit., p.98.

7 The hypothesis may be checked in terms of our analysis in Chapter 4 where it was found that private investment in East Pakistan is only about a quarter in comparison to three-quarters in West Pakistan.

But the argument must not be interpreted as meaning that all that matters is SOC. While adequate SOC is essential, surplus SOC has little attractive power.[8] Here one faces a choice of economizing in SOC to provide funds for DPA-investment in so far as the latter has a lesser gestation period and can produce higher marginal benefits. This is naturally the case because underdeveloped countries have a higher social time preference rate,[9] and when discounted at a higher rate the future benefit-stream of a quick-return project is likely to show a higher NPV than that of a slow-return project.[10] Thus, it is essential that scarce resources should not be committed to building SOC beyond a foreseeable demand.[11] How important the allocation between SOC and DPA is may be viewed from the Second Plan experience of Pakistan. The original Second Five Year Plan allocated 66 per cent to SOC and 34 per cent to DPA.

Table 5.1

Estimates of Capital-Output Ratio in the Original and Revised Second Plan

(Rs. in Million)

	Original Plan			Revised Plan		
	GNP	Total Investment	Invest-ment/ΔGNP	GNP	Total Investment	Invest/ ΔGNP
	(1)	(2)	(3)	(4)	(5)	(6)
1960	25,430			30,000		
		19,000	3.69		23,000	3.16
1965	30,580			37,270		

Sources and Notes: Cols. (1) and (2) - GOP, The Second Five Year Plan, p.26. Cols.(4) and (5) - GOP, The Second Five Year Plan (Revised Estimates), p.30. Rest - Computed. Absolute figures in Original Plan are based on 1959 prices, while those of Revised Plan are based on 1960-61 prices.

8 Lewis, W.A., Development Planning, p.98

9 As has been observed by Ursula Hicks: "when supplies of all sorts of equipment are meagre and the expectation of life is still short, it would be natural to suppose that a higher time preference rate/of discount would be appropriate." Cf. Development Finance: Planning and Control, Clarendon Press, Oxford 1965, p.34.

10 Following the exercise shown in the Appendix to Chapter 2, it may be easily estimated that the present worth of a slow-return project is much lower if discounted at a higher rate than at a lower rate.

11 Lewis, W.A., ibid, p.98. See also Youngson, A.J. Overhead Capital, op.cit. pp69-70. It is true that sometimes the nature of the project for example, ports, may necessitate building with excess capacity, but as far as practicable these should be planned to expand gradually as the demand increases.

When the Plan was revised, the SOC allocation was reduced to 60 per cent and the allocation for DPA was raised to 40 per cent.[12] The higher allocation for DPA in the revised Plan brought a reduction in the capital-output ratio (Table 5.1). This was one of the main factors that helped to raise the target rate of growth of GNP from 20 per cent in the original Plan to 24 per cent in the Revised Plan.[13]

It follows that SOC-DPA allocation is of vital importance. In allocating resources between SOC and DPA it is necessary to see that there is neither a 'shortage' of SOC which will discourage investment nor a 'surplus' which will not encourage investment. Ideally, the problem is to maintain a proper balance between demand for and supply of SOC. In other words, "as in other sectors, demand and supply should keep in step."[14] In order to maintain such a balance, investment allocation in terms of a well-prepared input-output table is necessary. From the Plan documents of Pakistan it does not seem that it has been possible to prepare an input-output table and to allocate resources accordingly. On the contrary, there are remarks which show that inadequacy of data still poses a serious problem and that the resources provided for most sectors in the Plan are not sufficient to cover the increasing demands in full.[15]

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12 Haq, M., The Strategy of Economic Planning, p.38.

13 The increase in investment in the revised Second Plan over the original Plan was mainly due to a rise in price-level which was observed as early as in 1960. In terms of real increase, the investment growth was only 6.2 per cent while the corresponding increase in output was 21 per cent. Cf. Chowdhury, M.K., "The Approach to Planning in Pakistan" Unpublished Ph.D.Thesis, Univ. of Manchester 1967, p.64.

14 Lewis, W.A., Development Planning, p.98.

15 For example, the Third Plan remarks that "no reliable information is available about the activities of road transport (private sector) and the large non-mechanized inland transport fleet. In the absence of such statistics, a clear picture of the inadequacy or otherwise of the transport system cannot be obtain[ed]." Cf. GOP, PC, The Third Five Year Plan, p.314. In this connection (transport system) the Second Plan remarked: "It has not been found possible to provide in the Plan the investment required to cover the increasing demands in full." Cf. GOP, PC, The Second Five Year Plan, pp.278-9.

Thus, for various reasons, much remains to be done for proper allocation of investment in Pakistan.[16]

So far the discussion has dealt with investment allocation in terms of the whole economy (comprising public and private sectors). For present purposes, we are however interested mainly in the government development expenditure in the SOC programme. Table 5.2 shows the relative allocation of public investment and total development expenditure among different sectors. From the Table it would appear that some 60 per cent of total development expenditure is directed towards the development of infrastructural facilities such as water and power, transport and communications, housing, education, health and social welfare, while the corresponding figure of public investment is 75 per cent or more. This means that a larger part of public investment is allocated for SOC. The larger allocation of public investment for the development of infrastructural facilities follows from the growth strategy of Pakistan (Chapter I). It has been a delcared objective of the economy, that, unless it is absolutely essential, the Government will not participate in directly productive activities. Consequently, the intention of government expenditure policy, as found earlier, is to provide incentives to the private sector by creating infrastructural facilities and by providing direct government assistance in the form of subsidies, loans, etc.[17] It is true that the

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16 The approach by the planners of the First, Second and Third Plans towards estimating accounting prices is discussed in Appendix A. It appears that although a start was made by the planners of the First Plan, those of the Second and the Third Plan did not try to make any estimate of accounting prices.

17 We shall deal with the second point concerning with direct government assistance in Chapter 7.

Table 5.2

Sectoral Allocation of Investment-fund

(In Percentage)

	First Plan		Second Plan		Third Plan	
	Public Investment (actual)	Total Dev. Exp. (actual)	Public Investment (actual)	Total Dev. Exp. (actual)	Public Investment (est. actual)	Total Dev. Exp. (Plan allo.)
	(1)	(2)	(3)	(4)	(5)	(6)
Agriculture	11.6	7	10.6	13	11.2	15.4
Manufacturing and Mining	17.2	31	9.3	28	11.3	25.9
Water and Power	30.5	17	41.4	19	39.7	15.1
Transport and Communications	23.0	17	17.6	17	17.1	18.2
Physical Planning and Housing	10.0	20	9.5	15	6.5	12.7
Education and Training	5.5	6	5.2	4	5.4	5.1
Health and Medical Services	2.1	2	2.3	1	3.9	2.3
Social Welfare, Manpower and Employment	0.1	Neg.	0.4	Neg.	0.4	0.5
Works Programme	-	-	3.7	3	4.5	4.8
Total	100.0	100	100.0	100	100.0	100.0

Sources: Figures of Public Investment are from GOP, The Fourth Five Year Plan, p.28, and those of Total Development Expenditure from GOP, The Third Five Year Plan, pp.6 and 41.

Government has also directly participated in productive fields, for example industries, but the role of the Government in this connection should be understood as supplementary rather than competitive. This aspect of government development expenditure will be taken up in the next Chapter.

In the field of public investment, an important question is whether a different SOC-DPA allocation would have been efficient for achieving a higher rate of growth. Here the main consideration is that private sector investment in DPA is inadequate and Government participation is necessary. But this becomes difficult when a large portion of public investment is tied up for SOC, leaving very little for DPA. The problem may be considered from two main view-points:

1. Less public investment for low-priority infrastructure, and
2. More private investment for infrastructure.

The first point is easily determined if allocation of public investment is made on the basis of the marginal benefit criterion as explained in Chapter 2. For example, if the marginal benefit of building a federal capital at Islamabad appears very low compared with that in education, it would be necessary to reduce investment in the former. It is true that the estimate of marginal benefit is not very easy, but this does not imply that attempts should not be made to improve the basis of allocation. As mentioned earlier, the allocative aspect of investment is the main basis which determines how high the growth rate will be. Maximum growth will be achieved only when investment takes place in such a way that marginal benefit is equal in all sectors (Chapter 2). At the present stage of economic planning in Pakistan serious attempts do not seem to have been made to improve the allocation of investment. This is probably the main weakness of public sector planning in Pakistan. There is no doubt that even some crude estimates of marginal benefit may substantially improve the basis of allocation and thereby avoid the misallocation of public resources directed towards low-priority areas.

So far as the second point is concerned, it is not essential that all sorts of SOC must be provided by the Government. In the USA, for example electricity is supplied through the private sector. Air transport was developed in Colombia almost entirely through private capital.[18] Even in Pakistan, private enterprise has strongholds in many municipal bus systems which are publicly owned in most countries.[19] In recent years in West Pakistan, there has been a tremendous increase in private irrigation by means of tubewells which are estimated to be operating at the rate of 6,500 wells per year.[20] In the social services sector such as housing, education, health and social welfare, private participation may be encouraged. In the Second Plan of India, out of a total allocation of Rs. 12,900 million for the social services, only Rs. 3,400 million was kept in the public sector and the remainder, Rs. 9,500 million was allocated to private sector.[21] It is therefore practicable that, given proper incentives, the private sector can be encouraged to play a constructive role in the creation of infrastructural facilities. What appears to be of the utmost importance in the context of the development strategy adopted for Pakistan (Chapter I) is that public investment should be directed only towards those SOC where private investment is not forthcoming and due to the absence of which investment in productive fields is not encouraged. Such an investment strategy is particularly essential considering the limited amount of public investment funds which need to be allocated for both SOC and DPA.

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18 Youngson, A.J., Overhead Capital, pp.80 and 78.

19 Papanek, G.F., Pakistan's Development, p.24.

20 GOP, PC, The Third Five Year Plan, p.294. In 1967-68 the figure was 8,000. Cf. Khan, A.M., "Agricultural Revolution and Role of Manufacturing Industries," Forward, February 1970, p.30.

21 Government of India, PC, The Third Five Year Plan, p.59.

Once the allocation of SOC is determined, the main task is to distribute the investment-fund among different sectors so as to maximize benefits. And the job needs particular attention when the allocated investment is not adequate to fulfil the demand for different activities. Here the problem is not simply one of distributing the limited SOC to the different sectors in an efficient way, but is also a matter of achieving efficient intra-sectoral allocations in each sector. These points will be further discussed in the next Section.

III Sectoral Allocation of INFA

This Section will deal with public investment allocation among different infra-structural facilities (INFA). Following the classification shown in Table 5.2 there are six broad sectors:

1. Water and Power,
2. Transport and Communications,
3. Physical Planning and Housing,
4. Education and Training,
5. Health and Medical Services, and
6. Social Welfare, Manpower and Employment.

As mentioned previously, according to the planners the first three sectors belong to the category of Physical Infrastructure and the last three to Social Infrastructure. Since our analysis will be based mainly on the information supplied by the Planning Commission, a note of caution is necessary. Firstly, the Plans do not maintain a strict division among the sectors and sometimes a sector includes some investment which technically speaking belongs to some other sector. For example, the housing sector

includes investment in 'education for architecture and town planning' which should belong to the education sector. Secondly, from Table 5.2 it will be found that there is a sector called Works Programme. According to the planners, "the Works Programme will form a separate sector in the Plan mainly concerned with the growth and development of the rural economy."[22] Such an argument, however, is confusing for a sectoral breakdown where a knowledge of the nature of the service to be provided is necessary. So far as the works programme is concerned, it will mainly provide rural infrastructure in the form of roads, irrigation, etc. Thus one may argue that the works programme should be included in infrastructure. On the contrary, the planners have preferred to consider it as belonging to Production Programme. Thirdly, in so far as water is provided as an agricultural input, one may question the justification for including water under infrastructure.[23] For example, in the First Five Year Development Plan of Turkey irrigation was included in agriculture.[24]

Table 5.3 shows inter-sectoral allocation of public investment in infrastructural facilities. Whether the sectoral allocation of INFA as shown in the Table was based on some cost benefit analysis is not known. As mentioned earlier, for an ideal allocation one needs information about marginal productivity and cost in different sectors. Unfortunately, data in this regard are lacking in Pakistan.[25] It seems that personal

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22 GOP, PC, The Third Five Year Plan, p.515

23 The question has already been raised by Haq, M., The Strategy of Economic Planning, p.34.

24 Government of Turkey, State Planning Organization, The First Five Year Development Plan (1963-67), Ankara, 1963, pp.145-47.

25 It would however be unfair to say that the Planning Commission is not aware of the problem. It seems that some initiative has already been made to obtain information about unit cost. For example, the finding of a study published in the Fourth Plan gives an idea of the unit cost for medical education at different levels. Cf. GOP, PC, The Fourth Five Year Plan, p.218.

Table 5.3

Public Sector Allocation for Infrastructure in the First, Second and Third Plans

(Rs. in Million)

	First Plan		Second Plan		Third Plan	
	Absolute (1)	% (2)	Absolute (3)	% (4)	Absolute (5)	% (6)
Water and Power	2,697	43	4,140	41	8,047	38
Transport and Communications	1,666	27	2,725	27	6,711	32
Physical Planning and Housing	861	14	1,885	18	2,477	12
Education and Training	580	9	955	9	2,374	11
Health and Medical Services	288	5	370	4	1,175	6
Social Welfare, Manpower and Employment	133	2	120	1	176	1
Total	6,225	100	10,195	100	20,960	100

Sources and Notes: Col. (1) - GOP, The First Five Year Plan, p.15. Col. (3) - GOP, Evaluation of Second Five Year Plan, p.15. Col. (5) - GOP, Revised Phasing ..... of the Third Five Year Plan, p.16. Rest - Computed. First Plan allocations show gross total including likely shortfall. Due to difference in prices direct inter-period comparison of investment figures is not possible. Figures have been rounded off.

judgement of the planners has been the guiding criterion for sectoral allocation. The application of such a criterion sometimes creates difficulties. During planning and at the time of execution, bargaining strength and administrative capacity of the different sectors may largely influence the sectoral allocation of investment-fund. That this

factor has largely influenced investment allocation in Pakistan seems obvious.[26] This may be one important factor why the allocation of public investment for infrastructure does not generally appear efficient, as we shall see from an examination of the rationale of allocation.

Considering the investment allocations as shown in Table 5.3 it appears that the so called 'physical infrastructure', consisting of water and power, transport and communications, and physical planning and housing, have occupied the largest share. Of the total public sector allocation for INFA in the First Plan, the share of physical infrastructure was 84 per cent, as against 16 per cent for social infrastructure. The respective shares in the Second Plan were 86 per cent and 14 per cent, and in the Third Plan, 82 per cent and 18 per cent. It follows that in the allocation of public investment top priority has been given to physical infrastructure, the expansion of which is considered essential for the growth of DPA, while low priority has been attached to social infrastructural facilities which are considered to have comparatively little growth effect. Such an aggregated analysis conceals some truth. In order to see the rationale of the hypothesis, it is necessary to analyse the allocation taking the individual sectors. In the sub-sections that follow, the three individual sectors falling within the category of physical infrastructure and the education and training sector from the category of social infrastructure will be dealt with. In order to keep the analysis brief, the allocations of water and power, and transport and communications

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26 As has been observed by Haq: "the allocations in the Government sector were determined by the demonstrated administrative capacity of various organizations in the past and by the inevitable departmental pressures." Cf. The Strategy of Economic Planning, p.183.

will be discussed at a broad level. In analysing the allocation for physical planning and housing, and education and training an attempt will be made to extend the discussion at intra-sectoral level.

(a) Water and Power. Sometimes water and power are jointly supplied through multipurpose projects. However, this is not always essential. Further, when water and power are supplied jointly, a separate value may be imputed for each type of benefits. This is particularly essential at the time of making the feasibility study of a project. For the present purpose, water and power will be treated as separate sectors.[27]

Table 5.4 shows public sector allocation for water and power in the First, Second and Third Five Year Plans. It is found that of the allocation for water and power sector in the First Plan, the share of water was 68 per cent as against 21 per cent for power; 11 per cent is shown as miscellaneous. In the Second and Third Plans, the share of water was 62 per cent and 49 per cent respectively; the corresponding figures of power were 35 per cent and 48 per cent. It follows that water was allocated the major share in the First, Second and Third Plans. It is true that the share for water has gradually declined, but the relative position in the last two periods needs to be taken with caution, since an extensive water programme in the form of the Indus Basin Development was kept outside the Second and Third Plans. In fact, including the Indus Basin Development the actual public expenditure for the development of

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27 It appears that the advantage of conceiving allocation separately for water and power development has been realized by the planners of the Fourth Plan. Unlike the previous Plans, separate allocations for water and power are shown in the Fourth Plan.

Table 5.4

Plan Allocations for Water and Power in Public Sector

(Rs. in Million)

	First Plan		Second Plan		Third Plan	
	Absolute (1)	% (2)	Absolute (3)	% (4)	Absolute (5)	% (6)
Water	1,826*	68	2,579.7	62	3,934*	49
Power	571	21	1,440.5	35	3,848	48
Miscellaneous	300**	11	119.8***	3	265	3
Total	2,697	100	4,140.0	100	8,047	100

Sources and Notes: Col. (1) - GOP, The First Five Year Plan, p.43. Col. (3) - GOP, Evaluation of the Second Five Year Plan, p.225. Col. (5) - GOP, Revised Phasing ..... of the Third Five Year Plan, p.19. Rest - Computed. *Includes Rs. 733 million allocated for multipurpose development in the First Plan and Rs. 854 for the same in the Third Plan. ** Shows reserve. *** Shows Central Government programme in water and power. Other notes - same as in Table 5.3

water in the Second Plan was Rs. 5,476 million as against Rs. 1,775 million for the development of power. The respective figures for the Third Plan are Rs. 6,458 million and Rs. 3,507 million.[28] In other words, as percentage of the total, the share of water was 76 per cent in the Second Plan and 65 per cent in the Third Plan.

Consideration of priority selection in the water and power sectors may be analysed from two main points of view:

a) What is the nature and use of the input?

b) Can the input be supplied through the private sector?

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28 GOP, PC, The Fourth Five Year Plan, p.37. Appendix B. (The Plan figures show estimated actual)

So far as water is concerned, it was mentioned earlier that this may be considered as an agrucultural input. If this is true, the economic rationale of the allocation for water should be considered together with the allocation for other agricultural inputs, such as seeds, fertilizers, etc. Such an argument assumes that the different agricultural inputs, including water, are substitutable. In reality this may not always be the case. But this probably does not nullify our hypothesis that in so far as water is an agricultural input its economic justification lies in its capacity to contribute to increasing agricultural production.

The allocation for water in the context of agricultural development in the First, Second and Third Five Year Plans will be discussed in Chapter 7. As shall be seen, more suitable alternative opportunities than major irrigation works are available. In fact, the recent remarkable growth of agricultural production in West Pakistan has been due mainly to higher yielding seed varieties, increased use of fertilizers and the development of irrigation by means of tubewells.[29] But this growth has not been reflected in the investment allocation of Pakistan.[30] For example, the planners of the First Plan allocated Rs. 1,826 million for the development of major water schemes, as against Rs. 1,503 million for all other inputs - including Rs. 286 million for fertilizers and seeds. The Second Plan allocated Rs. 2,580 million for water development compared with only Rs. 582 million for fertilizers and seeds. In the Third Plan,

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29 Bose, S.R. and Clark II, EH., "Some Basic Considerations on Agricultural Mechanization in West Pakistan," Pakistan Development Review, Autumn 1969 p.296.

30 Haq has attacked the higher allocation for major irrigation works through the capital-intensity criterion. According to him, the capital-output ratio implicit for major irrigation works in the First Plan was as high as 3.5 compared to only 0.8 for intensive cultivation through better fertilizers, seeds and farming techniques. Cf. The Strategy of Economic Planning, pp.34-35.

the public sector allocation for water is Rs. 3,934 million against an allocation of only Rs. 884 million for manures and fertilizers (Tables 5.4 and 7.3). Further, in the revised Third Plan, while the allocation for manures and fertilizers has been reduced from Rs. 1,167.2 million in the original Plan to Rs. 884 .5 million, for plant protection from Rs. 655.9 million to Rs. 585 million and for agricultural extension from Rs.169 million to Rs. 88 million, the allocation for irrigation has been increased from Rs. 785 million to Rs. 788 million.[31]

In order to judge the rationale of the allocation for water, the possibility of supplying the input through the private sector must also be considered. This follows partly from the development strategy which aims at bringing public sector investment only to those areas where private investment is not forthcoming, and partly because of the greater demand for public investment in other fields. It is difficult to say with certainty how far private investment will be an adequate substitute for the total public investment programme in irrigation of West Pakistan - which has been carried out on a vast scale. Depsite this, the recent experience of the rapid expansion of tubewell irrigation in the private sector enables us to question the rationale of the allocation of such a large public sector programme for major irrigation works in West Pakistan. It seems that, given proper incentives, the agricultural revolution so far as irrigation by means of tubewells is concerned could have taken place much earlier. Thus, it is essential to consider whether or not a large investment programme for water is necessary in the public sector.[32]

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31 GOP, PC, Revised Phasing ... of the Third Five Year Plan, pp.17 and 19.

32 According to Bose and Clark, "Nowhere else in the world are such low-value crops as wheat and maize grown on irrigated land. Exports for such products may turn out to be socially costly for Pakistan." Cf. "Some Basic Considerations on Agricultural Mechanization in West Pakistan." op.cit., p.297.

In contrast to the position of water, power has a special importance in the list of INFA. According to Hirschman, "the hard core of the concept (of SOC) can probably be restricted to transportation and power." [33] The most important characteristic of electricity is that it facilitates the carrying on of a great variety of economic activities. It is believed that "enlarged availabilities of electric power and of transportation facilities are essential preconditions for economic development practically everywhere." [34]

In Pakistan, there has been an enormous increase in power generation. For example, installed generating capacity increased from 882 MW in 1960 to 1435 MW in 1965, and it is expected that it will increase to 2888 MW in 1970.[35] These figures should not, however, be interpreted as meaning that no further emphasis on power is necessary. On the other hand, as shall be seen later, electricity will have to play a substantial role in the process of economic development, particularly in East Pakistan. Further, it has already been felt that the demand for power has been increasing at a very fast rate.[36] Thus, considering the importance of power as an input, it will be necessary to see that the inadequacy of power does not prevent the growth of investment. Such an emphasis should not be meant to say that mere increase of installed generating capacity without provision of supply through the transmission lines will be

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33 Hirschman, A.O., The Strategy of Economic Development, p.83. A qualification, of course, is necessary since Hirschman's observation is based on general and not on particular application.

34 Ibid, p.84.

35 GOP, PC, The Third Five Year Plan, p.310.

36 Ibid, p.304 (Paragraph 62).

good planning or that power should necessarily be supplied by the public sector. Firstly, the tendency to build large and impressive projects in the form of hydro-lectric dams or muclear generators has little economic rationale.[37] What is required is the supply of power at a minimum possible cost which can be determined by estimating NPV of the alternative power supplies. Secondly, the case for the private sector supplying electricity may also be considered. Before any move is taken in this direction further studies however will be necessary.

(b) Transport and Communications. As shown earlier, transport and communications received the second highest share in the public sector allocation of INFA (Table 5.3). This sector was allocated a relative share of 27 per cent in both the First and Second Plans; the figure was raised to 32 per cent in the Third Plan. An analysis of the allocation as found for transport and communications may be made by viewing firstly, the nature of demand for this sector in economic development and secondly, the relative importance of transport and communications sector.

The existence of a transport bottleneck is an established fact in Pakistan. According to the Third Plan, "inadequacy of transport is believed to be seriously hampering the productivity and growth of the national economy."[38] The Second Plan also reiterated the view: "In the agricultural sector, e.g., productivity remains low due inter-alia to rural isolation; fertilizers, improved seeds and extension services do not reach many areas in time. Difficulties of transporting agricultural produce to market act as a disincentive to the grower; reliable figures from spoilage or wastage

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37 For example, in the case of Turkey it has been found that the Government selected the Keban Hydro-dam instead of the alternative thermal power station, although based on a discount rate higher than 8 per cent the former shows negative NPV. Cf. Karatas, C., "A Study of Turkish Planning with particular reference to project evaluation technique," Unpublished Ph.D. thesis, University of Glasgow 1970, pp.338-39.

38 GOP, PC, The Third Five Year Plan, p.313.

resulting from poor transport are not available, but they are undoubtedly large. Manufacturing industry, too, suffers delays in getting delivery of raw materials or spare parts and output taken to market. Sugar mills in East Pakistan, for instance, are working below capacity because adequate sugar cane cannot be transported to them. Valuable mineral resources in Chitral, Waziristan and former Baluchistan areas are not being exploited for want of access; and coal mines near Quetta have to be shut down when bad weather interrupts transport." [39]

The above paragraph helps to show how important transport is in the economic development of the country. The importance of transport may also be viewed from the non-specific character of the service. In fact, as has been observed by Professor Youngson, "The more closely one examines the impact of transport improvement, the more clearly one realizes how pervasive this impact is, in what a multitude of ways the transport system helps to determine the scope and direction of economic development, and how important are transport improvements in the creation of new economic opportunities and new incentives." [40] Past experience of the increase in demand for transport shows that the rate of growth is faster than that of GNP. For example, in India the rate of growth of the amount of traffic carried by rail and road between the early 1950's and the early 1960's was about 2.75 times that of the national income. In Pakistan, the annual rate of growth of traffic in the 1950's was as high as 5.9 per cent as against 2.6 per cent for national income.[41] Thus partly because of the continuing transport bottleneck in Pakistan and partly because of the nature and

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39 GOP, PC, The Second Five Year Plan, p.278.

40 Youngson, A.J., Overhead Capital, p.75.

41 Ibid, pp.107-8.

importance of the service in the growth process, there is a strong argument in favour of an increased allocation for the development of transport.

Table 5.5 has been prepared in an attempt to assess the relative importance of (a) transport, and (b) communications as emerges from Plan allocations in INFA. From the Table, it is found that the relative share of communications has increased from 19 per cent in the First Plan to 23 per cent in the Second Plan, and was further increased to 26 per cent in the Third Plan. This means that the relative share of transport has accordingly declined. In order to justify the relative increase of public sector allocation for communications compared to transport, it must be shown (following our analysis in Chapter 2) that the marginal benefit per rupee is higher in communications than in transport. As pointed out earlier, the Planning Commission has not yet been able to make sectoral allocation on some scientific basis. Any argument, therefore, in support of a higher allocation for communications cannot but be qualitative. The planners would probably like to argue that both transport and communications at times complement each other, which suggests that mere development of transport will not be enough unless communication facilities are also developed. It should be mentioned that in such an argument it is implied that transport facilities are not absent. Looking at Pakistan what we find is that it has not yet been possible to provide the basic transport needs in most parts of the country and many rural areas suffer from economic isolation.[42] The situation demands attention particularly since 90 per cent of the people live in rural areas. How quickly the basic transport needs can be met is therefore of utmost importance.

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42 GOP, PC, The Third Five Year Plan, p.314.

Table 5.5

Public Sector Allocations for Transport and Communications in the First, Second and Third Plans

(Rs. in Million)

	First Plan		Second Plan		Third Plan	
	Absolute (1)	% (2)	Absolute (3)	% (4)	Absolute (5)	% (6)
Transport	1,344	81	2,094.5	77	4,937	74
Communications	322	19	630.5	23	1,774	26
Total	1,666	100	2,725.0	100	6,711	100

Sources and Notes: Col. (1) - GOP, The First Five Year Plan, p.48. Col. (3) - GOP, Evaluation of the Second Five Year Plan, pp.231-32. Col. (5) - GOP, Revised Phasing ..... of the Third Five Year Plan, p.22. Rest-Computed. The classification of transport and communications as shown in the Evaluation of the Second Plan has been followed in finding sectoral distribution in the First and Third Plans. Other notes - Same as in Table 5.3.

Viewing the relative distribution of investment fund within the transport and communications sector it does not appear that the allocations have been directed towards higher priority areas. "Inland water navigation," according to the planners of the Second Plan, "is the backbone of the transport system of East Pakistan, a fact dictated by the geography of the Province. It is also the most economic method of transport of goods, particularly bulk cargo, if suitable facilities are available at inland ports."[43] The Plan allocation for inland water transport does not show that its importance has been realized in actual practice. Even the allocation for civil aviation - which is considered as "much less economical than other alternatives in the transport sector "[44] - has been higher than the inland water transport. In the revised

43 GOP, PC, The Second Five Year Plan, p.298.

44 Haq, M., The Strategy of Economic Planning, p.212.

Third Plan, while the allocation for inland water transport has been reduced from Rs. 310 million to Rs. 274 million, the share of civil aviation has been increased from Rs. 380 million to Rs. 440 million.[45]

One also fails to understand the rationale of allocation for the development of television as a communication medium. It is true that one can put forward a number of arguments in support of the necessity of television and its educational value. But it must be remembered that for a society which has not yet been able to provide compulsory primary education the alternative use of the fund spent for television is probably much higher. Further, it may be mentioned that the process of economic development demands some restraint on consumption as well as a check on further inequality in consumption. By introducing television both these criteria have been violated. The fact is that for a poor society with a per capita income less than half the price of a television set it is unwise to add a new item to its consumption-demand list.

(c) Physical Planning and Housing. In Table 5.3 it was found that of the total public investment for infrastructural development the allocation for physical planning and housing was 14 per cent in the First Plan, 18 per cent in the Second Plan and 12 per cent in the Third Plan. The allocation would appear very meagre if one considers that there is an acute shortage of housing and a severe sanitation problem in the country. For example, on the eve of the Third Plan there was a shortage of one million dwelling units. There is also the acute sanitation problem.[46] Unfortunately, allocation on a

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45 GOP, PC, Revised Phasing ... of the Third Five Year Plan, p.22.

46 As has been observed in the Third Plan: "In rural areas, there are problems of fundamental needs like pure water supply, drainage and sanitation as well as community services and roads. Very few villages have good water supply systems, surface drainage and/sanitation facilities." Cf. GOP, The Third Five Year Plan, p.365. proper

requirement principle cannot be considered as an efficient criterion. In other words, one needs to face the case for an allocation in physical planning and housing in real perspective. In Pakistan, the root of all housing and sanitation problems is mass poverty which does not allow the people "to own or rent minimum essential shelter or afford minimum amenities."[47] Here lies the crux of the problem. With the given resources, there is no short-cut to an immediate solution.

It follows that a choice of lower allocation for physical planning and housing cannot probably be avoided. The process, however, should be understood as a step towards the long-term solution of the housing problem at minimum total sacrifices. In an economy with higher time preference rate it would be necessary to encourage investment in quick-return projects or sectors. It is generally believed that most investments in the housing sector do not belong to the quick yielding category.

The argument for a lower allocation of public investment in physical planning and housing should not imply that nothing can be done at present in this field. On the contrary, there are two important areas where government expenditure policy may be directed. Firstly, direct government assistance (Chapter 7) may play an active role in encouraging people to build their own houses. For example, incentives may be provided in the form of procuring land, buying building materials and so on. This point has laready been raised by the planners of Pakistan.[48] In executing the policy there should, however, be constant reviews in order that the growth of private investment in housing does not seriously affect other productive areas. Secondly, given the

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47 Ibid, p.365.

48 GOP, PC, The Third Five Year Plan, pp. 385-87.

limited government fund allocated for physical planning and housing, attempts should be made to maximize benefits. This will necessitate an improvement in allocation among different sub-sectors within the sector.

Table 5.6 shows the relative allocation of public sector investment among different sub-sectors within the physical planning and housing sector. It should be pointed out that the intra-sectoral classification in the Table is not very distinct. As a result, it is not possible to make a very good analysis. However, some generalizations can be made. Firstly, public sector allocation for physical planning and housing has been largely directed towards urban development. Urban-based sectors like the urban programme, public housing, government offices and buildings, administrative centres, etc., have received a disproportionately large share in all three Plans. Secondly, in the allocation as found for the Second and Third Plans, a large share has been directed to what may be called personal uses of the Government. In the First Plan, the combined share for government offices and buildings and administrative centres was only 7 per cent. But in the Second Plan the figure was raised to 17 per cent,[49] together with public servants housing it amounts to 24 per cent. In the Third Plan, a share of 31 per cent was allocated for government offices and buildings, and administrative centres; together with public servants housing the figures total 39 per cent.

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49 Further, actual implementation of the Second Plan programme for government offices and buildings and administrative centres was much higher than the Plan allocation. As against the allocation of Rs. 96 million for government offices and buildings, Rs. 182 million was invested, that is Plan implementation of 191 per cent. For federal capitals at Islamabad and Dacca Rs. 379 million was invested against the Plan allocation of Rs. 220 million, that is Plan implementation was 172 per cent. Cf. GOP, PC, Final Evaluation of the Second Five Year Plan, p. 211.

Table 5.6

Public Sector Allocations for Physical Planning and Housing in the First, Second and Third Plans

(Rs. in Million)

	First Plan		Second Plan		Third Plan	
	Absolute (1)	% (2)	Absolute (3)	% (4)	Absolute (5)	% (6)
Basic Development	22	3	42	2	69	3
Rural Programme	72	8	.	.	86	3
Urban Programme	346	40	525.7*	28	970***	39
Public Housing and Rehabilitation	362	42	675	36	-	-
Government Offices and Buildings	50	6	95.6	5	234	9
Administrative Centres	10	1	220**	12	540**	22
Public Servants Housing	-	-	133.7	7	205****	8
Aid to Local Bodies	-	-	165	9	336	14
Miscellaneous	-	-	28	1	37	2
Total	862	100	1,885	100	2,477	100

Sources and Notes: Col. (1) - GOP, The First Five Year Plan, p.538. Col. (3) - GOP, Evaluation of the Second Five Year Plan, p.237. Col. (5) - GOP, Revised Phasing ... of the Third Five Year Plan, p.23. Rest - Computed. *Represents rural and urban water supply and sewerage. **For federal capitals at Islamabad and Dacca. *** Includes slum improvement, urban water supply and fire services. **** Includes loans to Government servants for house building. Other notes - same as in Table 5.3.

It follows that the allocation of public sector investment for physical planning and housing has been done at the expense of the rural areas where about 90 per cent of the total population lives and where the problem is so severe that in many areas even pure drinking water is not available. One also fails to understand the justification for a large allocation for Government personal uses. The planners were aware

that "Ostentatious and expensive buildings will be discouraged in favour of simple and austere designs." [50] They also advocated that "Only the most essential government offices and buildings will be constructed during the (Third) Plan period and some of the offices will continue to utilize rented accommodation." [51] How far the criteria have been actually followed is doubtful. It is probably worth repeating that in the initial process of development what is of highest importance is restraint in 'consumption' in all fields, whether it is building a new capital or providing a television service.[52] Contrary to this hypothesis, Pakistan's Brasilia in Islamabad is emerging as an example of luxurious construction where, according to the Third Plan, "Anumber of leading international as well as Pakistani architects have participated in planning and designing various complexes and buildings ... (and where) even the Class IV employees viz., peons and messengers have been provided with two living rooms apart from bathroom, kitchen, verandah, etc. The houses are equipped with proper sanitation, water supply and gas burners." [53]

What criterion has been followed by the planners in allocating higher public investment especially in the Second and Third Plans for building national capitals at Islamabad and Dacca is not known. If the marginal productivity criterion was followed as the allocation criterion it is doubtful whether capital-building would have received such

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50 GOP, PC, The Third Five Year Plan, p.383.

51 Ibid, p.383.

52 The term 'consumption' as used here should be understood in a broad sense.

53 GOP, PC, The Third Five Year Plan, p.373.

a large share particularly when, even within the physical planning and housing sector, there are areas such as research for cheap housing, rural water supply, etc., which seem to have a higher marginal benefit. Considering the higher allocation and implementation for Islamabad it seems almost certain that non-economic factor has played an important role. As shown earlier, the Second Plan implementation for federal capitals was 172 per cent of the Plan allocation. In the Mid-Plan review of the Third Plan it has been found that while the implementation of Plan allocation in almost all other areas faces failure "the progress of construction of work on both the Capitals is extremely satisfactory and it is expected that the programme envisaged in the Third Plan for these two Capitals would be fully accomplished."[54] The news is certainly not very comforting considering the low priority that the construction of the national Capitals is likely to receive in an economy like Pakistan.

(d) Education and Training. Marshall was one of the early economists to recognise the value of education. He observed that "the economic value of one great industrial genius is sufficient to cover the expenses of education of a whole town; for one new idea, such as Bessemer's chief invention, adds as much to England's productive power as the labour of a hundred thousand men."[55] In recent times, Professor Schultz's article, "Investment in Human Capital," shows how productive investment in education can be.[56] According to Professor Youngson, "Of the fact that such an investment would pay there is usually little doubt: the rate of return on elementary schooling is particu-

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54 GOP, PC, Mid Plan Review of the Third Five Year Plan, p.118.

55 Marshall, A., Principles of Economics, (quoted in Youngson, A.J., op. cit., p.71.)

56 Schultz, T.W., "Investment in Human Capital," American Economic Review, 1961, pp.1 -17.

ularly high, possibly exceeding 100 per cent per annum at some times in newly developing countries."[57] History provides many examples from which one can appreciate the value of education. Scotland had a higher literacy rate from a long time and it is believed that when economic progress accelerated, say after 1760, as high as 90 to 95 per cent of the people could read and write. Due to extensive federal aid to education and arrangements like compulsory education, the USA appears to have enjoyed an advantage over England in education in the early 19th century.[58] Primary education was made compulsory in Japan before the turn of the present century which seems to have contributed greatly towards the present development of the country.[59]

Theoretically, the importance of education is well-recognised in Pakistan. The report of the Commission on National Education, as accepted by the Government, has pointed out that education should be viewed as a productive activity and an investment in human resources.[60] An important objective of the Perspective Plan of Pakistan is to achieve universal literacy by 1985.[61]

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57 Youngson, A.J. Overhead Capital, p.88. (For observation on the rate of return on education see also Schultz, T.W., "Capital Formation by Education," Journal of Political Economy, 1960, pp.571-83, in which he observes that the rates of return on the resources allocated to education were larger than the rate of return to investment in physical capital).

58 Youngson, A.J., ibid, p.85.

59 UN, Economic Commission for Asia and the Far East, "The Increasing Role of the Public Sector," Economic Survey of Asia and the Far East 1960, p. 53.

60 GOP, PC, The Second Five Year Plan, p.339.

61 See Chapter 2 on Long Term Perspective Plan in GOP, PC, The Third Five Year Plan, especially p.27. It may be mentioned that the Perspective Plan objective has been revised from the original education target of the National Education Commission to achieve universal primary education by 1970 and eight years of elementary education for all by 1975.

It is doubtful whether or not the importance of education as theoretically accepted in Pakistan, has been actually implemented. "Education in Pakistan," observe Griffin and Glassburner, "is in a very bad state, by everyone's admission, both quantitatively and (perhaps more seriously) qualitatively."[62] It does not seem that for the development of education much can be expected from the private sector. The planners of the Third Plan estimated that of the total allocation of Rs.3,030 million for education and training, the private sector share is only Rs. 300 million, that is less than 10 per cent of the total.[63] The role of the public sector in the development of education in Pakistan cannot therefore be over-emphasised. But looking at the relative share allocated to education and training (Table 5.3) it does not seem that the point has been realized. Further, one also observes that in implementing the Plan allocation, the education and training sector has always been marked by shortcomings, the failure being quite substantial at times.[64] Against the First Plan allocation of Rs. 580 million, only Rs. 380 million was actually invested.[65] Actual investment in the Second Plan was Rs. 913 million, while the Plan allocation was Rs. 955 million.[66] The estimated

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62 Griffin, K.B., and Glassburner, B., "An Evaluation of Pakistan's Third Five Year Plan," Journal of Development Studies, July, 1966, p.457.

63 GOP, PC, The Third Five Year Plan, p.214.

64 The finding further strengthens the argument advanced earlier that the bargaining capacity and administrative influence of different sectors largely determine the distribution of public investment in Pakistan. The lower allocation and implementation of investment fund for the education sector may be due to its lower bargaining strength.

65 GOP, PC, The Third Five Year Plan, p.215. In terms of the concept of the Second and Third Plans, the actual expenditure in the First Plan is estimated at Rs. 230 million.

66 GOP, PC, Final Evaluation of the Second Five Year Plan, p.219.

Table 5.7

Government Expenditure for Education in Selected Countries (In descending order of per capita income)

Country	Public Expenditure as % of GDP	Country	Public Expenditure as % of GDP
USA	4.85	Kenya	4.37
Sweden	5.63	India	2.55
UK	4.91	Pakistan	1.68
Israel	7.09	Sudan	4.60
Japan	5.79	Cambodia	3.73
UAR	5.68		

Source: Computed from data shown in Blot, D. and Debeauvais, M., "Educational Expenditure in Developing Areas: Some Statistical Aspects," in OECD, Financing of Education for Economic Growth, 1966, pp.82-83.

expenditure of public sector investment for education and training in the Third Plan is Rs. 1,328 million against the Plan allocation of Rs. 2,375 million.[67] It may be mentioned that the Third Plan allocation of Rs. 2,375 million in the revised Plan was reduced from Rs. 2,730 million allocated for education and training in the original Plan.[68]

How the public expenditure for education in Pakistan compares with some other countries may be seen from Table 5.7. As a percentage of gross domestic product (GDP), in 1961 government expenditure for education was only 1.68 per cent in Pakistan.

67 GOP, PC, Preliminary Evaluation of the Third Five Year Plan, pp.234-5.

68 GOP, PC, Revised Phasing ... of the Third Five Year Plan, p.15.

This figure is not only very low compared to that for the countries such as Israel, Japan, UAR, Sweden, UK or USA, but also compared to India which is at a comparable stage of development and which has a higher literacy rate than Pakistan.[69] Even countries like the Sudan and Cambodia - which were estimated to have lower per capita income than Pakistan in 1961 - spent a much higher government expenditure for education as percentage of gross domestic product.

The approach of intra-sectoral analysis may be applied to see the allocation among the different sub-sectors within the education and training sector. Table 5.8 has been prepared for this purpose. From the Table one can see that in the First Plan, the relative share of primary education was only 18.6 per cent as against 26.7 per cent for secondary education and 30.1 per cent for higher education. The respective figures in the Second Plan are 15.0 per cent, 17.3 per cent and 24.1 per cent and in the Third Plan 13.4 per cent, 23.4 per cent and 16.6 per cent. In other words, the relative share of primary education is much lower when compared with the share of secondary and higher education together. Such an allocation does not appear efficient considering that in a developing country like Pakistan the rate of return from primary education is very high. According to the planners of the Fourth Plan, "The productivity benefits are likely to be highest from improvements in primary education and it is the cheapest form of education."[70] It would therefore appear that by neglecting

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69 According to the 1961 census of Pakistan, only 15.9 per cent of the population were able to read and write. Cf. Census Commissioner, Population Census of Pakistan 1961, Literacy and Education, Census Bulletin No. 4, p.vii, Statement 1. (As percentage of population of five years and over, the literacy rate is 19.2 per cent.)

70 GOP, PC, The Fourth Five Year Plan, p.139.

Table 5.8

Public Sector Allocation for Education and Training in the First, Second and Third Plans

(Rs. in Million)

	First Plan		Second Plan		Third Plan	
	Absolute (1)	% (2)	Absolute (3)	% (4)	Absolute (5)	% (6)
Primary Education	108	18.6	143	15.0	319	13.4
Secondary Education	155	26.7	165	17.3	557	23.4
Teacher Education	35	6.0	47	4.9	81	3.4
Technical Education	52	9.0	156	16.3	616	26.0
Higher Education (Colleges and Universities)	175*	30.1	230**	24.1	395	16.6
Scholarships	-	-	80	8.4	168	7.1
Miscellaneous	56	9.6	134	14.0	240	10.1
Total	581	100.0	955	100.0	2,376***	100.0

Sources and Notes: Col. (1) - GOP, The First Five Year Plan, p.53. Col. (3) - GOP, Evaluation of the Second Five Year Plan, p.245. Col. (5) - GOP, Revised Phasing ... of the Third Five Year Plan, pp. 24-25. Rest - Computed. *Includes talent scheme and overseas scholarship. ** Includes foreign training. *** Slight difference with Table 5.3 due to rounding off. Other notes - Same as in Table 5.3

primary education and putting importance on secondary and higher education, an attempt has been made to build an 'inverted pyramid' in the education system of Pakistan. The fact was realized by Haq who strongly emphasised the necessity of correcting the situation by reducing the allocation for secondary and higher education to 24 per cent while raising the allocation for primary education to 25 per cent.[71] The suggestion is, of course, based on his personal value judgement and remain subject

71 Haq, M., The Strategy of Economic Planning, p.213. The suggested allocation is shown in the form of a proposed allocation for the Third Plan.

to criticism. It however points to an area requiring drastic action.

An estimate by the Planning Commission shows that in 1967-68, the enrolment rate of children of school age in East Pakistan will rise to only 47 per cent.[72] Compared with the figure of 42.3 per cent quoted for 1960 in the Second Plan, this implies that the Third Plan would probably have to struggle to achieve even the Second Plan target of raising the enrolment rate to 60 per cent.[73] A nation-wide calculation on the basis of the enrolment in primary schools shows that the increase in enrolment over the previous years was 5.83 per cent, 7.36 per cent and 3.63 per cent in 1961-62, 1962-63 and 1965-66, respectively.[74] These figures, however, need to be treated with caution as the drop-out rate is very high, particularly in East Pakistan. It has been estimated that less than 20 per cent of the appropriate age group is in Class V.[75] Assuming that the population growth rate of the primary age-group is much higher than the over-all growth rate, it follows that primary enrolment will have to be substantially increased and the drop-out rate checked in order to achieve the Perspective Plan objective of achieving universal literacy by 1985.

As in most underdeveloped countries, the shortage of skilled manpower has been a persistent problem in Pakistan. According to Professor Huda, "all our Plans have been

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72 GOP, PC, The Mid-Plan Review of the Third Five-Year Plan, p.54.

73 GOP, PC, The Second Five Year Plan, p.341.

74 GOP, CSO, Pakistan Statistical Yearbook 1967, p.429. The absolute figures shown in the source have been computed to find out the percentage increase.

75 GOP, PC, The Third Five Year Plan, p.189. Class V is the final year of primary school.

weak in manpower projection and budgeting, with the result that skill has proved to be a persistent bottleneck in making a switchover to a sophisticated industrial and technological base."[76] As may be seen from Table 5.8, the relative share of technical education was only 9 per cent in the First Plan. Things, however, have improved in the Second and Third Plans which allocated a higher figure of 16.3 per cent and 26.0 per cent, respectively. A start has also been made in manpower planning. Based on the available information in Pakistan and on the material of some other countries at the comparable stages of development, some estimates of requirements and output have been made in the Third Plan, as may be seen from Table 5.9.

It should be mentioned that Table 5.9 shows only additional requirements and does not take into consideration the deficit which was already there before the Third Plan. Assuming that already there was a serious bottleneck of technical hands at the end of the Second Plan, the amount of deficit would be much higher than shown in the Table. Moreover, at the lower level (not shown in the Table), deficits would be very high. For example, after considering requirements and output for engineering alone during the Third Plan, the amount of deficit will be 10,600 at diploma level and 205,000 at certificate and below-certificate level.[77] It is therefore essential that to raise productivity the allocation for technical education will have to be increased. Such a suggestion, however, does not limit us to the given allocation for the education sector. On the contrary, a case is put forward for raising the allocation for education and training.

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76 Huda, M.N., "Planning Experience in Pakistan," Pakistan Development Review, Autumn 1968, p.343.

77 GOP, PC, The Third Five Year Plan, p.221. Computed from the source data on the availability and requirements of the trained personnel for engineering.

Table 5.9

Estimated Additional Requirements and Output of Degree Holders during the Third Plan

	Additional Requirements	Estimated Output	Deficit (-)
Engineers	13,100	6,000	-7,100
Mathematicians and Physical Scientists	4,000*	9.550	N.A.
Accountants, Commerce Degree Holders, etc.	N.A.	16,500	N.A.
Agricultural Degree Holders	5,300	4,700	-600
Physicians and Surgeons	4,200**	4,200	-
Teachers	20,000	N.A.	N.A.

Source and Notes: GOP, The Third Five Year Plan, p.221. *Known requirements.
** Covers all additional requirements in the public sector and a small increase in the private sector.

Unlike technical education, quite a different picture is obtained in the field of general education. Already a serious problem has emerged in the form of educated unemployed. One source estimates that there are over two hundred thousand educated youths who are unemployed in Pakistan.[78] This problem was recognised by the planners who remarked that "the country can ill afford to see secondary school leavers pursuing subjects of study for which there is no economic demand, and thus creating a class of educated unemployed."[79] It is therefore necessary that a thorough revision in the secondary school course be undertaken in order to make the educational system functional so that it is largely geared to the needs of industry, agriculture, commerce and government.

78 Governor Nur Khan's Speech, The Sangbad, 4th July 1969.

79 GOP, PC, The Third Five Year Plan, p.191.

IV Regional Allocation of INFA

In the analysis of the regional allocation of investment for infrastructural facilities (INFA), the earlier approach of taking East Pakistan as one region and West Pakistan as another region will be followed. An important hypothesis is that the relatively higher infrastructural development in West Pakistan has been an important factor for disproportionately higher investment in that region. According to the Planning Commission, "while economic and social infrastructure has been greatly strengthened in most parts of West Pakistan, it continues to be disorganised and weak in East Pakistan."[80] A proper analysis of inter-regional priorities of infrastructural facilities in Pakistan needs to be viewed in the above context, considering the fact that the regional growth strategy (Chapter I) adopted by the country demands a faster rate of growth in East Pakistan than in West Pakistan. In the discussion that follows we have, therefore, preferred to concentrate mainly on East Pakistan which remains the economically backward region, and has about 55 per cent of the total population of the country.

Table 5.10 shows public sector allocation for INFA at regional level. As may be seen from the Table, East Pakistan has always been allocated a lower share than West Pakistan, the difference being higher in the First two Plans. It should, however, be mentioned that the improvement in regional allocation in favour of East Pakistan in the Second and Third Plans over the First Plan is misleading because a large investment programme for the Indus Basin Development was kept outside the Second and Third

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80 GOP, PC, Evaluation of the Second Five Year Plan, p.5. See also Bose, S.R., "Pakistan's Develpment - The Role of Government and Private Enterprise," Pakistan Development Review 1968, p.275, for the argument that directly productive sectors have faced a serious constraint in East Pakistan due to highly inadequate infrastructure.

Table 5.10

Public Sector Allocation for Infrastructure in East and West Pakistan in the First, Second and Third Five Year Plans

	First Plan				Second Plan				Third Plan			
	Absolute		% Distribution		Absolute		% Distribution		Absolute		% Distribution	
	East Pak. (1)	West Pak. (2)	East Pak. (3)	West Pak. (4)	East Pak. (5)	West Pak. (6)	East Pak. (7)	West Pak. (8)	East Pak. (9)	West Pak. (10)	East Pak. (11)	West Pak. (12)
Water and Power	830	1340	38	62	1803	2337	44	56	3660	4387	45	55
Transport and Communications	450	750	37.5	62.5	1039	1686	38	62	3280	3431	49	51
Physical Planning and Housing	270	410	40	60	818	1067	43	57	1364	1113	55	45
Education and Training	240	250	49	51	450	505	47	53	1308	1066	55	45
Health and Medical Services	120	120	50	50	179	191	48	52	631	544	54	46
Social Welfare, Manpower and Employment	20	30	40	60	55	65	46	54	101	75	57	43
Total	1930	2900	40	60	4344	5851	43	57	10344	10616	49	51

Sources and Notes: Absolute figures - First Plan: GOP, The First Five Year Plan, p.19. Second Plan: GOP, Highlights of Pakistan's Second Five Year Plan, p.21. Third Plan: GOP, Revised Phasing ... of the Third Five Year Plan, pp.15 and 32. Percentage Distribution - Computed. First Plan allocation is shown in the source on the basis of estimated net expenditure. The data shown for West Pakistan in the First Plan includes Karachi but excludes Rs. 80 million shown as reserve for less developed areas because the sectoral allocation is not known. The Second Plan allocation shown for Centrally administered areas have been distributed between East and West Pakistan on the basis of 38: 62 regional distribution as found for the Second Plan in Chapter 3. Absolute figures are not at the same price level. Figures have been rounded off.

Plans, as mentioned earlier. Including Indus Basin Development public investment for water and power during the Second Plan period was Rs. 7,251 million.[81] Since the estimated expenditure for this sector is shown as Rs. 4,341 million[82] it means that Rs. 2,910 million was invested for Indus Basin Development in West Pakistan during the Second Plan. The corresponding figure for Indus Basin Development during the Third Plan is Rs. 3,620 million.[83] It follows that West Pakistan's share of public investment for INFA during the Second and Third Plans will appear much higher than that shown in Table 5.10. In fact, including Indus Basin Development, during the Second Plan period actual public investment in West Pakistan is Rs. 9,002 million as against Rs. 4,375 million in East Pakistan.[84] The corresponding figures during the Third Plan period are Rs. 11,173 million in West Pakistan as against Rs. 7,082 million in East Pakistan.[85]

The regional allocation as shown in Table 5.10 may be used to make an interpretation in per capita terms.[86] It is found that in the First Plan, the per capita allocation for INFA in East Pakistan was Rs. 38 as against Rs.68 in West Pakistan. The respective figures for the Second Plan are Rs. 75 and Rs. 120; and for the Third Plan Rs. 156 in East Pakistan and Rs. 192 in West Pakistan. It goes without saying that, including the investment for Indus Basin Development, West Pakistan's share in per capita terms would appear much higher than that for East Pakistan during the Second

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81 GOP, PC, The Fourth Five Year Plan, p.37.

82 GOP, PC, Final Evaluation of the Second Five Year Plan, p.199.

83 Rs. 3,620 million = Rs. 9,965 million - Rs. 6,345 million. Cf. GOP, PC, The Fourth Five Year Plan, p.37 and GOP, PC, Preliminary Evaluation of the Third Five Year Plan, p.269-70.

84 GOP, PC, Final Evaluation of the Second Five Year Plan, pp. 201-2, 208-9, 213-4, 221-2, 227-8, 231-2 and 237-8; and Calculation as shown in the thesis. (West Pakistan 6,092 + 2,910 = 9,002).

85 GOP, PC, Preliminary Evaluation of the Third Five Year Plan, pp. 179-80, and Calculation as shown in the thesis. (West Pakistan 7,553 + 3,620 = 11,173)

86 For the purpose of calculation of per capita measurement, mid-year population in the respective Plan periods will be used.

and Third Plans.

Following the planners' classification of INFA into so called physical and social infrastructures, a disaggregated analysis may be shown. It is found that in all three Plans, public sector allocation for physical infrastructures is higher in East Pakistan than in West Pakistan. As percentage of the total, in the First Plan public investment allocation for physical infrastructures was 38 per cent in East Pakistan compared with 62 per cent in West Pakistan. The corresponding figures in the Second Plan were 42 per cent in East Pakistan and 58 per cent in West Pakistan; and for the Third Plan, 48 per cent and 52 per cent respectively. The improvement in Plan allocation for physical infrastructures in East Pakistan in the Second and Third Plans, however, is deceptive since, as mentioned earlier, the vast Indus Basin Development in West Pakistan has been kept excluded.

In per capita terms, public sector allocation for physical infrastructures in East Pakistan was Rs. 30.2 in the First Plan, while for West Pakistan it was Rs. 58.3. The respective figures in the Second Plan are Rs. 62.9 and Rs. 104.7; and in the Third Plan, Rs. 125.6 and Rs. 161.1.

So far as social infrastructures are concerned, the position of East Pakistan has not been as bad as it is in the case of physical infrastructures. Of the total public sector allocation for social infrastructures in the First Plan, East Pakistan had 49 per cent as against 51 per cent for West Pakistan. The corresponding shares in the Second Plan are 47 per cent for East Pakistan and 53 per cent for West Pakistan. In the Third Plan allocation, East Pakistan's share was raised to 55 per cent and that of West Pakistan reduced to 45 per cent. Measured on a per capita basis, East Pakistan was allocated Rs. 7.4 as against Rs. 9.3 for West Pakistan in the First Plan. The respective figures in the Second Plan are Rs. 11.8 for East Pakistan and Rs. 15.6 for

West Pakistan and in the Third Plan, Rs.30.8 and Rs. 30.4. Thus it appears that the Third Plan allocated a higher per capita government investment of Rs. 0.4 in East Pakistan and, if realized, it will remain as a lone example in the entire history of public investment for INFA in Pakistan up to 1970.

The following sub-sections will consider (a) Water and Power and (b) Transport sectors and discuss these, as mentioned earlier, mainly with reference to East Pakistan.

(a) Water and Power. Inter-regional allocation of public investment for the development of water and power has been highly in favour of West Pakistan. Data available from 1947 to 1955 show that only 9 per cent of the total public investment for water and power was made in East Pakistan, while the remaining 91 per cent was invested in West Pakistan.[87] The First Plan (1955-60) allocated 38 per cent to East Pakistan, but the actual implementation figures show that only 20 per cent was invested in East Pakistan as against 80 per cent in West Pakistan.[88] The respective shares of East and West Pakistan were 44 per cent and 56 per cent in the Second Plan and 45 per cent and 55 per cent in the Third Plan allocation for water and power in the public sector. The improved allocation in favour of East Pakistan in the Second and Third Plans needs to be viewed with caution because, as already mentioned, a large investment in the form of Indus Basin Development has been kept outside the Plan. In fact, including Indus Basin Development the actual investment for water and power development during the Second Plan is found to be Rs. 7,193 million in West Pakistan compared with Rs. 1,489 million in East Pakistan.[89] The corresponding figures for the

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87 Computed from investment figures shown in the First Five Year Plan, op. cit., pp.348,363 and 378. (Rs. 85.2 million in East Pakistan and Rs. 905.2 million in West Pakistan).

88 Computed from figures shown in the Second Five Year Plan, op. cit., p.199. (Rs. 350 million in East Pakistan and Rs. 1,420 million in West Pakistan.)

89 GOP, PC, Final Evaluation of the Second Five Year Plan, pp.201-2; and calculation shown in this thesis. (West Pakistan = 2,852 + 4,341).

Third Plan are Rs. 6,885 million in West Pakistan and Rs.3,080 million in East Pakistan.[90] As a percentage of the total East Pakistan's share appears to be 17 per cent in the Second Plan and 31 per cent in the Third Plan. It is obvious therefore that there has been wide disparity in public sector investment for water and power between the two regions. Considering the fact that water occupied the major share of the sector (Section III) and that it was directed for utilization as an agricultural input, the effect on West Pakistan's agriculture was substantial. The Third Plan lends support to this view when it is remarked that "in West Pakistan the substantial progress in water development during the Second Plan period has been a major factor in the greatly improved agricultural performance." [91]

As to the future role of water development in West Pakistan, it was found earlier that the emphasis on the public sector may be reduced if the expansion of tubewell irrigation in the private sector is found to be adequate. But in East Pakistan the dimension of the problem is different. Not only is flooding the main scourage of the Province but also the programme involved is too big to encourage private investment.[92] According to the planners, "There is a large untapped agricultural potential in East Pakistan. Present cropping intensities on some 20 million cultivated acres are substantially below those which climate and water potential would permit, and yields

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90 GOP, PC, Preliminary Evaluation of the Third Five Year Plan, pp. 274-7; and calculation shown in this thesis. (West Pakistan = 3,265 + 3,620).

91 GOP, PC, The Third Five Year Plan, p.290.

92 Here we find a good example of infrastructure presenting symptoms like low prospect of private return, wide divergence between social and private profitability, and the amount of investment required being beyond the capacity of private investors. It may be mentioned that the problem faced here provided an important argument for the necessity of government investment considered from theoretical point of view in Chapter 2.

are only one-fourth of those found in many other countries. Capitalizing on this potential, however, necessitates the solution of some of the most difficult hydrological and engineering problems of the world." [93] Thus it seems that realizing the huge agricultural potential in East Pakistan will require large public investment.

By putting a case for public investment for water development in East Pakistan, we do not suggest that it should be based on a mere requirement principle devoid of any cost-benefit analysis. On the contrary, we would strongly argue for a systematic study of the contribution from water as well as from other alternatives including fertilizers, improved seeds and so forth. Secondly, the case for public investment in water should not be interpreted to mean replacing private investment. Indeed, private investment in water especially for tubewells should be encouraged. According to the Third Plan, "Experience in East Pakistan demonstrates that distribution of power, together with small village roads, is the main instrument for rural development. In some areas where electric power was recently introduced, this resulted in a significant change in the structure and the level of activity of small industries. Also additional tubewells call for rapid extension of distribution lines to areas underlain by sweet water." [94]

The hypothesis implicit in the above quotation puts a case not only for the development of power but also for a development which may be called rural-based. This strategy is a bold one. Until now industrial development in Pakistan has been associated mainly with the development of large-scale manufacturing in which each enter-

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93 GOP, PC, The Third Five Year Plan, p.296. The very fact that the World Bank estimates to control flood in East Pakistan at a cost of only £500 (The Economist, November 21, 1970, p.11) implies that the problem is not something extraordinarily difficult nor is the cost involved exceptionally high if compared with the Indus Basin Development.

94 GOP, PC, The Third Five Year Plan, p.308.

prise employs hundreds and thousands of labourers. In the context of East Pakistan, this may not be the only course of development.[95] Greece and Colombia may be cited as examples where small -scale manufacturing played a significant role in the industrial development. Professor Youngson found that in Greece the typical industrial establishment has remained small. Of 109,500 manufacturing establishments listed in 1958 census, 5,800 employed more than ten workers each and only 829 employed more than fifty workers each.[96] Similarly, in Colombia the average number of persons per enterprise was only 6.[97] Another good example is Japan where small manufacturing has contributed and is still contributing a great deal in the economic development of the country. As many as 90 per cent of entrepreneurs in Japan start their business with fewer than 20 workers.[98]

There are arguments (although these are not substantiated by detailed examination) against labour-intensive small enterprises. Firstly, it is argued that the development of small enterprises will give rise to inefficient utilization of scarce capital. But the argument ignores that (a) the 'inefficiency in overhead capital embodied in transport and communications equipment' and other market imperfections raise the cost of production and do not 'permit either specialization or expansion byfirms'* and (b) the availability of surplus labour the employment of which would involve zero or negligible social cost. The

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95 For a case of small scale enterprise in the context of underdeveloped countries see Bauer, P.T., and Yamey, B.S., The Economics of Underdeveloped Countries, James Nisbet & Co., Ltd., and Cambridge University Press, London, 1957, pp. 252-54.

96 Youngson, A.J., Overhead Capital, p.151.

97 Ibid, p.151.

98 Watanabe, S., "Entrepreneurs and Small Enterprises in Japanese Manufacturing," International Labour Review, December 1970, pp. 533-36.

* Quotes are from Youngson, A.J., ibid, p.153.

situation therefore demands that one should calculate the marginal cost of inefficiency of capital due to its under-utilization and the marginal value added due to the employment of the surplus labour. According to Professor Lewis, "the best way of using capital in these circumstances is to choose labour-intensive rather than capital-intensive techniques."[99] It is true that an increase in productivity per labourer would not be as high as it would have been through large-scale production, but the increase in total income would be higher as relatively much higher number of people would be employed.

Secondly, it has been argued that labour-intensive small enterprises would give rise to a smaller savings-ratio. Galenson and Leibenstein have put a strong theoretical case in favour of it.[100] How far the argument can stand on empirical observation is highly doubtful. In his empirical study based on a survey of industries in Karachi, Ranis has found that the Galenson-Leibenstein hypothesis in so far as it advocates a capital-intensive technique does not hold good.[101] Further, if one considers that saving is a planning device and does not depend upon the wishes of the savers, the Galenson-Leibenstein argument no longer holds. As has been observed by an expert planner: "Saving is normally a planning device. Once a certain rate of saving has been decided upon (for instance, a 25 per cent marginal rate of saving in Pakistan's revised Second Plan), the task before the planners is to suggest concrete steps to capture these savings, both through the capitalist sector and the fiscal machinery of the Government."[102]

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99 Lewis, W.A., Development Planning, p.224.

100 Galenson, W., and Leibenstein, H., "Investment Criteria, Productivity and Economic Development," op. cit., pp.343-70.

101 Ranis, G., "Investment Criteria, Productivity and Economic Development: An Empirical Comment," Quarterly Journal of Economics 1962, pp.298-30.

102 Haq, M., The Strategy of Economic Planning, p.49.

(b) Transport. Following the hypothesis that top priority should be given to the development of transport facilities, we shall deal here with the transport sector with reference to East Pakistan. Inter-regional allocation of public investment in transport has always been in favour of West Pakistan. Of the total public investment for transport during the Second Plan, East Pakistan had a share of only 40 per cent as against 60 per cent for West Pakistan.[103] It is feared that in previous periods the share of East Pakistan was even smaller. The situation occurred in spite of the remark of the First Plan that "Transport is a major problem in East Pakistan and its inadequacy leads to local shortages and holds up development."[104] Unfortunately, even at the end of the Second Plan, the situation did not improve, as revealed by the Planning Commission's observation that "Transport continues to be a bottleneck, particularly in East Pakistan, where it is one of the major factors inhibiting balanced economic development."[105] It therefore appears that the development of transport, together with water and power, will have to play a vital role in the development of East Pakistan.

It need hardly be mentioned that any development of transport in East Pakistan must be based on the geographical features of the region. The overwhelming importance of inland waterways in the transport system of East Pakistan was mentioned earlier. It forms the backbone of the transport system and handles about three-quarters of the total internal traffic of the Province.[106] According to the Third Plan, "given suitable navigational and terminal facilities and organised on sound, progressive lines, inland water transport can become the most economical and effective mode of

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103 GOP, PC, Final Evaluation of the Second Five Year Plan, pp.208-9. Percentages shown here have been computed from the figures given for investment in transport in East Pakistan and West Pakistan.

104 GOP, National Planning Board, The First Five Year Plan, p.48.

105 GOP, PC, Evaluation of the Second Five Year Plan, p.5.

106 GOP, PC, The Second Five Year Plan, p.277.

transport in the Province, which abounds in natural waterways."[107] Thus it may reasonably be thought that a cost-benefit study determining intra-sectoral allocation for transport in East Pakistan will substantiate the case for achieving a breakthrough in inland water transport system. But it was found earlier at the all-Pakistan level that public sector allocation for inland water transport has been very small (Section III).

Table 5.II gives an idea of the public sector investment among different sub-sectors within the transport sector in East Pakistan. Data of actual investment as available for the Second and Third Plans have been used to prepare the Table. Looking at the relative shares of different sub-sectors it follows that inland water transport - which has been termed 'the backbone of the transport system' in East Pakistan, the 'most economical and effective mode of transport of the Province' - has not yet received proper allocation.

One important geographical feature of East Pakistan is that the Province is divided into two major parts - eastern and western - by the rivers Brahmaputra and Jamuna. There is no direct road or rail link between the two parts. Table 5.II shows that in the Second Plan, railways and roads together comprised a share as high as 84 per cent of the total public investment for transport in East Pakistan. The corresponding figure during the Third Plan is 81 per cent. One may thus reasonably expect that if roads and railways were given such a big share, a bridge or an alternative ferry service connecting the two parts ought to have been considered. From the Plan documents it is not known whether the planners considered the project.[108] On the contrary, in order to achieve

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107 GOP, PC, The Third Five Year Plan, p.332.

108 A slight hint however, is found in the Third Plan which proposes to undertake feasibility study of bridging the major rivers. Cf. The Third Five Year Plan, op. cit. p.328.

Table 5.11

Public Investment for Transport in East Pakistan in the Second and Third Plans

(Rs. in Million)

	Second Plan		Third Plan	
	Absolute (1)	% (2)	Absolute (3)	% (4)
Railways	438.80	45	528.00	42
Roads*	377.50	39	487.00**	39
Inland Water-ways ***	132.00	14	142.00	11
Ports and Shipping****	16.50	2	92.69	7
Tourism	4.16	Neg.	9.95	1
Transport Survey	-	-	2.50	Neg.
Total	968.96	100	1,262.14	100

Sources and Notes: Col. (1) - GOP, Final Evaluation of the Second Five Year Plan, p.208. Col. (3) - GOP, Preliminary Evaluation of the Third Five Year Plan, p.287. * Includes road transport. ** Includes investment for Kamafuli Bridge. *** Includes East Pakistan Shipping Corporation. **** Includes expenditure for Mercantile Marine Academy.

speedy transport they recommended connecting the two parts by air transport. But it was mentioned earlier that civil aviation is much less economical than other alternatives. It may be pointed out that the helicopter services introduced in 1964 were abandoned two years later.[109] Probably the scheme proved to be a very loss-making concern. Further, considering the enormous benefits which will arise due to the linking of the two major parts of the Province, it is expected that even if discounted at a higher rate, the NPV of the project will be positive. This however, warrants a careful study.[110]

109 The Financial Times, London 23rd September, 1970.

110 The Chinese experts are known to have made a feasibility study of a Bridge over the Brahamaputra river. Cf. The Times, London, 16th November 1970.

Chapter 6

DIRECT GOVERNMENT UNDERTAKING

The part of government development expenditure (Gd) directed towards infrastructural development was discussed in the last Chapter. Considered in terms of our classification of Gd into SOC and DPA, we are now left with the second term of the right hand side of the equation. It was found earlier that in Pakistan three-fifths of total development expenditure and about three-quarters or more of public sector investment are directed towards the development of infrastructural facilities (Table 5.2). This means that approximately one-quarter of public sector investment is left for directly productive activities such as agriculture, manufacturing and mining. Period-wise distribution of public investment for directly productive activities was found as follows: 28.8 per cent in the First Plan, 19.9 per cent in the Second Plan and 22.5 per cent in the Third Plan.[1]

It should be mentioned that the entire public sector allocation for directly productive activities is not for what may be called public enterprises involving direct government undertaking (DGU).[2]

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1 The Second and Third Plan respective figures of 19.9 and 22.5 per cent exclude 3 percent and 4.5 per cent allocated for Works Programme which, as mentioned earlier, will mainly provide infrastructural facilities such as transport, irrigation, etc.

2 The term DGU may, however, be extended to include the purchase of shares by the government in the public companies purely sponsored by private enterprises. In the context of Pakistan, it appears that the government Corporations have taken the initiative to form public companies and invite private capital. There are, of course, exceptions, e.g. Pakistan Oil Fields Ltd., Pakistan Petroleum Ltd., Esso Standard Eastern Inc. etc. which are in private sector but the Government also holds some shares in them.

Almost the entire allocation for agriculture and a porition of the allocation for manufacturing and mining is spent in the form which we have called direct government assistance (DGA). From the Five-Year Plans of Pakistan, it is found that the public sector allocations for directly productive activities are broadly grouped under agriculture, manufacturing and mining. Some idea of the distribution of allocation of government development expenditure in the First, Second and Third Five-Year Plans for direct government undertaking and direct government assistance may be given in Table 6.1. In preparing the Table it has been assumed that (a) the entire public sector allocation for (i) large and small scale manufacturing, excluding industrial estates, productivity schemes, scientific and industrial research, etc., and (ii) mining, excluding geographical survey, is in the form of direct government undertaking; and (b) the entire public sector allocation for agriculture, excluding forestry, is in the form of direct government assistance.

Table 6.1

Public Sector Allocation for DGU and DGA

	Rs. in Million			% Distribution	
	DGU (1)	DGA (2)	Total (3)	DGU (4)	DGA (5)
First Plan	1622	1485	3107	52	48
Second Plan	1939	2486	4425	44	56
Third Plan	3759	4461	8220	46	54

Sources and Notes: Computed from figures shown in (a) GOP, The First Five-Year Plan (pp. 280, 394, 435 and 479): (b) GOP, Evaluation of the Second Five-Year Plan (pp. 211-12, 218 and 222); and (c) GOP, Revised Phasing ..... of the Third Five-Year Plan (pp. 17-18, and 20-21). Figures have been rounded off. Inter-period comparison of investment figures is not possible due to differences in prices.

The present Chapter will enlarge on the discussion of direct government undertaking (DGU). At the outset it should be mentioned that in our discussion we shall concentrate mainly on government investment in large-scale manufacturing and for that matter on the role of the PIDC (Pakistan Industrial Development Corporation). This is partly because government investment in other fields in the way we have understood direct government undertaking was much lower, and partly because the PIDC was the main organ of direct government undertaking in Pakistan. But our concentration on large-scale manufacturing and the PIDC should not be interpreted as neglect of other fields and bodies. On the contrary, there is a case for an increasing emphasis on investment allocation for direct undertaking in mining,[3] the importance of which as a supplier of raw materials is bound to increase as development proceeds.[4] Indeed, being aware of its importance, the Government has already entrusted the PIDC with the responsibility to develop mining. Secondly, there is reason to believe that, with the expansion of activities, division of work through the specialised bodies may prove helpful. Already, separate bodies, such as the Forest Industries Development Corporation and the Pakistan Steel Mills Corporation have been established by the Government.

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3 We assume that adequate private investment is not forthcoming for the development of mining.

4 Foreign exchange constraint is the main consideration. Mining may also prove an important source of foreign exchange earning. For example, it is estimated that the exploration of the high quality coal deposit which has been discovered in Rajshahi-Bogra, East Pakistan, can not only meet the entire domestic demand but also be a foreign exchange earner.

The Chapter is arranged in the following manner. Section I provides a preliminary survey of how investment for direct government undertaking takes place. Brief mention will be made of the bodies responsible for direct government undertaking, procedure and fields of investment. In Sections II and III, the need for and the allocation of direct government undertaking respectively will be analysed; in both these Sections, discussion will be mainly from sectoral and regional viewpoints. The question of public sector efficiency in the context of direct government undertaking in Pakistan will be discussed in Section IV.

I Introduction

Government investment in Pakistan is not a single agency function. Different special agencies and government ministries take part in the implementation of the programme. Since independence in 1947, a number of special Corporations have been established to carry out investment for direct government undertaking. The earliest and most important of these has been the PIDC.[5] It was established in April 1950 with an authorised capital of Rs. 10 million. It acquired operational status in January 1952. The main purpose of the Corporation is to set up industrial ventures [6] which private industrialists are either unable or unwilling to undertake.

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5 In July, 1962, the Corporation was bifurcated into East Pakistan Industrial Development Corporation (EPIDC) and West Pakistan Industrial Development Corporation (WPIDC). Unless otherwise mentioned the name PIDC will be used to include both EPIDC and WPIDC.

6 Since the early 1960's the PIDC has also been entrusted with the responsibility of mining development.

Its main objective is to supplement, rather than supplant, private enterprise. Besides PIDC, some other Corporations like the East Pakistan Forest Industries Development Corporation (1959),[7] West Pakistan Small Industrial Corporation (1960), East Pakistan Small Industries Corporation (1957) and the Pakistan Steel Mills Corporation (1968) and Government departments such as fisheries and forestry, have also played a part in State participation in directly productive activities. It should be mentioned that the role of direct government undertaking played by these bodies is very small when compared to that of PIDC.[8] With the exception of the Pakistan Steel Mills Corporation and the East Pakistan Forest Industries Development Corporation, the role of these bodies is mainly to concentrate on providing direct assistance to the private sector - a topic which will be the subject of discussion in the next Chapter.

The Corporations hold semi-autonomous status and do not work in the watertight compartments in the generally understood sense of governmental organisations. They have freedom of action in matters of administration and execution of schemes. They are permitted to associate themselves with the private sector in the financing and management of projects.

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7 For the dates of establishment and other information about Corporations see Braibanti, R., Research on the Bureaucracy of Pakistan, Duke University Press, Durham, N.C. 1966, Table 4, facing pp.236-37.

8 The Pakistan Steel Mills Corporation Ltd., however, is expected to perform a very big role. It will co-ordinate all activity connected with the manufacture of iron and steel in Pakistan as well as implement Steel Mill projects at Karachi and Kalabagh which have an annual capacity of about 2 million tons of steel and are estimated to cost Rs. 2767 million including foreign exchange expenditure of Rs. 1650 million.

They are authorised to sponsor public companies with the development of which they are entrusted, and in those companies private capital is always invited. They may underwrite the whole or any portion of the share capital of those companies or subscribe, on behalf of the government, any portion of the issue capital which is not subscribed by the public .

Investment funds of the Corporations are derived from four main sources: (I) the government fundin the form of annual budget grants; (2) the amount of private capital that they can invite; (3) self-generation of funds and foreign loans; and (4) funds invested from their own resources.[9]

Direct government undertakings in Pakistan comprise a wide field. For example, the WPIDC projects produce a large number of goods such as cement, fertilizers, chemicals, pharmaceutical products, dyes, minerals, textiles,

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9 Data available for the fixed capital expenditure at cost in WPIDC projects and managed companies may give an idea of the sources of finance, as shown below.

(On 30th June, 1969: Rs. in Million)

	Absolute (I)	% (2)
Total government funds (Provincial and Central)	869	47
Total private investment	233	12
Funds invested from own sources	11	1
Self-generation of funds and foreign exchange loans	756	40
Total	1,869	100

Source: Col. (I) - Ahmad, S., "Accountancy and Self Financing in WPIDC," Forward, September 1970, p.10. Col. (2) - Computed.

products of shipbuilding and heavy engineering, natural gas, sugar, etc.[10] So far as the production of steel and iron in West Pakistan is concerned, the responsibility lies with the Pakistan Steel Mills Corporation Ltd.[11] EPIDC projects cover the following major fields: jute, sugar, paper and newsprint, ship-yard and drydock, pharmaceutical goods, chemicals, fertilizers, polythene bag manufacturing, iron and steel, cement, hardboard, groundnut oil, oil refining, etc.[12] The establishments of the East Pakistan Forest Industries Development Corporation (EPFIDC) comprise wood seasoning, wood treating and cabinet manufacturing, tanning extraction, etc.[13] Although there is no counterpart of EPFIDC in West Pakistan, it seems that the work is done by WPIDC and the Forest Department of the Government of West Pakistan.[14] Some small-scale industrial projects have been established by the Small Industries Corporation. For example, the East Pakistan Small Industries Corporation has set up pilot projects on coir and copra, agricultural implements and glazed pottery, and metal production units on cheese and butter, and cigars and cherrot.[15]

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10 WPIDC: An Introduction (Publication date not mentioned. Probably 1969)

11 Production of iron and steel in East Pakistan is still in the hands of EPIDC.

12 EPIDC Progress Report 1967-68, p.10

13 GOP, PC, Evaluation of the Second Five-Year Plan, p.83

14 For example, a project for the establishment of forest industries complex in Dir State, involving an expenditure of Rs. 26 million, was sanctioned by the Government and steps were being taken to implement it as early as possible. Cf. GOP, Economic Adviser, Pakistan Economic Survey 1968-69 p. 33

15 Pakistan Economic Survey 1968-69, p.54

An official procedure of government investment in Pakistan is the approval of the National Economic Council (NEC), the supreme body. The NEC has as Chairman the President of the country and consists of the Governors of the Provinces, Finance Minister, the Deputy Chairman of the Planning Commission, the Chairmen of EPIDC, WPIDC, the East Pakistan Water and Power Development Authority and the West Pakistan Water and Power Development Authority. All public projects need to be submitted to the NEC for approval. The Executive Committee of the NEC sits regularly, reviews projects and may approve or reject any project. [16]

II Need for DGU

Following the strategy of development as adopted by Pakistan (Chapter I), the cardinal principle is to provide incentives to the private sector. It was mainly in this context that the role of government development expenditure for infrastructural development was viewed in the preceding Chapter. The role of government development expenditure in the form of direct assistance by providing incentives to the private sector will be the concern of the next Chapter. In the present Chapter we are mainly interested in examining the role

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16 Seth, K.L., The Pattern of Economic Development in Pakistan, Sterling Publishers (Private) Ltd., Delhi, 1967, pp. 49-50. See also the 1962 Constitution of Pakistan, op. cit., Karachi 1964, p. 81.

of direct government undertaking (DGU) in order to achieve the development objectives of the economy. It should be mentioned that the development Plans of Pakistan do not argue for such a relatively large share of DGU as one finds in the planning documents of India. Thus there is a clear-cut difference between the planning objectives of Pakistan and India, the latter being based on the principle of development along socialistic line through gradual increase in public sector share. Table 6.2 gives a comparison of the shares of public and private sectors in industries in these two countries.

The Table shows that in India the relative share of public investment in industries has gradually increased. In the First Plan, the shares of public and private sectors were 19 per cent and 81 per cent, respectively.

Table 6.2

Public and Private Investment in Industries in India and Pakistan

(In Percentages)

	India			Pakistan		
	1st Plan 1951-56 (1)	2nd Plan 1956-61 (2)	3rd Plan 1961-66 (3)	1st Plan 1955-60 (4)	2nd Plan 1960-65 (5)	3rd Plan 1965-70 (6)
Public Sector	19	52	59	54	29	35
Private Sector	81	48	41	46	71	65
Total	100	100	100	100	100	100

Sources and Notes: Computed from data shown in (a) Government of India, Fourth Five-Year Plan: Draft Outline: Programmes and Targets. Delhi, September 1966, p.36: (b) GOP, The First Five-Year Plan, pp.429-34; (c) GOP, The Second Five-Year Plan, p. 12. The Third Plan figures for Pakistan are given for original Plan in GOP, Revised Phasing ..... of the Third Five-Year Plan, p.10. Indian figures for the First and Second Plans seem for actual investment, while the Third Plan figures refer to anticipated investment. Pakistani figures refer to original Plan allocations.

In the Second Plan, the share of the public sector increased to 52 per cent while that of private sector decreased to 48 per cent. In the Third Plan, public and private sectors were allocated 59 per cent and 41 per cent, respectively. Thus, there has been a steady increase of public-sector share from 19per cent in the First Plan to 59 per cent in the Third Plan, while there has been a corresponding decrease of private-sector share from 81 per cent in the First Plan to 41 per cent in the Third Plan of India.

No such trend, however, appears from the data shown for Pakistan. In the First Plan of Pakistan, the share for the public sector was 54 per cent as against 46 per cent for the private sector. In the Second Plan, the shares of public and private sectors were 29 per cent and 71 per cent, respectively. In the Third Plan, the corresponding figures are 35 per cent and 65 per cent.[17] Thus, with no doctrinaire assumption like India's, the figures for Pakistan may be interpreted as meaning that the role of direct government undertaking in Pakistan is based mainly on the relative contributing capacity of the public and private sectors in the total investment.[18] While efforts are made to encourage

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17 In the revised Third Five-Year Plan, the original public sector allocation of Rs. 4,470 million has been reduced by 19.5 per cent to Rs. 3,513 million while the allocation of the private sector has been increased thus causing a shift of the original public: private allocation of 35: 65 in favour of the latter. Cf. GOP, PC, Revised Phasing ... of the Third Five-Year Plan, pp. 10 and 20

18 "No doctrinaire assumptions underlie the Plan,and neither an exclusively capitalist nor an exclusively socialist economy is postulated. The approach throughout is pragmatic. The fundamental problem is now, under severely limiting conditions, to find some way towards the liberation of the people from the crushing burden of poverty." Preface by G. Ahmed, Chairman, Planning Commission, in Second Five-Year Plan, op. cit., p. xiii.

private investment, government undertaking is not uncommon. The main intention of the public sector, however, is to undertake industrial investment "only in those cases where private capital is not forthcoming, where a joint venture cannot be organised or where considerations of national interest dictate public investment." [19]

Absence of exact data for private investment in industries in the early years of development makes any proper analysis of the role of DGU in Pakistan difficult. However, a good approximation may be got from an estimate given in one source which shows that in 1949-50 total private investment was Rs. 515 million, the share in manufacturing being Rs. 202 million. [20] As a percentage of GNP, the figures appear as 2.58 per cent and 1.01 per cent, respectively. Assuming a conventional capital-output ratio of 3:1 and a population growth rate of 2.5 per cent, the private investment figures indicate a negative growth in per capita income. Many factors were responsible for the low rate of private investment. Firstly, the industrial base of the economy was extremely low. In 1949-50, agriculture contributed 60 per cent of GNP, while the share of manufacturing was 6 per cent in which large-scale manufacturing contributed only 1.4 per cent (Background Table 5). Since agriculture was run mainly on a subsistence basis its contribution towards savings was negligible. Secondly, in the absence of adequate infrastructural

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19 GOP, PC, The Third Five-Year Plan, p.450

20 Papanek, G.F., Pakistan's Development: Social Goals and Private Incentives, p.296. The total private investment figure may be compared with the figure of Rs. 520 million shown in Background Table 20.

facilities the cost of production was probably too high to attract private investment. Thirdly, the country did not have the capitalist class which in terms of organisation and finance was able to undertake large-scale industrial projects. Fourthly, as mentioned earlier, direct controls also worked as a deterrent towards the growth of private investment. Finally, the real time-discount with which Pakistani investors were operating was probably too high and unless the rate of return was higher than this, they were naturally unwilling to undertake investment.[21]

The PIDC was established in 1950 with the main objective of helping industrial development and raising the investment ratio by supplementing private investment. The Corporation had some definite advantages in initiating investment. Firstly, as it received funds from annual budgetary grants, the Corporation did not need to worry much about making profits and could operate at a much lower time-discount than in the case of private enterprise. Secondly, it did not have an obligation of providing jobs to family members, nor had it any difficulty in hiring a complete management staff from abroad for some of its projects, an idea which 'seemed strange and dangerous' to private enterprise. * Thirdly, at a time when bureaucratic controls worked as a deterrent towards the growth of private investment, the Corporation had some advantage since, as a powerful government organisation, it could approach other government bodies 'as an equal, rather than as a supplicant.' *

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21 According to Papanek, the real time discount with which Pakistani investors were operating might be 50 per cent per year. ibid., p.93

* Quotes are from Papanek, G.F., ibid., pp.92 and 94.

Fourthly, due to its financial and orginsational superiority the Corporation was in a much better position to initiate a number of investments in order to internalize the externalities and thereby reduce costs through cross-subsidization.[22]

The superior position of the PIDC over private enterprise put it at an advantage to play a significant role in undertaking investment, a role which it did in fact play. As one expert on the Pakistan economy remarked: "in the 1950's the PIDC fulfilled an extremely useful function in supplementing private enterprise. The PIDC gave to one, able entrepreneur command over the resources required for investments involving too much capital, or too complex a technology, or too much risk, for private investors."[23] Within three years of its operation, PIDC enterprises covered jute textiles, heavy engineering, shipbuilding, fertilizers, cement, paper, sugar, cotton textiles, natural gas, chemicals, pharmaceuticals, etc. By 1959 - that is at the end of seven years of its operation - PIDC investment comprised about one-sixth of the total industrial assets of Pakistan.[24]

The significant role played by the PIDC probably encouraged the establishment of the other Corporations mentioned in Section I. Although it is difficult to quantify the exact contribution of direct government undertaking in encouraging the growth of private enterprise in Pakistan, one can probably

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22 For a good discussion of internalization of externalities arising from institutional circumstances, see Nove, A., "Internal Economies," Economic Journal, December 1969, pp. 847-60.

23 Papanek, G.F., ibid., p. 104

24 Ibid., p. 96.

safely argue that it had a significant impact. Table 6.3 helps to give us an idea of the growth of private investment as a percentage of GNP. It is found that there has been a steady growth of

Table 6.3

Growth of Private Investment: As % of GNP

1949-50	2.6
1951-52	3.1
1954-55	3.5
1959-60	3.6
1963-64	6.4
1966-67	6.4
1967-68	7.6

Source: Background Table 21.

private investment. As a percentage of GNP, private investment increased from 2.6 per cent in 1949-50 to 7.6 per cent in 1967-68. The following may be advanced as contributing factors towards the growth of private investment.[25] Following the DGU-leadership private investment was forthcoming in many industries in which previously there was marked reluctance in the private sector. Secondly, DGU helped in increasing technical and organizational knowledge. This should be considered a great benefit for a country

25 It should be mentioned that the Table shows the growth of private investment as a whole and not that part which has gone for manufacturing only. However, considering the structural change (Background Table 5), one may reasonably argue that the growth of private investment in Pakistan is mainly due to the growth in manufacturing.

short of trained personnel. Thirdly, following its Charter, the PIDC invited capital from private enterprise. For example, in East Pakistan the shares of a jute mill were sold to 80,240 primary school teachers and of a sugar mill to growers of sugar cane.[26] Finally, the disinvestment policy also contributed towards the growth of private investment.[27] The big Karnafuli paper mill was sold to private enterprise (to Messrs. Dawood) in 1958.[28] As late as 1967-68, the EPIDC disinvested two mills, namely Muslin Cotton Mills Ltd., Kaliganj and Rajshahi Sugar Mills, Harian.[29]

Thus it seems that the contribution of direct government undertaking should have been substantial in the economic development of Pakistan. It is in this context that we would like to list two major areas where direct government undertaking as an instrument of government expenditure policy may play a major role:

(a) To help in maintaining a balance in inter-industrial growth; and

(b) To help in achieving the regional growth objective.

Both these aspects will be taken up for further discussion in the next Section, where they will be discussed from the point of view of allocation. It is true

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26 EPIDC Progress Report 1967-68, p.20

27 Here we assume that increase in private investment took place without any corresponding decrease elsewhere. Viewed from Pakistan's experience the assumption does not seem absurd.

28 Hirschman, A.O., Development Projects Observed, The Brookings Institute, Washington, 1967, p.52

29 EPIDC Progress Report 1967-68, p.21. Recently, the East Pakistan Government has set up a four-member Provincial Disinvestment Board to carry out a comprehensive examination of commercial projects in the public sector for disinvestment. Cf. State Bank of Pakistan Bulletin, November 1969, p. xxv.

that sometimes it is difficult to see them quite separately in two Sections. So, in order to avoid unnecessary repetition, the discussion will be kept brief.

(a) Balance of Inter-industrial growth. An important objective of economic planning in Pakistan is to achieve a balanced growth in all fields. So far as the intra-manufacturing side is concerned, such a balance has not been maintained (Chapter 4). The domestic production of investment and related goods has failed to keep pace with the increase in domestic demand. The gap in the production of and demand for these goods has increased from Rs. 747 million in 1954-55 to Rs. 2808 million in 1963-64. [30] This is probably the main reason why the planners have emphasised the necessity "to develop basic industries for the manufacture of producer goods so that the requirements of further industrialization can be met mainly from the country's own capacity." [31] Considered from a theoretical point of view, this gap may not be a problem, provided that there is a corresponding increase in exports or a corresponding decrease in imports of other goods, keeping pace with the export performance of the economy. It is therefore necessary to examine the question of industrial balance from two main points: firstly, total imports and exports of the country; and secondly, imports on the basis of commodity groupings.

Table 6.4 shows total exports and imports. From the Table it is found that since 1956-57 imports have remained higher than exports, the amount of deficit

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30 The original figures of Rs.566 million in 1954-55 and Rs.2,951 million in 1963-64 as calculated from the Lewis and Soligo study, op. cit., 122-27, have been converted to 1959-60 factor cost by using the National Income Deflator.

31 GOP, PC, The Third Five-Year Plan, p. 39

Table 6.4

Imports and Exports of Pakistan

(Rs. in Crore)

	Imports (1)	Exports (2)	Balance (3)
1949-50	129	120	-9
1952-53	139	151	+12
1955-56	132	178	+46
1956-57	233	161	-72
1960-61	318	180	-138
1964-65	537	241	-296
1968-69	487	330	-157

Source: Background Table 13.

being at times almost equal to or higher than the amount of exports. A shortage of foreign exchange has thus remained a characteristic feature of the economy. Foreign assistance has helped to solve the problem in the short term. But with the sudden drop in the prospective availability of foreign aid and the objective of the economy to eliminate dependence on foreign aid by 1985, it has become necessary to look for a balance in foreign exchange earning and expenditure. Shortage of foreign exchange has already caused a serious constraint in development efforts of the economy.[32] It should be mentioned that this has happened at a time when the export performance of the economy has been on the whole satisfactory. During the Second Plan (1960-65), export earnings increased at the rate of 7 per cent per annum as against 3 per cent forecast in the Plan.[33] In the first two years of the Third Plan

32 GOP, PC, The Fourth Five-Year Plan, pp. 8-9

33 GOP, PC, Evaluation of the Second Five-Year Plan, See Forward

(1965-67), the increase has been at a rate of 9 per cent per annum.[34] It follows that unless foreign exchange earnings can be sufficiently increased to meet the bill for required imports, the alternative course left is to meet the demand through domestic production if the rate of growth is to be maintained. As has been observed by Professor Bhagwati in the context of under-developed countries: "It would undoubtedly be an expensive method of growth. The country may not possess adequate raw materials. The necessary skills may not be readily available. But this merely means that an increased rate of investment and growth in this country is correspondingly more difficult and exacting. It does not mean that an easier solution is available - for it is not, given the foreign exchange bottleneck."[35]

Table 6.5 shows absolute and relative figures for the import of capital

Table 6.5
Import of Capital Goods, Industrial Raw Materials and Consumer Goods

(Rs. in Million: Current Prices)

	Capital Goods		Industrial Raw Materials		Consumer Goods	
	Absolute (1)	% (2)	Absolute (3)	% (4)	Absolute (5)	% (6)
1960-61	1214	38	1043	33	931	29
1961-62	1467	47	954	31	688	22
1962-63	1920	51	1133	29	766	20
1963-64	2084	47	1390	31	956	22
1964-65	2689	50	1497	28	1188	22
1965-66	2235	53	1225	29	748	18
1966-67	2346	45	1661	32	1185	23
1967 -68	2213	48	1502	32	940	20

Source: Pakistan Economic Survey 1968-69, p.98 (Statistical Section)

34 GOP, PC, The Mid-Plan Review of the Third Five Year Plan, p.25.

35 Bhagwati, J., The Economics of Underdeveloped Countries, p.168.

goods, industrial raw materials and consumer goods from 1960-61 to 1967-68. From the Table it appears that while the share of consumer goods is around one-fifth and that of industrial raw-materials one-third, the import of capital goods alone occupies a share of about one-half. The absolute figures in the Table are in current prices and a direct comparison is not possible. However, using the National Income Deflator it is found that the import of capital goods has increased from Rs. 1,155 million in 1960-61 to Rs. 1,743 million in 1967-68, while that of consumer goods has declined from Rs. 885 million to Rs. 741 million in the corresponding period. It thus seems that the possibility of a further import substitution may not be very bright in the consumer goods sector and, considering the relatively small volume, a further cut in this category will not make a significant contribution. Consequently, the choice of import substitution falls mainly on the capital goods industry, partly because it alone occupies almost 50 per cent of the total import bill, and partly because with further economic development the demand for capital goods will increase greatly. It is, therefore, easy to understand why the planners have put emphasis on the growth of capital goods industries in Pakistan. This emphasis on capital goods industries should not be interpreted as implying a neglect of the contribution of exports. An increasing role of foreign exchange earning through exports will be necessary in any case if the rate of investment is to be raised. Emphasis on the development of capital goods industries is an attempt to maintain a balance in the inter-industrial sector as well as in the foreign exchange part of the growth model. It need hardly be mentioned that in order to have a viable capital goods sector many factors such as the size of market, level of technical

development, and so forth will need serious consideration.

It was shown earlier that the tariff policy in Pakistan provided incentives for the domestic production of consumer goods while capital goods industries were relatively discriminated against (Chapter 4). It thus follows that in order to encourage private investment in the capital goods industry an important alternative is to bring the prices of the imported investment goods more in line with the prices of other goods. For this, substantial changes in the taxation policy will be necessary since the private rate of return from capital goods industries will have to be brought to a level comparable with the rate of return from other industries, if investment in the former is to be encouraged. Pending such a measure, a relatively bigger role of direct government undertaking will be necessary for the growth of capital goods industries as required.[36] Further, government undertaking may also be necessary even if taxation policy is rationalized. Such a necessity arises from three considerations. First, the total amount of investment and the organizational and technological requirement for capital goods industries are relatively higher and may be well beyond the capacity of the private sector. Second, divergence between social and private profitability may be so much as not to encourage private investment but may well justify government investment. Third, in some industries, one unit for the whole

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36 The assumption here is that the social rate of return from capital goods industries is favourable.

country or one unit in each region may be adequate to meet the whole demand and as such monopoly considerations may necessitate direct government undertaking. It would seem that mainly from these considerations the planners have emphasised the need for a relatively bigger role of direct government undertaking in developing heavy industries, notably the manufacture of basic metals and the production of machinery and fertilizers. [37]

(b) Balance of Regional Growth. Balance in regional growth, particularly between East and West Pakistan, is now a very important planning objective of the economy. As mentioned earlier, the Perspective Plan has put a target on achieving equality in per capita income between the two regions by 1985, that is by the end of the Sixth Five-Year Plan (1980-85). It was the objective of the Third Plan that during the five-year period from 1965-66 to 169-70 the Gross Regional Product (GRP) of East Pakistan would increase by 40 per cent and that of West Pakistan by 35 per cent. [38] What exact rate of investment (consisting of both public and private sectors) will be necessary to achieve the regional growth objective will depend on the regional capital output ratio, as discussed in Chapter I.

So far as the distribution of private investment between East and West Pakistan is concerned, it was found that East Pakistan's share is much lower than that of West Pakistan (Chapter 4). In order to be meaningful it is necessary

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37 GOP, PC, The Third Five-Year Plan, p.450.

38 GOP, PC, The Third Five-Year Plan, p.39. The Fourth Five-Year Plan (1970-75) which was launched from July 1970 has put a target of an annual growth rate of 7.5 per cent in East Pakistan as against 5.5 per cent in West Pakistan. Cf. GOP, PC, The Fourth Five-Year Plan, p.22.

Table 6.6

Private Investment as Percentage of GRP in East and West Pakistan

	East Pakistan (1)	West Pakistan (2)
1949-50	1.4	3.9
1954-55	1.9	5.2
1960-61	2.8 (2.8)	9.1(9.2)
1966-67	3.2 (2.9)	9.1 (9.4)
1968-69	4.0 (3.8)	9.1 (9.3)

Source: Background Tables 23 and 24.

that figures of private investment in East and West Pakistan are expressed as percentages of GRP. Such an estimate is shown in Table 6.6. From the Table it would seem that the ratio of private investment to GRP is much less adequate in East Pakistan for achieving the regional growth objective of the economy. In East Pakistan, private investment has increased from 1.4 per cent in 1949-50 to 4.0 per cent in 1968-69, while the increase in West Pakistan is from 3.9 per cent to 9.1 per cent in the corresponding period. The private investment ratio has thus remained very low in East Pakistan. This is probably the main reason why the planners have envisaged a quite different role for the private sector in the two regions. As has been observed in the Third Plan: "The public sector will play a much larger role in East Pakistan where substantial infra-structure has yet to be built and the private sector is still rather shy. This is particularly evident in the field of industry where about half of the investment is to be managed by the East Pakistan Industrial Development Corporation as against just over one-fifth by its West Pakistani counterpart." [39] However, the logic of a relatively larger investment

39 GOP, PC, The Third Five Year Plan, pp. 32-33.

(through direct government undertaking) in East Pakistan than in West Pakistan follows mainly from the role played by direct government undertaking in the early years of development when the ratio of private investment to GNP was very low.

The case for a relatively bigger role of direct government undertaking in East Pakistan also follows from our analysis of Chapter 4 where it was found that the longer tax holiday and preferential tariff granted to East Pakistan have not succeeded in attracting private investment. It is expected that, other things remaining at least neutral, a policy based on infrastructural development for East Pakistan (Chapter 5) will greatly assist the working of taxation policy in favour of that region. But nothing surprising can be expected to happen immediately, particularly if, as we shall see in Section III, some other factor, in the form of Bengalee nationalism, is present in East Pakistan. Thus it seems that a bigger role of direct government undertaking in East Pakistan may be necessary to increase the rate of investment.

Before concluding this Section two points need mentioning. Firstly, the above discussion considering the need for a relatively higher direct government undertaking in capital goods industries/and in East Pakistan should not be interpreted as meaning that we neglect the role of private investment. On the contrary, in keeping with the development strategy of the economy, measures should be taken to raise the private investment ratio so that growth can be self-sustaining. The other two tools - infrastructural development and direct government assistance - of government expenditure policy have a great role to play in this regard. Secondly, in the discussion of the need for direct government undertaking

maximization of total investment has been considered, bearing in mind the approach of the planners which seeks to provide a supplementary role to DGU. The principal aim is to ensure that the total investment is adequate to achieve the development objectives of the economy. Considered in these terms the necessity for direct government undertaking arises mainly through deficiency of private investment and the role of direct government undertaking is not to discourage private investment but to encourage it.

III Allocation of DGU

The preceding Section analysed the necessity of direct government undertaking (DGU) in the context of the development strategy adopted for the economy. Based on past performance, it was observed that DGU may be helpful in raising the rate of investment in East Pakistan and in developing capital goods industries in the country. In the present Section we shall take up the allocation aspect of DGU, again from sectoral and regional viewpoints. Here, as shall be seen, the main consideration is to analyse the allocation of DGU, given the investment fund for it. In other words, we assume that the total investment fund for DGU is known and our main objective is to consider an efficient allocation of the total fund.

Criteria for allocating investment from a mainly theoretical point of view were discussed in Chapter 2. It was found that for an ideal allocation public investment decisions should be based on social prices. This is necessary because of the divergence between social and market prices. For example, considering

the acute unemployment problem prevailing in Pakistan, the market wage rate does not reflect the social price of labour which will be lower than the market wage rate. Similarly, the official exchange rate and the discount rate of Pakistan do not represent the foreign exchange and capital scarcity prevailing in the economy, and the social prices of foreign exchange and capital will be higher than the official market rate (Appendix A). A private entrepreneur, who is interested in market profitability, will not take account of these distortions in considering his investment decisions. But social profitability (and not market profitability) is the main basis of DGU. Hence for an ideal allocation of DGU, the calculation of costs and returns should be on social or 'accounting' prices of the inputs and outputs, and to find out the Net Present Value (NPV) it will be necessary to discount the calculated cash flows at a social time preference rate. Given the DGU fund, the problem is to select projects with a higher NPV. With no capital constraint, all projects with higher NPV should be undertaken.

It is not known how far investment allocation for direct government undertaking in Pakistan has been based on some rigid quantitative analysis using a criterion of social profitability.[40] As shall be seen below, the rationale of the allocation of DGU is subject to criticism. It may be partly due to

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40 On author's request EPIDC and WPIDC kindly supplied some materials, op. cit., which do not indicate anything in this regard. So EPIDC and WPIDC were again approached to supply information on some projects undertaken by them. Unfortunately, no reply has yet been received.

investment allocation in the absence of an input-output table[41] and partly due to investment decisions not based on 'accounting prices.'

Sectoral Allocation. Public sector allocation figures shown for large-scale manufacturing in the First, Second and Third Five-Year Plans will be used for the present discussion from a sectoral point of view, and for the subsequent discussion from a regional point of view.

Table 6.7 shows the public sector allocation in three groups of industries.[42]

A. Industries primarly producing consumer goods;

B. Industries primarily producing intermediate goods; and

C. Industries primarily producing investment and related goods.

Although the above classification is not unique, it has the advantage of enabling one to see an aggregated allocation picture from a sectoral point of view. (Disaggregated allocation within each group is shown in Table 6.8).

From table 6.7 it is seen that in the First Plan 16 per cent was allocated for consumer goods industries, 60 per cent for intermediate goods and 24 per cent for investment and related goods. In the Second Plan, the allocation

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41 The Third Plan mentions that "An input-output table for industries is, however, under preparation to serve as a guide in the implementation of a balanced Plan, for ensuring that the import bill for industrial raw materials does not outstrip the foreign exchange savings derived through replacement of imports." Cf. GOP, PC, The Third Five-Year Plan, p.488.

42 As pointed out in footnote of Table 6.8, the classification follows from that maintained by Lewis, S.R., op. cit. Due to non-availability of data in the revised Second and Third Plans, investment figures shown in the original Second and Third Plans have been used.

Table 6.7

Aggregated Allocation for DGU in Consumer, Intermediate and Investment and Related Goods Industries

(Million Rs.)

	First Plan		Second Plan		Third Plan	
	Absolute (1)	% (2)	Absolute (3)	% (4)	Absolute (5)	% (6)
A. Consumer Goods	193	16	76	9	251	7
B. Intermediate Goods	719	60	524	62	1889	52
C. Invest. and Rel. Goods	295	24	245	29	1512	41
Total	1207	100	845	100	3652	100

Source: Cols. (1), (3) and (5) - Table 6.8. Rest - Computed. Figures have been rounded off. Inter-period comparison of investment figures is not possible due to differences in prices.

for consumer goods was 9 per cent, for intermediate goods 62 per cent and for investment and related goods 29 per cent. The corresponding figures in the Third Plan are 7 per cent, 52 per cent and 41 per cent respectively. A remarkable trend which appears from the Table is in the allocation for consumer goods and investment and related goods. While the allocation for consumer goods has declined from 16 per cent in the First Plan to 7 per cent in the Third Plan, the allocation for investment and related goods has increased from 24 per cent to 41 per cent in the same period. The aggregated allocation thus seems to be in conformity with our analysis of Section II.

Some discrepancy, however, becomes apparent when viewed from the allocation for individual industries, as shown in Table 6.8. In this Table, the relative share of each industry within a group has been shown separately. This enables one to see which type of industry has been given priority in each

Table 6.8

Allocation for DGU in Large Scale Manufacturing in the First, Second and Third Plans

(Rs. in Million)

	First Plan		Second Plan		Third Plan	
	Absolute (1)	% (2)	Absolute (3)	% (4)	Absolute (5)	% (6)
A Consumer Goods						
1. Sugar Manuf.	182.4	94	60	79	196	78
2. Cotton & Text.	2.3	1	-	-	-	-
3. Printing & Pub.	1.1	1	5	7	13	5
4. Misc. Manuf.	7	4	11	14	42	17
Sub Total for A	192.8	100	76	100	251	100
B Intermediate Goods						
1. Jute Textiles	150	21	100	19	77	4
2. Paper & Paper products	184	26	41	8	484	26
3. Fertilizer	332	46	330	63	1022	54
4. Chemicals & pharmaceuticals	52.9	7	38	7		
5. Petro-Chems.	-	-	15	3	185	10
6. Wood & Cork	-	-	-	-	121	6
Sub Total for B	718.9	100	524	100	1889	100
C Investment & Related Goods						
1. Non-metalic minerals	55	19	36	15	321	21
2. Basic metals	130	44	183	75	434	29
3. Metal products (excl. machinery)	-	-	5	2	11	1
4. Machinery (excl. electrical)	-	-	6	2	397	26
5. Elect. Mchnry. & equipmnt.	-	-	-	-	168	11
6. Transport equipment	109.5	37	15	6	181	12
Sub Total for C	294.5	100	245	100	1512	100
Total for A, B, and C	1206.2	-	845	-	3652	-

Sources and Notes: Col.(1) GOP - First Five Year Plan, pp.430-34. Col. (3) - GOP, The Second Five Year Plan, pp.231, 260-4. Col. (5) - GOP, The Third Five Year Plan, p.458. Rest - Computed. The classification into A, B and C follows the one maintained by Lewis, S.R., Economic Policy and Industrial Growth in Pakistan, op.cit., Chapter 6. The only addition is the item wood and cork included in group B. In an attempt to use the source-data in our Table at places aggregation had to be made; this is, however, unlikely to make a significant change. Figures have been rounded off. Inter-period comparison of investment figures is not possible due to price differences.

aggregrated group. It is found that sugar manufacturing has received the highest share in the allocation of consumer goods; of the total allocation for consumer goods its share was 94 per cent, 79 per cent and 78 per cent in the First, Second and Third Five-Year Plans respectively. Of the total allocation for intermediate goods, fertilizer received the highest share, followed by paper and paper products in the First and Third Plans and jute textiles in the First and Second Plans. In category C (Investment and related goods), the First Plan allocation was distributed among basic metals, transport equipment and cement in order of priority. In the Second Plan, 75 per cent was allocated for basic metals, 15 per cent for cement and 6 per cent for transport equipment; metal products and machinery were allocated 2 per cent each. In the Third Plan, of the total allocation for investment and related goods, 29 per cent has been allocated for basic metals, 26 per cent for machinery (excluding electrical), 21 per cent for cement, 12 per cent for transport equipment, 11 per cent for electrical machinery and 1 per cent for metal products.

Following our earlier discussion, it is essential to ensure that the allocation for direct government undertaking is made firstly to those industries which are essential but cannot attract private investment and, secondly, given the limited DGU-fund, to the industries with higher NPV. From the allocation figures shown in Table 6.8, it is doubtful whether a great deal of care was taken to observe the criteria.

In Pakistan the Government is committed to a policy of rapid industrialisation as well as balanced growth of the sector. Available data indicate ,

however, that while the growth of consumer goods and intermediate goods industries has proceeded according to demand, this has not happened in the case of capital goods industries (Chapter 4). It was found earlier that the tariff policy of Pakistan has been an important factor in the lagged growth of capital goods industries.[43] This leads directly to a consideration of direct government undertaking. In fact, since the Government has undertaken a policy of rapid industrialisation, DGU in capital goods industries could have greatly relieved the present serious constraint. The allocation of DGU for large scale manufacturing, particularly in the First and Second Plans, does not indicate that this constraint was identified.

Even considered from the point of view of capital constraint, it would seem that the allocation of investment for direct government undertaking neglecting the growth of investment and related goods has not been sound. In the First Plan, out of the total allocation of Rs. 1,206.2 million, Rs. 182.4 million was allocated for sugar manufacturing while no provision was made for machinery. The Second Plan allocated Rs. 60 million for sugar manufacturing while only Rs. 6 million was allocated for machinery. It is only in the Third Plan that the allocation for investment and related goods

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43 The lagged growth point does not, however, imply that the industry has remained stagnant. On the contrary, as pointed out earlier, from 1959-60 to 1963-64 the output of investment and related goods measured in money terms increased by 131 per cent. As has been observed by Nayimuddin: "This reflects on the one hand, the development potential of these industries and on the other, the implicit subsidy (though limited) given to them by direct controls rather than by tariff protection." Cf. A Study of Fiscal Policy in Pakistan, op. cit., pp. 320-21.

has been significantly raised, but even yet sugar manufacturing has received a considerable allocation, Sugar manufacturing is cited here because it provides a suitable example of a line of production being duplicated.[44] 'Native sugar' as a substitute for sugar is favourable example of substitute wants often cited in the economics textbooks of India and Pakistan. Indeed, from consideration of both food value and price, 'native sugar' is a strong competitor of sugar. Just how strong this competition is may be gauged from the allegation that some of the sugar-mill authorities have gone to the extent of forcibly taking away the cane-crushers of the cultivators in order to stop them producing 'native sugar.' The defects of such direct controls were discussed in Chapter 4. What we find here through the DGU allocation for sugar manufacturing is an example of underestimation of the effectiveness of price-policy in market mechanism. Further, considering the employment and foreign exchange effects of 'native sugar' production and the seasonal nature of sugar manufacturing one fails to understand the rationale of DGU allocation for sugar manufacturing . A proper calculation of costs and returns

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44 'Bidis' (native cigarettes) and cigarettes provide another good example. Here also the large benefits out of continued production of bidis were ignored and production of cigarettes was encouraged. It is true that DGU allocation was not necessary, but since investment in cigarette manufacturing meant less investment in some other alternative line of production, one may criticize the logic of investment allocation.

in alternative lines of production may not only disprove the so-called 'wisdom' of DGU allocation for sugar manufacturing but also reveal the amount of wastage under the circumstances.[45] What the economy needs, as has been rightly remarked by Hirschman in the context of underdeveloped countries, is not to invest its "scarce capital resources in duplicating lines of production that are already being carried on, even though inefficiently. A better use for capital would almost certainly be in the establishment of new-product industries."[46]

Regional Allocation. As in the preceding Chapter, discussion of regional allocation will be concentrated mainly on East Pakistan. In Section II of this Chapter, the case for a relatively bigger role of direct government undertaking in East Pakistan was considered. The argument may now be discussed on the basis of the allocation as found in the First, Second and Third Five-Year Plans of Pakistan.

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45 A recent study by Raquibuzzaman shows that sugar manufacturing has proved to be a very costly venture for Pakistan. He made an estimate for 1960-66 period and found that Pakistan would have annually saved 25.466 million dollars if it had imported all its sugar requirements from world market instead of producing a large portion of its requirements at home. This is mainly because Pakistan's cost of production for sugar is more than 200 per cent higher than the world sugar price. Cf. Raquibuzzaman, M., "The Economic Implications of a Complete Free Trade and an Alternative Form of Free Trade in Sugar through 1980," Pakistan Development Review, Autumn 1970, pp. 352-53.

46 Hirschman, A.O., The Strategy of Economic Development, op. cit., p. 131.

Table 6.9 shows public sector allocation for large-scale manufacturing in East and West Pakistan. As may be seen from the Table, East Pakistan's share has always been higher than that of West Pakistan. Of the total allocation, in the First Plan, East Pakistan was allocated 71 per cent as against 29 per cent for West Pakistan; the respective figures in the Second Plan were 61 per cent and 39 per cent and in the Third Plan, 71 per cent and 29 per cent. The main intention of allocating a higher share to East Pakistan was to raise the private investment ratio to GRP by providing leadership through direct government undertaking. But considering ~~at the~~ growth of private investment in East Pakistan (Table 6.6), it is difficult to believe that much success has been achieved.

Table 6.9

Public Sector Allocation for Large-Scale Manufacturing in East and West Pakistan

(Rs. in Million)

	First Plan		Second Plan		Third Plan	
	Absolute (1)	% (2)	Absolute (3)	% (4)	Absolute (5)	% (6)
East Pakistan	852.0	71	514	61	2595	71
West Pakistan	353.1	29	331	39	1057	29

Sources and Notes: Col. (1) GOP, The First Five-Year Plan, p.435. Cols. (3) and (5) - Same as in Table 6.8. Rest - Computed. The figures of Col. (1) have been adjusted on the basis of figures shown in Table 6.8 and West Pakistan's figures shown in the source, First Five-Year Plan, p.435. The discrepancy of Rs. 1.1 million in the total of Col. (1) with the figures in Col. (1) of Table 6.8 is due to the fact that it is not shown in the source cited above. Inter-period comparison of investment figures is not possible due to differences in prices.

Assuming that the actual investment for direct government undertaking in East and West Pakistan has been more or less according to Plan allocations, it may be argued that the main reason for a low stagnant private sector investment in East Pakistan may lie somewhere else. The factor dealing with infrastructural development was discussed in Chapter 5. It was found that per capita investment for economic infrastructural facilities has been much lower in East Pakistan than in West Pakistan. This may have been a factor in deterring the growth of private investment in East Pakistan. The obstacle, however, was not a serious factor for direct government undertaking, because a government Corporation like the PIDC was not concerned so much in making a profit, or could afford to undertake an investment expecting that infrastructural facilities would follow. The case of the Karnafuli paper mill is a good example. It was to be located in an inaccessible area of the Chittagong Hill Tracts with no road or electricity facilities. Under such circumstances, no private investor would probably have thought of undertaking the investment. The PIDC could and did.

Besides, infrastructural development, some other factors like a lower allocation of fund for direct government assistance in East Pakistan, direct controls, lack of native enterprise in East Pakistan, reluctance of West Pakistani enterprise, etc., are important in connection with the lack of adequate private enterprise in East Pakistan. The case of direct controls was discussed earlier (Chapter 4), while direct government assistance will be taken

up in the next Chapter. Here let us consider the role of private enterprise in the context of the socio-political aspect of Pakistan.

It is alleged that there is a widespread Bengalee feeling against West Pakistanis. According to Papanek, "Whatever one may think of the widespread Bengali feeling about outsiders, it exists and has to be taken into account." [47] This feeling was publicly expressed on a number of occasions and has ranged from language to politics and economics. [48] As early as 1952 students in East Pakistan came out in protest against the declaration of Urdu as the national language of Pakistan. A number of students were killed in police firing and consequently the situation worsened to the extent that the administration almost collapsed. The declaration of Bengali as the national language pacified the Bengalees. In the Provincial election held in East Pakistan in 1954, the whole Province unanimously gave its verdict against the ruling Muslim League Government dominated by West Pakistan. In 1955, the riot between Bengalees and non-Bengalees in the construction phase of the Karnafuli paper mill resulted in the killing of several non-Bengalees including the general

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47 Papanek, G.F., Pakistan's Development, op. cit., p.259.

48 The East-West relationship has been viewed mainly from political aspect by Brainbanti, R., Research on the Bureaucracy of Pakistan, op. cit., pp. 44-54.

manager.[49] In the first national election held in December 1970, the political party of Sheikh Mujibur Rahman supporting outright Bengalee nationalism won 167 out of 169 National Assembly seats in East Pakistan.[50]

For the purpose of analysis the above non-economic factor needs to be interpreted in economic terms. In Pakistan, non-Bengalees form the larger section of the capitalist class.[51] Other things remaining same, in the presence of the widespread feeling against outsiders in East Pakistan, a West Pakistani investor would want a relatively higher rate of return for undertaking an investment in that province as against in West Pakistan. In other words, he would consider an investment in East Pakistan worth undertaking only if the NPV is favourable after discounting at a rate which includes some risk premium. Considering that no such risk-premium is necessary for a unit of investment in West Pakistan, the rate of return in East Pakistan will have to be relatively higher in order to attract investment. The fact that the share of private investment in East Pakistan is very small may mean

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49 Hirschman, A.O., Development Projects Observed, op. cit., p.149.

50 Since March 1971 the happenings in East Pakistan have caused large-scale massacre.

51 As has been observed by Professor Rahman, none of the 24 fabulous capitalists comes from East Pakistan. Cf. Rahman, M.A., "East Pakistan: The Roots of Estrangement," South Asian Review, April, 1970, p.237.

that the risk-premium considered by a West Pakinstani investor is high and the existing rate of return has failed to attract private investment.

Thus, it appears that in order to attract private investment for achieving the regional growth objective of the economy the rate of return in East Pakistan will have to be made considerably higher than that in West Pakistan. Government expenditure policy through infrastructural development and direct government assistance may be helpful in this regard; a discriminatory taxation policy as mentioned in Chapter 4 may also play a great role in this respect. Alternatively, as already pointed out, direct government undertaking will have to bear the burden if the growth objective for East Pakistan is to be achieved. Considering the development strategy of Pakistan, it follows that the private sector should be provided with every incentive to come forward. The role of DGU, as mentioned earlier, needs to be viewed mainly from this aspect.

Table 6.10 shows the public sector allocation for large-scale manufacturing in East Pakistan in the First, Second and Third Five-Year Plans. From the Table it appears that the DGU allocation has been directed mainly towards the growth of sugar manufacturing, jute textiles, paper and fertilizer, while industries such as cement, machinery, metal products etc., have remained neglected. Whether or not the allocation was sound becomes doubtful in view of the earlier discussion with respect to a higher DGU allocation for sugar manufacturing.

Table 6.10

Allocation for DGU in Large Scale Manufacturing in East Pakistan

(Rs. in Million)

	First Plan		Second Plan		Third Plan	
	Absolute (1)	% (2)	Absolute (3)	% (4)	Absolute (5)	% (6)
1. Sugar manufacturing	176.4	21	60	12	196	7.5
2. Printing and publishing	-	-	2	Neg.	-	-
3. Jute textiles	150	18	100	19	77	3
4. Paper and paper products	180.2	21	41	8	484	19
5. Fertilizer	180	21	180	35	680	26
6. Chemicals and pharmaceuticals	38	4	23	4	145	6
7. Wood and cork	-	-	-	-	120	5.5
8. Cement	-	-	20	4	169	6.5
9. Basic metals	100	12	55	11	279	11
10. Metal products (excl. machinery)	-	-	3	1	11	Neg.
11. Machinery (excl. electrical)	-	-	4	1	185	7
12. Electrical machinery and equipment	-	-	-	-	68	2.5
13. Transport equipment	27.4	3	15	3	156	6
14. Misc. manufacture	-	-	11	2	25	1
Total	852.0	100	514	100	2,595	100

Sources: Same as in Table 6.9.

In the context of East Pakistan, the shortage of cement has generally been a serious constraint in economic development.[52] In order to alleviate the situation, the Third Plan has allocated a large amount for the development of cement industries through the PIDC, but the failure of the First and Second Plans to see the problem in perspective was remarkable.

In concluding this Section it may be observed that the regional side of the allocation aspect of direct government undertaking will need serious consideration. Development strategy of the economy demands that private enterprise should take an active part in direct undertaking. How far private enterprise would co-operate to achieve the development objective of the economy, which calls for a higher growth rate in East Pakistan than in West Pakistan, will largely depend on the role of infrastructural development, direct government assistance and other policy measures. In the circumstances, however, it seems that for some time to come an increasing participation of direct government undertaking may be necessary. As already mentioned, such an emphasis on DGU should not be interpreted as meaning that the role of the private sector can be neglected. The task involved is considerable and may be

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52 For example, it has been observed that "the Second Plan period has generally been characterised by shortage of cement both in East and West Pakistan, more particularly in East Pakistan." Cf. GOP, PC, The Third Five-Year Plan, p.475.

well beyond the capacity of DGU. Keeping in line with the development strategy and the development objective of the economy, probably the best suggestion that can be made is firstly in order to help the growth of indigenous Bengalee capitalists, as observed by one expert,[53] the role of DGU in taking Bengalees as partners and selling enterprises to Bengalees should be considered, and secondly, whatever role direct government undertaking is asked to play should be based on an allocation which takes into account the capital constraint as well as the development potential of the Province.

IV Public Sector Efficiency

In our analysis of the need for direct government undertaking with particular reference to sectoral and regional aspects it was assumed that given proper allocation of funds, DGU can perform its duty efficiently. Such an assumption, however, may demand too much from the public sector and needs to be examined. In order to be efficient it is not enough that the investment fund be allocated properly; it is also essential that the public sector is capable of organising it. As Professor Lewis has said, it is false to assume that what

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53 Papanek, G.F., Pakistan's Development, op. cit., p.260.

private enterprise cannot or will not do the government can and will. The classical economists who adhered to laissez-faire doctrine were largely influenced by the fact that the government of their day was notoriously inefficient and corrupt. It was for this reason that they sought 'to confine the activities of government within the narrowest practicable limits, so as to minimize the damage they might do.'[54] Compared to circumstances prevailing during Smith's time, India and Pakistan are fortunate today in the sense that they have a relatively high standard of civil service, thanks largely to century-old British traditions. In fact, the high standard of the civil service might put the Governments of India and Pakistan in a relatively better position than the private sector in organising large scale investment.[55] As has been observed by Professor Mason, "in considering the relative capacities of public and private administration in the two countries, it is rather easy to understand why government has assumed its role in the industrialization process".[56]

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54 Quoted in Hanson, A.H., Public Enterprise and Economic Development, op. cit., p.203.

55 Another good example is Japan. In the 19th century, the public sector of Japan attracted an exeptionally large proportion of able and enterprising people. Cf. Bauer, P.T., and Yamey, B.S., The Economics of Under-developed Countries, p.161, f.n.

56 Mason, E.S., Economic Planning in Underdeveloped Areas: Government and Business, Fordham University Press 1958, p.57.

In order to gain some specific idea it is necessary for public sector efficiency in relation to that of the private sector to be reflected in the rate of return from investment. Unfortunately, sufficient evidence is lacking to make such an analysis.[57] Only a limited idea can be provided from a study based on a sample survey by Papanek. Returns of PIDC and private firms in jute, cement, sugar and cotton textiles have been estimated, as shown in Table 6.II. The Table shows that except in jute goods, PIDC returns were higher than the private enterprise in cotton textiles, sugar and cement. Caution must be exercised in any consideration of the evidence because of the favourable treatment given to the PIDC in respect of import licences and facilities, and because of the tendency of private firms to report a lower rate of return than the actual. Further, the Table is not exhaustive enough to provide strong evidence of the comparative efficiencies of public and private enterprise. Indeed, as the same source remarks, "PIDC showed almost no return on investment in jute, substantial losses in shipyardsand engineering works, and smaller losses on sugar mills."[58] Again, further caution is necessary since "PIDC's low returns came in part from industries

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57 The journal of WPIDC (Forward, July 1970, p.9) provides some evidence of the overall position of profits and percentage return of the WPIDC during the seven years from 1962-63 to 1968-69. According to the source, net profit earned as percentage of investment increased from 1.3l in 1962-63 to 5.32 in 1964-65, and further to 8.2l in 1967-68. There has, however, been some decline in 1968-69 which shows a rate of return of 6.7l per cent.

58 Papanek, G.F., Pakistan's Development, op. cit., p. 98.

Table 6.11

Returns of PIDC and Private Firms, 1958

Industry	Location	Returns (% of Assets)		No. of Firms	
		PIDC	Private	PIDC	Private
(1)	(2)	(3)	(4)	(5)	(6)
Cotton textiles	East Pak.	18	12	1	42
Sugar	East Pak.	20	4	1	8
Cement	West Pak.	17	15	1	4
Jute goods	East Pak.	4	6	1	9

Source and Notes: Papanek, G.F., Pakistan's Development, op.cit., p.99. Table 20. Returns are the sum of profits, depreciation, interest and managing agency fees. Figures of returns are those reported which, especially for the private sector, are undoubtedly understated.

which the government wanted developed and which private investors were avoiding precisely because expected returns were low." [59]

The rates of return, as shown in the Table, are those reported. Returns of private firms seem to be based on commercial profitability. Since the source does not comment, it is not known what criterion was used by PIDC in its estimate of return. If a social profitability criterion had been used by PIDC in its estimates, a direct comparison with the figures as reported by private firms would not be possible. On the other hand, if private profi-

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59 Ibid. p.98.

tability was the criterion of estimate used by PIDC the estimates cannot be considered as a true indicator of public sector efficiency. For we have already mentioned that public investment decisions ought to be based on social profitability and not on private profitability criterion. How misleading an investment decision based on a private profitability criterion may be is shown by Little and Mirrless in their case study of a Rayon Plant for Pakistan.[60] Based on market prices of inputs and output, the project is a profitable concern. A different picture emerges, however, when the social profitability criterion is applied. Assuming a discount rate of 10 per cent and considering the price of linters (the raw material) as £125 per ton, the calculations show that the social present value (net) of the project is negative. The social rate of return was found to be 5.4 per cent as against the private rate of return of 12.3 per cent.

This emphasis on social profitability should not be interpreted as meaning that public projects should not make profits, or that the market profit accruing to a direct government undertaking has no meaning at all. On the contrary, a project with the ability to make higher profits should deserve priority over a project making lower profits or incurring losses. The exact priority to be

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60 Little, I.M.D. and J.A. Mirrless, Manual of Industrial Project Analysis in Developing Countries (Vol. 2): Social Cost Benefit Analysis, OECD, Paris 1969, pp. 222-36.

attached will depend upon the need for savings; the greater the need for savings the higher will be the priority for more profitable concerns. In an underdeveloped country like Pakistan facing a big (ex ante) savings-investment gap, projects with a capacity for earning more profits will naturally be preferred. Adler has tried to explain the point with the help of the 'maximum-revenue-feed-back principle' according to which project B with a lower social yield may be preferable to project A which has a higher social yield if the 'revenue-feed-back' is higher in project B than in A.[61] It should be mentioned that in applying the social profitability criterion, the 'feed-back' capacity of a project can be taken into account. What one needs is to give proper weight to the re-investment potential or the 'savings effect' of investment. In other words, how Galenson-Leibenstein[62] would argue in terms of 'maximizing re-investment quotient' should be considered.[63]

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61 Adler, J.H. "Fiscal Policy in a Developing Country" in K. Berrill (ed.), Economic Development with special reference to East Asia, Macmillan and Co., London 1964, pp.306-07.

62 Galenson, W. and H. Leibenstein, "Investment Criteria, Productivity and Economic Development" op. cit., For our arguments against Galenson-Leibenstein criterion see Chapter 5, Section IV.

63 Assuming that the only cost is labour, w, due to employment E, the problem is to maximize the re-investment quotient, r, from the total original investment, I, giving rise to output, O. Symbolically, this may be written as $r = \frac{O - wE}{I}$. See Sen, A.K. "Some Notes in the Choice of Capital Investment in Development Planning." Quarterly Journal of Economics, 1957, p.564. Taira, K., "A Noteon the Analytical Properties of Galenson-Leibenstein Investment Criterion," Bulletin of the Oxford University Institute of Economics and Statistics 1965, p.152.

Incidentally, their assumption that the capitalist sector will invest the entire profit is more applicable to direct government undertaking, for, practically speaking, the marginal propensity to save is equal to one in the public sector, while it is less than one in the private sector. [64] Thus, considered from a re-investment point, with an equal rate of profit in the same field, a direct government undertaking will appear more efficient than a private enterprise.

How far public investment decisions in Pakistan are based on proper accounting techniques, as mentioned earlier, is not known. In order to consider investments at project-level, it is necessary to undertake project studies. [65] Here, it is suffice to say that investment for direct government undertaking should be preceded by a proper cost-benefit analysis. It is about two decades since the Government has seriously started undertaking direct investment in Pakistan. With the passage of time the volume of investment for DGU is expanding. [66] It is, therefore, essential that serious efforts be made to improve the efficiency of direct government undertakings. This would necessitate

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64 We assume that profit accruing to a public undertaking is entirely re-invested. The assumption is not unrealistic in the context of the developing countries like Pakistan.

65 See footnote I in Appendix to Chapter 2.

66 If we take into account the investment made by Corporations in all fields it is estimated that "Over one-half of the investment at present is being channelled through public corporations." GOP, PC, Socio-Economic Objectives of the Fourth Five-Year Plan, November 1968, p.21.

improvement in the selection, undertaking and operation of projects. It seems to be particularly at the selection-stage that there exists a serious deficiency.[67] This may be considered an important weakness in public investment planning in Pakistan. Another important weakness is that the public Corporations are not accountable to the public for their operations. The recruitment system of the Corporations will also need to be improved.[68]

What has been said above should not suggest that direct government undertaking has been inefficient in Pakistan. It should be remembered that 'public sector efficiency' is a relative term and needs to be assessed in relation to private sector efficiency. DGU seems to be in a position to

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67 It has been remarked by the Third Plan that inadequacy of facilities for preparation of projects is a substantial hindrance in the way of speedy and orderly industrial development in Pakistan. See The Third Five-Year Plan, op. cit., p.453. In the Preface to the Second Impression (March 1966) of his book Haq observes that there is "still a relative disregard of the proper costing of projects and appropriate techniques for their detailed appraisal." The Strategy of Economic Planning, op. cit., p. xi.

68 As has been observed by the Planning Commission: "It is of vital importance that the operative efficiency of these corporations be improved and they be made accountable to the public for their operations. A managerial pool should be available to man public corporations and other public sector enterprises. This managerial pool should be recruited through open competition, like other public services, and can be used to staff public enterprises at all levels." Cf. GOP, PC, Socio-Economic Objectives of the Fourth Five-Year Plan, op. cit., p.21.

pass such an efficiency test in Pakistan. It is true that direct government undertaking has not been free from defects, and there is much room for improvement. But this should not undermine the effective role which DGU, and for that matter PIDC, has played in the development process of Pakistan. As has been remarked by Hanson, "Organizationally, the Corporation has in fact been one of the brightest spots in an otherwise rather sombre scene. Its supervision of engineering plans and of plant construction has been, on the whole, efficient, and it has not abused the very considerable degree of administrative freedom it has received." [69] However, the greatest contribution of direct government undertaking in Pakistan seems to be that it has helped to provide the highly valued entrepreneure role, technological knowledge and managerial capacity in an area where and at a time when these were urgently needed.

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69 Hanson, A.H., Public Enterprise and Economic Development, op. cit., p.235.

Chapter 7

DIRECT GOVERNMENT ASSISTANCE

In the preceding two Chapters we have discussed government development expenditure as directed for the development of infrastructural facilities and direct government undertaking. Following our classification in equation 4.2 we are therefore left with the last term, that is, direct government assistance (DGA) to private enterprise. Like infrastructural development, direct government assistance has the distinctive quality of promoting investment by raising the rate of return. But the latter differs from the former in so far as the nature of the assistance is concerned; while assistance through infrastructural development is mainly indirect, assistance through DGA, as the term implies, is in a direct way. For example, agriculture in Pakistan is carried out almost entirely within the private sector and government development expenditure for agriculture is mainly of a promotional nature designed to meet the cost of administration of public organizations concerned with the development of agriculture, providing subsidies on fertilizer, research extension etc. These are not infrastructural facilities in the sense we have dealt with in Chapter 5. Nor do they form a part of direct government undertaking in the sense of public enterprises as discussed in Chapter 6.

In Table 6.1 (page 181) an attempt was made to find out the distribution of public investment between direct government undertaking (DGU) and direct government assistance (DGA). It was found that of the total government investment for productive activities like manufacturing, mining and agriculture, in the First Plan 52 per cent was for DGU and 48 per cent for DGA. The respective figures in the

Second Plan were 44 per cent and 56 per cent; and in the Third Plan 46 per cent and 54 per cent. It should be mentioned that Table 6.1 while useful for the discussion of direct government undertaking, fails to provide an accurate idea of direct government assistance. There are three main reasons for this. Firstly, the expenditure not forming a part of DGU does not necessarily go to provide direct assistance to private enterprise only. For example, government expenditures for the productivity centre, scientific and industrial research, the geological survey, etc., benefit private as well as public enterprise. Secondly, direct government assistance may go beyond production activities like agriculture, industry and mining. For example, direct government assistance may also be provided to encourage private investment in the infrastructural sectors such as housing, transport, education, health, etc. Thirdly, government development expenditure in the sense understood by the planners in Pakistan is narrower in coverage since it does not include the entire government credit given to private enterprise.[1] As we shall see later on, in a capital-scarce country like Pakistan, the sanction of loans undoubtedly provides assistance to borrowers. In fact, even in developed countries government loan is an important instrument of DGA. Thus, it appears that so far as DGA is concerned the coverage of Table 6.1 needs to be treated with caution.

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1 It seems that government credit to the industrial sector has been kept excluded from government development expenditure. So far as agriculture is concerned, the position is not very clear. For example, in the original Second Five-Year Plan, (p.40 Table 10), government credit for private sector in agriculture is shown as Rs. 200 million - Rs. 100 million in the form of 'taccavi' loans and Rs. 100 million to Agricultural Banks and Corporations. But these loans are not included in public sector development expenditure in agriculture (Second Five-Year Plan, p.192 Table 16) and are shown as capital liability of government. On the other hand, in the Evaluation of the Second Five-Year Plan (p.213, Table 7.3) government credits for agriculture have been shown within public sector investment. In the Third Five-Year Plan (p.443, Table 12) agricultural credit to be provided by the Government has again been kept outside the Plan allocation of government expenditure and is shown as capital liability on government account.

The Chapter is divided into four Sections. Section I provides an introduction to government assistance in Pakistan. In Section II, the need for DGA is analysed. Section III deals with the rationale of DGA allocation; here we mainly concentrate on public investment for agriculture as found in the First, Second and Third Five-Year Plans. Finally in Section IV, DGA as a policy instrument is discussed.

I Introduction

It follows from our earlier discussion that an important portion of government development expenditure in Pakistan is directed in the form that we have called DGA (Direct government assistance). It is particularly in agriculture that the allocation of DGA is significantly marked in the Five Year Plans of Pakistan. As mentioned earlier almost the entire public sector investment programme for agriculture is in the form of DGA confined mainly to promoting and assisting private enterprise.[2] For example, during the Second Plan period there was a subsidy of over 50 per cent for fertilizers. Subsidy has also been provided for introducing and distributing improved seeds, for installation of open wells and tubewells, to introduce mechanization, etc.

It should however, be mentioned that the activities of DGA are not as solidly organised as in the case of infrastructural development and direct government undertaking. In the 1950's the role of DGA was performed by a large number of govern-

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2 "Only in a few instances, such as certain aspects of forestry, is the Government concerned with the production of goods and services in agriculture." Cf. GOP, PC, The Third Five-Year Plan, p.108.

ment departments and organizations. With the increase in emphasis on agriculture in the 1960's some attempts have been made to improve the administration of DGA in agriculture. In October 1961, the West Pakistan Agricultural Development Corporation (WPADC) was set up. A similar body has also been established in East Pakistan. The Agricultural Development Corporations (ADCs) perform a large number of activities in connection with fertilizer distribution, multiplication and distribution of seeds, implementing the colonization programme in West Pakistan, introducing mechanization, etc.[3] But it would be wrong to conceive of the ADCs as being like the PIDC. Unlike in industries, government departments - both at Centre and Provinces - have played an active and large direct role in agriculture. For example, the Governments of East and West Pakistan maintain a large staff for extension services in disseminating knowledge among the farmers. The Government maintains a department for Co-operation and Marketing, gives loans known as 'taccavi' (cash) loans[4] directly through the Revenue or Agricultural Departments, and performs many other activities.

As seen earlier the role of DGA is not confined to agriculture. In fact, the growth strategy of Pakistan which puts emphasis on the development of private enterprise also implies the participation of DGA in other activities like industries, mining, transport, housing, etc. In the industrial sector, direct government assistance has

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3 The Third Five-Year Plan (Chapter on Agriculture, especially pp.402-9) gives some idea of the functions performed by the Agricultural Development Corporations.

4 "The Second Plan recommended that Taccavi loans be made on a progressively declining scale and be replaced eventually by institutional credit. The Credit Inquiry Commission (1959) also made the same recommendations, but they remain unimplemented." Cf. GOP, PC, The Third Five-Year Plan, p.423.

been provided mainly in forms such as the establishment of industrial estates,[5] sanction of government loans, technical and commercial assistance, etc. For the development of industrial estates an amount of Rs. 75 million was allocated in the Second Plan[6] and Rs. 188.5 million in the Third Plan.[7] So far as government loans for industries are concerned they are provided through the Industrial Development Bank of Pakistan (IDBP) and the Pakistan Industrial Credit and Investment Corporation (PICIC). As mentioned earlier it does not seem that these are shown in government development expenditure as included in the Five-Year Plans. It is for the development of small and medium scale industries that direct government assistance has been intended to be of special significance. The Small Industries Corporations - one each in East and West Pakistan - are responsible for the development of small industries in each region. Their activities fall into two broad categories (a) technical and management services, and (b) commercial services.[8] As has been observed by the Second Plan: "The technical and management services and most of the commercial services will be available to both small and medium scale industries. Credit facilities, however, in so far as they need to be underwritten or provided directly or indirectly by the Corporations, will be extended only to the small scale industries."[9]

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5 Provision of small industrial estates is included in the development programme of Small Industries Corporations.

6 GOP, PC, The Second Five-Year Plan, p.231.

7 GOP, PC, The Third Five-Year Plan, p.458. In the revised Plan the amount has, however, been reduced from Rs. 188.50 million to Rs. 137.50 million. Cf. Revised Phasing ... of the Third Five Year Plan, op. cit., p.20.

8 The different facilities provided under the two groups are enumerated in the Second Five-Year Plan, op. cit., p.257.

9 Ibid, p.257.

So far as direct government assistance in activities such as housing, transport, education, health, etc., is concerned the scope may not be as wide as in the case of agriculture and industries. However, in Pakistan no conscious effort has yet been made in these fields except probably in housing for the development of which the House Building Finance Corporation (HBFC) was established in 1952. The Corporation gives loans to private individuals and Housing Societies. An individual can borrow a loan of up to Rs. 40,000.[10] The operation of the HBFC, however, is very limited and can satisfy only an insignificant portion of the total demand for loans.[11]

It was pointed out earlier that government credit is an important instrument of direct government assistance. But, as mentioned, an overall idea of the credit policy as a mechanism of DGA cannot be obtained from the Plan documents of Pakistan. The specialized credit institutions such as the ADBP, IDBP, PICIC, HBFC, etc. have been important vehicles in channelling government credit. A publication of the Central Government shows nine such institutions, as enumerated in Table 7.1.

From the Table it may be seen that the Government not only sponsored these institutions but also took part in their finance. It therefore follows that in formulating government expenditure policy in Pakistan, the allocation of government credit cannot be ignored. Further, as shall be seen, the credit policy like other DGA instruments has an important role to play in raising the investment ratio and influencing production techniques.

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10 HBFC, Sixteenth Annual Report Ending June 30, 1968. p.14.

11 As has been observed by the Third Plan (p.386): "The House Building Finance Corporation is virtually the only credit institution at present active in the field of housing. Its activities are severely limited by inadequacy of resources at its disposal and limited number of branches in the country." At one time the financial position of the Corporation became so bad that the Management had to stop receiving new applications for loans in West Pakistan for the months of May and June 1968. As reason it has been stated that "the demands were so high in that area that a huge arrear of already entertained loan applications were lying ready for sanction and/or for payments after sanction". Cf. HBFC Sixteenth Annual Rep. p.2.

Table 7.1

Government Sponsored Financial Institutions

(Rs. in Million)

	Year of Estab.	Paid Up Capital	Central Govt. Investment	
			Actual Payment up to Dec. 31, 1968	Total Govt. Loans up to Dec. 31, 1968
1. Pakistan Refugees Rehabilitation Corp.	1948	16	-	2.8
2. National Bank of Pakistan	1949	30	7.5	-
3. House Bldg. Fin. Corpn.	1952	50	-	30 (March 1969)
4. Pakistan Ins. Corpn.	1953	5	-	8.3
5. Pakistan Industrial Credit & Investment Corpn.	1957	101	-	80 (March 1969)
6. Agricultural Dev. Bank of Pakistan	1961	140	130	336.1
7. Industrial Dev. Bank of Pakistan	1961	40	-	88.7
8. National Invest.. (Unit) Trust	1962	1.2	-	0.1
9. Investment Corpn. of Pakistan	1966	50	-	100

Source: GOP, Ministry of Finance, Government Sponsored Corporations 1968-69, pp.2-70, 174-75.

II Need for Direct Assistance

In order to encourage private enterprise a variety of instruments is available in the hands of the government. The role of taxation policy in the context of Pakistan was discussed in Chapter 4. In the present Chapter, we have taken up the type of inducement that is provided through government expenditure policy, called direct

assistance. Generally speaking, inducements provided through taxation policy and direct assistance have an important similarity in the sense that both cost revenue to the government. The nature of the revenue cost is, however, different. In the case of inducement through taxation policy, the drainage of revenue is in an implicit way since the investors claim the financial assistance at the time of submitting tax returns. On the other hand, the nature of the drainage in the case of direct assistance is open as the government spends directly from the fund available for expenditure. The above distinction is rather simplified, but there is some advantage in it and it is useful for our purposes.

The need for direct assistance as distinguished from taxation policy arises, as shall be seen below, mainly from the special development objectives of the country. How far DGA as a policy instrument can be used effectively is an important issue which will be dealt with in Section IV. Here, in an attempt to see the need for direct assistance, three important areas where DGA may be of special significance will be discussed briefly.

(a) To help in raising investment-ratio. From the analysis of Chapter I it follows that in order to achieve a target rate of growth of say, 7 per cent, an investment ratio of 0.21 will be necessary if the capital-output ratio is 3:1. How the total required investment will be shared by government and private sectors is, of course, a matter of economic philosophy, efficiency and convenience. In Pakistan, the development strategy has laid emphasis on the growth of private enterprise. It is in this context that the implication of different policy measures need to be understood. The objective of direct assistance is to encourage private enterprise and to direct it along the desired lines. Government interference is not to engage itself in undertaking the ultimate investment but rather to encourage the

private sector to carry out the task. Here lies an important difference between direct assistance on the one hand, and direct investment for infrastructural development and direct undertaking on the other.

In Pakistan, as a percentage of GNP, private investment has increased from less than 3 per cent in 1950-51 to around 8 per cent in 1967-68 (Background Table 21). A number of policies including direct government assistance were in operation. In the course of our earlier discussion (Chapter 4), an attempt was made to see the effectiveness of taxation policy in achieving the regional growth objective and it was found that the ratio of private investment to GRP in East Pakistan is still very low although a longer tax holiday has been granted to the region since 1961. On the other hand, there is evidence that direct government assistance has played an important part in raising private investment in West Pakistan.

Data of loans given by the Industrial Development Bank of Pakistan (IDBP), Pakistan Industrial Credit and Investment Corporation (PICIC), Agricultural Development Bank of Pakistan (ADBP) and House Building Finance Corporation (HBFC) in East and West Pakistan are shown in Table 7.2. Since these institutions

Table 7.2

IDBP, PICIC, ADBP and HBFC Loans in East and West Pakistan

(Rs. in Million)

	IDBP		PICIC		ADBP		HBFC	
	Absolute (1)	% (2)	Absolute (3)	% (4)	Absolute (5)	% (6)	Absolute (7)	% (8)
E. Pak	860.0	48	738.7	33	3760.23	42	2108.19	41
W. Pak	944.2	52	1474.0	67	5147.12	58	3069.79	59
Total	1804.2	100	2212.7	100	8907.35	100	5177.98	100

Sources and Notes: Col. (1) - Eight years of IDBP, p.15. Cols. (3), (5) and (7), - Pakistan Economic Survey 1968-69, pp.76, 82, and 86. Rest - Computed. Figures for the PICIC and HBFC are up to March 1969, while figures for the IDBP and ADBP are up to 1968-69 and 1967-68, respectively. Figures for the ADBP include loans given by the Agricultural Bank and the Agricultural Development Finance Corporation, the two organizations which were merged into the ADBP.

provide credit at a cheap rate, direct assistance is given to private enterprise. From the Table it is seen that West Pakistan has received a higher share in all cases. Of the total loans given by the IDBP 52 per cent went to West Pakistan as against 48 per cent to East Pakistan. The distribution of the PICIC loans has been 67 per cent for West Pakistan and 33 per cent for East Pakistan. The discrimination against East Pakistan in the PICIC loans deserves particular attention since a large portion of the total loan is in foreign exchange. Of the total loans by the ADBP, East Pakistan received 42 per cent and West Pakistan 58 per cent. The respective figures for loans given by the HBFC are 41 per cent for East Pakistan and 59 per cent for West Pakistan.

Based on the regional distribution of loans, as shown in Table 7.2, one may argue that higher loans given in West Pakistan by the IDBP, PICIC, ADBP, and HBFC have been an important factor for the buoyant private sector in this region. It is true that it would be wrong to consider this as the only factor which was responsible for the growth of private investment in West Pakistan. But it points to an area where provision of credit (including the highly valuable foreign exchange) played an important part in the growth of the private sector.

The DGA-objective of raising the investment ratio works through the rate of return. It has an important resemblance with the objective of foreign aid which puts emphasis on raising the ratio of domestic savings. Direct government assistance is an aid to the investor and demands that x unit given in the form direct assistance should produce something over and above the amount supplied. The working of the PICIC[12] bears testimony to this direction. It has been estimated that "one rupee of

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12 It should be mentioned that the entire fund of thePICIC loans is not from the government budgetary grant only, since the PICIC also raises fund in the open market. However, as a government-sponsored credit institution the PICIC may be treated as an important vehicle of direct government assistance.

PICIC assistance mobilized Rs. 1.17 of private funds."[13] If this growth of private investment is not due to a corresponding dissaving elsewhere in the economy one can safely argue for the hypothesis that a positive contribution of DGA raises the investment ratio. Available information from Pakistan would appear to corroborate the hypothesis.

(b) To help in improving factor allocation. The role of direct government assistance in raising the investment ratio, as discussed above, is more a matter of aggregative analysis. The case for a better allocation of the given investment fund is also of vital significance for an economy like Pakistan. The structural disequilibrium existing in the economy implies that factor-use is not in conformity with factor-availability. There are indications that factor prices such as wages, foreign exchange rate, interest rate, etc., do not reflect the supply of and the demand for the respective factors. The extent of deviation in each case cannot be known without some study. An attempt is made to get an idea in this regard in Appendix A. It appears that the deviation is quite significant in most cases. The equilibrium prices of capital and foreign exchange turn out much higher than the Bank rate and the official foreign exchange rate, respectively. So far as the equilibrium price of labour is concerned it seems that it would be lower than the market wage rate. Considering East and West Pakistan separately it is found that while capital and foreign exchange prices are highly overvalued in West Pakistan compared to East Pakistan, labour price is relatively over-valued in East Pakistan than in West Pakistan.

In the face of a structural disequilibrium of the extent that exists in Pakistan, it may be interesting to see the role of direct assistance in influencing production

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13 GOP, MF, Pakistan Economic Survey 1968-69, p.77.

techniques. In Chapter 4 the influence of factor prices in a dual economy was mentioned. The hypothesis is that factor-price differentials in the modern sector and the subsistence sector are responsible for different uses of factor proportions. Let us consider a very simplified example with only one sector and two inputs, say labour and capital. We assume that while labour-price is overvalued, the capital-price is undervalued. The assumption is based on the situation existing in the economies like Pakistan. For simplicity constant price-ratios are taken. It is assumed also that factor proportions can be varied.[14]

In figure 7.1 below, labour is represented by the x-axis and capital by the y-axis. The expansion path OA represents production in a situation of structural

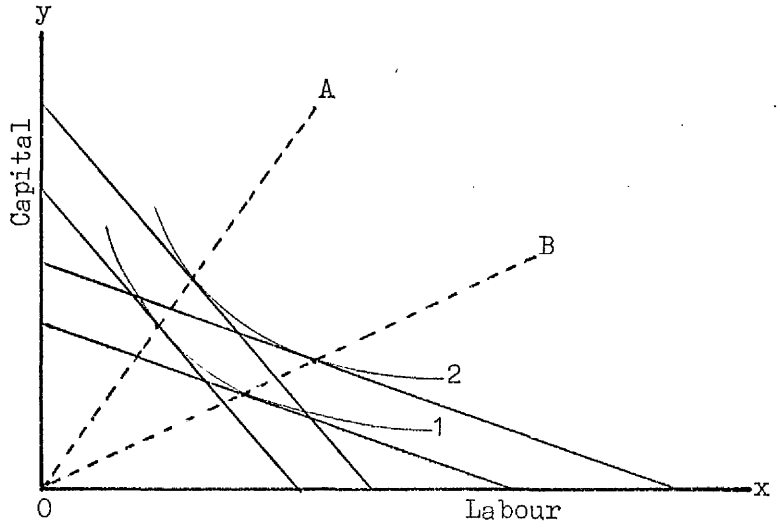

Figure 7.1: Expansion paths with different factor prices.

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14 Such an assumption of non-rigidity of factor-proportion will not be realistic if technological constraint is serious. As has been shown by Eckaus, technological restrains may not allow for change in factor proportion and this may be a cause of labour-unemployment-problem in underdeveloped countries. Cf. "The Factor-proportions Problem in Underdeveloped Areas," American Economic Review 1955. Reprinted in A.N. Agarwala and S.P. Singh (eds.) The Economics of Under-development, op. cit., pp.348-78 expecially 354-64. However, strict factor-rigidity should be considered a polar case and one often finds room for changing factor-proportions. In fact, considering long run investment decisions what factor proportion will be decided by the investor will mainly depend on factor prices. In the context of Pakistan, it has been found that "the entrepreneurs are not insensitive to relative factor-price differences. If the relative factor prices facing them could be rationalized they might be induced to shift to a more desirable capital-labour ratio." Cf. Khan, A.R. "Capital-Intensity and the Efficiency of Factor Use." Pakistan Development Review, Summer 1970, p.251.

dis-equilibrium. Here production occurs by using more capital and less labour. This is because the price of capital is relatively lower than the price of labour. The situation thus represents a typical economy like Pakistan where there is a concealed subsidy in the existing interest-rate and a concealed tax in the wage-rate.

Let us suppose that the equilibrium expansion path OB will assure factor-use based on factor-availability. So OB represents the expansion-path under structural equilibrium. In order to achieve a better allocation it is therefore necessary to disturb the original expansion-path OA in favour of OB. Since we have taken only two inputs - labour and capital - our task here is to see that in his investment decisions the investor faces a higher capital price and lower labour price.

So far as the capital price is concerned the planners of Pakistan repeatedly suggested raising the Bank rate. As early as in 1960 they observed that "There exists a good case for an upward revision in interest rates. Productivity of investment is high; it is, for instance, as high as 30 per cent in large scale industry."[15] The interest rate structure should bear some relationship to profitability of investment. There would be no fear that higher interest rates will result in some of the capital funds lying idle; the aggregate supply of capital will still fall short of aggregate requirements. In fact, higher interest rates should not only attract higher savings but also bring about selectivity in investment."[16] But the suggestion offered by the planners still remains to be implemented.

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15 According to Rahman, early entrepreneurs in West Pakistan enjoyed rates of profit as high as between 100 and 200 per cent. Cf. Rahman, M.A., The Private Sector of East Pakistan: An Analysis of Lagged Development. Reported in Economic Journal, December 1970 (New Books and Periodicals p.1046.)

16 GOP, PC, The Second Five-Year Plan, p.77. For the subsequent remarks see the Third Plan, p.123 and the Annual Plan 1968-69, pp.31 and 33 respectively.

So far as labour price is concerned it is feared that any suggestion of lowering the wage rate will not be welcomed by the society. This means that in order to establish relative prices of labour and capital in conformity with supply, the capital price will have to be raised by many hundred per cent, maintaining the labour price at its present level, in order to show the relative scarcity of capital. Another alternative is to apply different policy measures in a manner such that the use of capital is discouraged and the use of labour is encouraged.

It is in the realm of direct assistance that the government can offer financial grant on a per capita basis of labour employed. For example, in the United Kingdom it has been a policy of the government that in offering assistance to a firm, the prospective increase in employment should be considered. [17] It need hardly be mentioned that such a measure is urgently needed in Pakistan if there is no possibility of raising the capital price or reducing the labour price to an extent which could reflect the factor availability.

(c) To encourage small or new enterprises. In Chapter I we touched upon the problem of the concentration of wealth in a few hands. According to the Third Plan: "The rapid industrial development in the last two decades has been accompanied by growing concentrations of income and wealth in the hands of a few family groups. To some extent, this was inevitable as the demands for capital formation necessitated generous fiscal concessions for reinvestment of profits and for the entire accumulation process. A stage has been reached, however, where the growing concentrations of

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17 Prest, A.R., "The Role of Labour Taxes and Subsidies in Promoting Employment in Developing Countries," International Labour Review, April 1971, pp. 323-24. See also Wilson, T., Policies for Regional Development, op. cit., p.39.

industrial wealth are likely to raise not only problems of social justice but also of economic efficiency. If these concentrations of wealth result in monopolistic practices, industrial collusions, weeding out of newcomers with fresh ideas and enterprise and the exclusive dependence of big enterprises on family members alone, there is a serious risk that the dynamism of the industrial sector may be lost and the whole process of industrial growth tend to decay. Thus, broadening of the industrial base becomes a necessity to preserve the very character of the industrial growth."[18]

An important factor of income redistribution in favour of a particular group of people in Pakistan is the availability of scarce factors at much lower prices. Deposit rates and advance rates are very low in the organised money market.[19] Consequently, while depositors face a negative rate of interest, borrowers continue to enjoy a large benefit.[20] In other words, anybody with access to capital at such a low rate finds himself in a favoured position. The nature of the favouritism is

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18 GOP, PC, The Third Five-Year Plan, p.450.

19 Nominal rate of interest on deposits has varied from 1.15 per cent to 2.66 per cent in the period from 1960-61 to 1967-68. But considering the increase in the price level it appears that the real rate has been very low and for most years negative. Cf. Chowdhury, A.H.M.N., "Some Reflections on Income Redistributive Intermediation in Pakistan," op. cit., p.105. (For our estimate of change in price level from 1950-51 to 1969-70, seeBackground Table 8). The overall weighted average rate of interest on advances was 7.69 per cent in June 1969. In June 1968, it was 7.30 per cent. Cf. State Bank Bulletin, March 1970, p.xix.

20 The existence of a very low rate of interest in the presence of a large demand seems to be unacceptable from theoretical consideration. It is natural that given a large demand, an unorganised market will develop. It does not seem that such a market has emerged. The Muslim attitude against moneylending may be partly responsible. Direct administrative controls by the Government may also work as a factor.

clearly reflected in the way bank advances have been concentrated in a few accounts.[21]

The implication of a severe concentration of bank credit is that the needs of credit at large are denied. Unfortunately, the main victims are the small investors or newcomers who have less access to bank credit. But these are the people whose case has been recommended by the planners of Pakistan.[22] In order to encourage private investment in the lesser developed areas especially in East Pakistan, there is also the further necessity of assuring that bank advances are not allowed to concentrate in the more developed areas.

It appears that the Government is aware of the problem of ownership of the financial institutions in the hands of the industrialists and it has already been decided by the Government that the industrialists should not acquire control of financial institutions such as banks and insurance companies.[23] While a concentrated effort will be necessary to maintain impartiality in the credit market especially when the rate of interest is much lower than the equilibrium rate, the DGA policy in the form of providing credit may be directed towards providing incentives to newcomers and investors with little capital. Specialized credit institutions like HBFC, PICIC, and

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21 The Credit Inquiry Commission found that by March 1959, about 63 per cent of bank advances were concentrated in only 222 accounts (out of 40, 317). Cf. GOP, Credit Inquiry Commission Report 1959, p.96 as quoted in Nayimuddin, M., "A Study of Fiscal Policy in Pakistan," op.cit., p.314. Chowdhury has found that in 1967 there has been some deconcentration after the percentage share of loans reaches 64. But concentration seems to have increased before that. Cf. Chowdhury, A.H.M.N., op.cit., pp.107-8.

22 As has been observed by the Third Plan: "The internal profits of the big industrial families are sizeable enough to permit them to expand their industries without large and continuing assistance from the development banks like PICIC and IDBP and a major recourse to credit from the commercial banks. The present situation demands that credit facilities of these institutions be placed more and more at the disposal of the newcomers and the big industrial families should finance their future expansion increasingly from their own profits." Cf. GOP, PC, The Third Five-Year Plan, p.451.

23 GOP, PC, The Third Five-Year Plan, pp.450-51.

IDBP seem to have this objective in mind. For example, encouraging new entrepreneurs and establishing new industrial units have been important objectives of the IDBP. During the period 1961-69 about 63 per cent of the number of loans and 69 per cent of the total amount sanctioned by the Bank were for the setting up of new units.[24] The PICIC has lowered the minimum lending limit from Rs. 15 lakh to Rs. 10 lakh equivalent in foreign exchange for a project to be established in East Pakistan and a similar move is being contemplated for the underdeveloped areas of West Pakistan.[25] This is expected to encourage private investment in the less developed areas as well as to benefit prospective newcomers. The HBFC maintains a discriminatory interest and repayment policy in favour of smaller loans. For example, the present rate of interest is $7\frac{1}{2}$ per cent on loans up to Rs. 20,000 and 8 per cent on loans above Rs. 20,000. The maximum period for repayment is 12 years for a loan of Rs. 20,000 and 10 years for a loan of above Rs. 20,000.[26]

Whether the policy as pursued by the different credit institutions has been a success or whether some improvement is necessary in the credit policies are, of course, important issues. But since these will take us far afield we would like to leave it here simply by mentioning that once an objective such as giving incentive to small enterprises or to newcomers has been taken, the policy of direct government assistance provides an important instrument for achieving the objective. This is particularly so if credit through private banks are not found available for them.

In concluding this Section it may be mentioned that in the discussion of the need for direct government assistance we have tried to locate some areas keeping in

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24 Eight Years of IDBP. Date of publication not mentioned; probably 1969. p.12.

25 GOP, MF, Pakistan Economic Survey 1968-69, p.75.

26 Ibid, p.85.

line with the development objectives of the economy. It is true that our discussion is not what may be called exhaustive. It does show, however, that direct government assistance has an important role to play in the context of Pakistan and the development model of the economy. If the country does not care for ideology and if private and public sectors are found equally efficient, the need for direct assistance is not obvious. But if the growth of private sector is given importance the need for direct government assistance cannot be ignored if it is found to be an important mechanism for providing incentive and channelling private consumption fund towards investment. The role of DGA may be particularly important where private enterprise is not very quick to respond and where direct government investment for production is not the ultimate objective. The agricultural sector in Pakistan provides a good example. In fact, as mentioned earlier, almost the entire government investment in agriculture is in the form of direct government assistance. Accordingly, the next Section will be devoted mainly to an analysis of the agricultural sector with reference to the allocation of government expenditure as found in the First, Second and Third Five-Year Plans.

III Allocation of DGA in Agriculture

Agriculture contributes the biggest share of National Income in Pakistan (Background Table 5). In 1969-70, the share has been more than 45 per cent of the total National Income. In 1949-50, it was as high as about 60 per cent. It was stagnation in agriculture that was mainly responsible for the low growth rate of GNP in the 1950's. It is again the high rate of growth in agriculture which has enabled the economy to maintain an overall fast rate of growth in the 1960's. Of the total development expenditure in Pakistan the relative share of agriculture was 7 per cent in the First Plan; the figure was increased to 13 per cent in the

Second Plan and further increased to 15.4 per cent in the Third Plan (Table 5.2). So far as public sector investment is concerned it is found that the relative share of agriculture was 11.6 per cent and 10.6 per cent in the First Plan and Second Plan respectively. In the Third Plan the figure is found to be 11.2 per cent. It probably needs no mention that if water development were included the relative share of government development expenditure for agriculture would appear much higher.

As already mentioned, in this Section we shall deal with that part of government development expenditure which has been directed for the development of agriculture in the context of the First, Second and Third Five-Year Plans. Following our previous stand we shall assume the public-sector allocation for agriculture as given and our main task is to see the rationale of allocation of the given fund among the various sub-sectors within agriculture.

Table 7.3 shows public-sector allocation for agriculture as found for the First, Second and Third Plans. The Table needs to be treated with caution for three main reasons. First, as may be seen, information provided does not always allow us to obtain a specific idea about the nature of the service provided by the different sub-sectors; items such as the Agricultural Development Corporation, Rural Development, etc. are misleading in the sense that they do not specify the nature of the input. Second, the Table does not include the entire public sector expenditure directed towards providing assistance to agriculture. The vast water development programme providing facilities like irrigation, flood control, etc., as discussed in Chapter 5, are not included in Table 7.3. Further, as already pointed out, the rural credit given by the Government is not included and a large portion of government expenditure given in the form of agricultural loan is shown outside the allocation of the

Table 7.3

Public Sector Allocation for Agriculture in the First, Second, and Third Five-Year Plans

(Rs. in Million)

	First Plan		Second Plan		Third Plan	
	Absolute (1)	% (2)	Absolute (3)	% (4)	Absolute (5)	% (6)
1. Fertilizers	200	13	420.50	17	884.48	22
2. Mechanization			70.24	3	417.08	10
3. Soil Surveys	318	21	16.30	1	24.64	1
4. Plant Protection			331.44	13	584.98	14
5. Seed Multiplication and Distribution	86	6	161.10	6.5	93.50	2
6. Agricultural Development Corporation	-	-	201.80	8	99.55	2.5
7. Agricultural Marketing and Storage	59	4	190.17	7	285.54	7
8. Soil Conservation and Range Management	18	1	32.12	1.5	116.42	3
9. Colonization	115	8	135.90	5	93.82	2
10. Animal Husbandry	114	8	122.68	5	148.10	4
11. Forestry	90	6	168.42	7	256.71	6
12. Fisheries	35	2	60.10	2	169.94	4
13. Agricultural Extension Research, etc.	52	3	227.63	9	305.31	7.5
14. Land Reforms	12	1	71.80	3	13.50	Neg.
15. Rural Credit	107	7	(a)	(a)	75.00	2
16. Rural Development through Cooperatives and Basic Democracies	297	20	230.30	9	174.06	4
17. Miscellaneous	-	-	74.50	3	372.64	9
Total	1,503	100	2,515.00	100	4,115.27	100

Sources and Notes: Col. (1) - GOP, The First Five-Year Plan, pp.36-37 and 30. Col. (3) - GOP, Evaluation of the Second Five-Year Plan, pp.211-12. Col. (5) - GOP, Revised Phasing ... of the Third Five-Year Plan, pp.17-18. Rest - Computed. (a) Included in 16. In preparing the Table from the source data, at places some aggregation had to be made. This is, however, unlikely to make a significant change of any particular item. Figures have been rounded off. Inter-period comparison of investment figures is not possible due to difference in prices.

Second and Third Plans as capital liability on government account. Third, the inclusion of an item like forestry may create some confusion since it involves direct production by the Government and thus implies direct government undertaking. Available statistics, however, do not permit us to compute DGU and DGA elements separately.

It follows that the Table above is not fully representative of the public sector allocation for agriculture in Pakistan. As mentioned previously, the Table excludes the water development programme which has been considered by the planners of Pakistan as a part of infrastructural development. It was found that in so far as the water-programme provides an agricultural input there is an important agrument for including the allocation for water development within agriculture (Chapter 5). An analysis of the DGA allocation for agriculture without considering the allocation for water may invite criticism, especially when the allocation for water development has been substantially large. Table 7.4 has been prepared in order to provide an idea of the allocation for water in comparison with the separate allocation shown

Table 7.4

Public Section Allocation for Agriculture and Water

(Rs. in Million)

	First Plan		Second Plan		Third Plan	
	Absolute (1)	% (2)	Absolute (3)	% (4)	Absolute (5)	% (6)
1. Agriculture (excluding water-development as included in infrastructural development)	1,503	45	2,515	50	4,115	51
2. Water-development (as included in infrastructural development)	1,826	55	2,580	50	3,934	49

Sources: Investment figures for agriculture are from Table 7.3 and those for water from Table 5.4. Cols. (2) (4) and (6) - Computed.

for agriculture. The Table shows that of the total allocation, water alone has held a 55 per cent share in the First Plan, 50 per cent in the Second Plan and 49 per cent in the Third Plan. It is true that the relative allocation for water has been reduced in the Second and Third Plans. But this is misleading since the vast Indus Basin Development Programme, as mentioned earlier, has been kept outside the Plans.

To know whether such a big allocation for water development is economically justified or not requires a knowledge of marginal productivity, say in irrigation in comparison with that from other uses like mechanization, seeds, credit, etc. There is also the need for further consideration of whether or not the different inputs are substitutable. From our discussion in Chapter 5 it follows that if judged from only productivity considerations there is reason to question the rationale of such a big allocation of water for mainly large irrigation projects. For there are better alternative uses in the form of allocation for fertilizer, seeds, farming techniques, etc. The prospect of the development of private irrigation through tubewell installation has also made room for another alternative. The point remains however, that considering the big size and large amount involved in the public-sector irrigation, particularly in West Pakistan, there exists the necessity of calculating the net social benefit of irrigation in relation to other uses. From the exercise in Appendix A, it appears that the rate of discount is much higher in West Pakistan and the use of such a higher discount rate will substantially reduce the net present value of the irrigation projects with longer life.[27]

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27 The hypothesis that investments in major irrigation projects represent an inefficient allocation of scarce capital resources has been found valid in the context of a recent study based on agricultural production in India. The rate of return of the major river projects undertaken in Andhra Prodesh during the Third Plan of India is estimated at 3 to 4 per cent per annum, that is "a small fraction of the return realized by large private industrial companies and well below the prime commercial rate." Cf. Wellisz,S., "Resource Allocation in Traditional Agriculture: A Study of Andhra Prodesh," Journal of Political Economy, July/August 1970, p.671.

In the context of Pakistan's agriculture it seems that fertilizers and mechanization present two areas with quite different productivity potentials. It may therefore be of interest to see how these two sub-sectors appear in a study of the rationale of allocation for direct government assistance.

Fertilizers. From Table 7.3 it appears that of the total public sector allocation for agriculture the relative share of fertilizers was 13 per cent in the First Plan. The share was raised to 17 per cent in the Second Plan and further to 22 per cent in the Third Plan. The increase in the relative share over these periods implies an increase in relative importance which has been put on fertilizer as an input in raising agricultural productivity. As observed in the Third Plan, "Experiments so far conducted on the soils of both East and West Pakistan have shown that the use of fertilizers is one of the quickest and perhaps cheapest means for increasing agricultural production." [28]

In order to ascertain the productivity of fertilizer use, a number of studies have been undertaken. In a recent study Quraishi and Khan [29] have attempted to determine the economics of fertilizer application to wheat crops on cultivators' fields in the Lyallpur district of West Pakistan. 1966-67 was selected as the period of their study. In order to check their results, they compared their findings with

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28 GOP, PC, The Third Five-Year Plan, p.403.

29 Quraishi, B.A., and Khan, M.J., "Economics of Fertilizer Application to Wheat Crop: The Results of a Survey in Lyallpur District," Pakistan Development Review, Spring 1970, pp.88-99.

those of some other studies.[30] The Quraishi-Khan study shows that "the weighted average yield per acre of fertilizer users and non-users was 17 and 11 maunds, respectively. The increase in yield due to fertilizer was 6 maunds per acre, or 55 per cent. The weighted average yield per acre of fertilizer users was 19, 15 and 15 maunds and that of non-users 13, 9 and 9 maunds in the case of peasant proprietors, owner tenants and tenants, respectively. Thus the average yield for the fertilizer users for each category of farmers is very significantly higher than for the corresponding category of fertilizer non-users."[31] They also tried to determine the relationship between fertilizer dose and yield per acre. The correlations tried for Y(yield per acre) on X(fertilizer per acre) was found significant at 1 per cent level. 161 observations for the month of December gave $Y = 8.86 + \underset{(0.097)}{0.196}X$, the correlation coefficient being +0.525. 100 observations made in December + January gave $Y = 6.16 + \underset{(0.123)}{0.343}X$, the correlation coefficient being + 0.603. The regression coefficient represents the corresponding increase in yield due to the addition of one pound of fertilizer dose (nutrients) as being 0.196 and 0.343 maunds, or 16 and 28

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30 The studies referred are: (1) Ahmad, S. and A.Sodager, Fertilizer Trials on Mexican Wheat in West Pakistan. Mimeographed paper presented at the Regional Conference of ESSO (Pakistan) Fertilizer Co. Ltd., Lyallpur. (2) Pakistan, Ministry of Food and Agriculture, Survey Report on Use of Fertilizer in Pakistan. (Rawalpindi: Director of Agricultural Economics and Statistics, Ministry of Food and Agriculture, April 1961). (3) Pakistan, Planning Commission, Economics of the Use of Fertilizer (Karachi: Agricultural Section, Planning Commission, 1959). (4) Tufail, M., Some Studies regarding the Use of Manures and Fertilizers by the Farmers in Lyallpur Tehsil. M.Sc. (Agriculture) thesis submitted to the West Pakistan Agricultural University, Lyallpur, in 1962. (5) United States, Department of Interior Panel on Waterlogging and Salinity in West Pakistan, Report on Land and Water Development in the Indus Plain(Washington, D.C.: The White House Department of Interior, 1964). Most commonly known as Revelle Report. (6) Wahhab, A., "Grow More Food II, Fertilizer Trials on Cultivators Fields," Agriculture Pakistan, March, 1959.

31 Quraishi, B.A., and Khan, M.J., ibid, p.92.

pounds in case of fertilizer applied in December and December + January, respectively. Since the Quraishi-Khan study is based on a more prosperous area, their findings must be treated with caution when making any generalization. But even on an all-West Pakistan basis it has been stated in the Revelle report that, "the fertilizer-response coefficient for wheat in Pakistan had shown 9 pounds return per pound of plant nutrient applied." [32] The findings by Quraishi and Khan reveal that the monetary return per rupee spent on fertilizer at a 35 per cent subsidized rate and at full cost was Rs. 7.85 and Rs. 5.10, respectively. The findings are higher than those reported by the Ministry of Food and Agriculture (Rs. 2.8 at subsidized rate) and Tufail (Rs. 4.7 at subsidized rate), but the results are "close to the results reported by Ahmad and Sodager, who stated that the monetary return per rupee spent on fertilizer was 7 or 8 rupees in some cases." [33]

It thus seems that the increase in allocation for fertilizer is justified. What amount of subsidy ought to be given for fertilizer in the form of direct government assistance is, however, not very easy to say. The best that can be suggested is that efforts should be made to ensure that non-availability of fertilizer does not stand in the way of adequate use.[34] This will necessitate a great improvement in the distribution of fertilizer. Instead of providing subsidies in the form of lower priced fertilizer, an important alternative may be to provide credit to the farmer in the

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32 Quoted in ibid, p.92.

33 Ibid, p.95.

34 According to Papanek, "Two major causes of inadequate fertilizer use were administrative failure to provide credit, and failure to make fertilizer readily available." Cf. Pakistan's Development, op.cit., p.170.

form of fertilizer itself.[35] Studies, however, will be necessary before undertaking a final course of action.

Mechanization. While the case for a higher allocation for fertilizer appears obvious, the case for mechanization is not so. As early as 1951-52, the Pakistan Agricultural Inquiry Committee discouraged rapid mechanization. Implicitly based on foreign exchange shortage and labour-surplus considerations, the Committee observed that "it would be unwise to follow exactly the same pattern of rapid transition from animal to tractor power as adopted by the (developed) countries ..... It is estimated that complete farm mechanization would replace at least 2 out of 3 labourers. Such a change in agricultural economy might create a serious problem of unemployment. Caution against too rapid mechanization is, therefore, needed in settled areas as industrial development will take considerable time to absorb the surplus labour. We must, therefore, develop mechanization to suit our own conditions."[36] But in the report of the Food and Agricultural Commission submitted in 1960, the case for mechanization seems to have been recommended. According to this report, "there are strong reasons for examining the case for mechanization. In judging its value there is need to assess whether its use may not earn or save far more foreign exchange than its importation costs and, by increasing production, create far more jobs in the long run than it displaces. It is true that in Pakistan industrial-

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35 A recent study by Leonard indicates that "fertilizer subsidy is in fact an economic rent and that a more effective method of stimulating fertilizer sales might be through the credit system. This will depend on the extent to which credit acts as a substitute for the subsidy and the extent to which new users are stimulated by the credit facilities." Leonard, P.L., "A Note on the Demand for Fertilizer in West Pakistan," Pakistan Development Review, Winter 1969, p.424.

36 GOP, Ministry of Food and Agriculture, The Report of the Pakistan Agricultural Committee 1951-52. Quoted in Kaneda, H., "Economic Implications of the 'Green Revolution' and the Strategy of Agricultural Development in West Pakistan," Pakistan Development Review, Summer 1969, p.123.

ization has not reached a stage where population displaced from the land can easily find employment. When individuals are displaced, real human problems are created but these individual cases of hardship have to be compared with the prospect of poverty and unemployment faced by the country, if agricultural production is not increased.[37]

Thus it appears that the mechanization-issue needs a thorough consideration. Many factors such as labour-surplus, increase of output, saving consideration, alternative use of investment fund, etc., need to be considered. Following our approach of the criterion of social productivity what is required is to estimate the social costs and benefits of mechanization. Recently, Bose and Clark [38] attempted to make an analysis on a similar approach. They have tried to estimate both direct and indirect costs and benefits of mechanization in West Pakistan. They found that while net private benefits of mechanization are positive, net social benefits are negative. For the estimate they considered a 12 per cent annual rate of growth of mechanization, as has been recommended by the Planning Cell of the Agricultural Department of the Government of West Pakistan. "As an illustration of the implications of this recommendation," the Bose-Clark study shows that, "in 1975 the direct costs to society of such a programme would be about 330 million rupees, and the direct benefits would be around 200 million rupees. Thus, the net direct social cash flow in that year would be about minus 130 million rupees. Similarly for other years

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37 GOP, Ministry of Food and Agriculture, The Report of the Pakistan Food and Agriculture Commission (Karachi: Manager of Publications, 1960), p.106. Quoted in Kaneda, H., ibid, p.124.

38 Bose, S.R. and Clark II, E.H., "Some Basic Considerations on Agricultural Mechanization in West Pakistan," Pakistan Development Review, Autumn 1969, pp.273-97.

the direct social benefits would be considerably smaller than direct social costs. Moreover, the indirect social costs, mainly arising from throwing large numbers of farm labourers out of employment, may be considered much greater than the possible indirect benefits."[39]

How far the Bose-Clark study can be accepted as definitive is a matter of opinion. Their model is based on a number of assumptions, such as the possibility of improving present techniques, the scope of partial mechanization, etc., and they themselves were aware of the limitations. In a developing economy like Pakistan which is desirous to raise the investment ratio, the saving implication of mechanization is an important consideration. It would seem that Bose and Clark have failed to seriously consider the implication of this important aspect.[40] However, the extent of the negative net social benefit is so large that it leaves room for questioning the rationale of a higher public sector allocation for mechanization. Further, in East Pakistan where the unemployment problem is more acute (Background Table 4), the net social benefit of mechanization may appear worse.

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39 Bose, S.R., and Clark II, E.H., op.cit., p.294. It may be mentioned that a quite opposite hypothesis has been presented in a recent survey Report (GOP, Department of Marketing Intelligence and Agricultural Statistics, Survey Report on Farm Power, Machinery and Equipment in Pakistan, December 1967). The Report concludes that mechanized cultivation in West Pakistan is economical and more advantageous than bullock farming because cost per cultivated acre in case of tractor is Rs. 96.00 and of bullock Rs. 131.82. Similarly, for East Pakistan, mechanized cultivation has been found economical and advantageous over bullock cultivation. But it needs to be mentioned that the preconditions (included in the Report in the form of suggestions) involve a number of things including long-term credit at subsidized rate, subsidy on mechanization, irrigation, marketing etc. Further it seems certain that the Report is based on market prices and has little idea of the big social costs involved in mechanized cultivation as studied by Bose and Clerk.

40 Their main excuse is that it is difficult to predict the savings behaviour of the future agricultural capitalists.

In the context of an allocation problem what one should aim for is to achieve the best allocative use of the limited investment fund. Since resource uses are competitive with each other, particularly in a country like Pakistan where the investment fund is highly limited, it is natural that mechanization will tend to reduce the fund available for other alternatives with a higher productivity such as fertilizer, seeds, etc. So what must be done is to keep the allocation for mechanization in check. But looking at Table 7.3 it does not seem that this has been followed. No separate estimate of mechanization is available from the figures as shown for the First Plan.[41] In the Second Plan, of the total public sector allocation for agriculture the relative share of mechanization is 3 per cent; in absolute figures, the size of allocation is Rs. 70.24 million. The actual implementation was, however, much higher than the Plan allocation; the total estimated expenditure is found to be Rs. 115.35 million which means that the percentage implementation for mechanization during the Second Plan was 164 per cent.[42] In the Third Plan, the relative share of mechanization was increased to 10 per cent. This is in comparison with a 2 per cent share allocated for seeds which is now believed to be one of the highly productive inputs. Following the social productivity test one may thus reasonably question the emphasis put on mechanization.

It should be mentioned that the above analysis does not mean that there is no room for mechanization whatsoever, or that DGA policy should not operate in

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41 The First Plan shows an allocation of Rs. 318 million for "Others" under the heading "Field Crops." It seems that the allocation is meant for the items like mechanization, soil surveys, plant protection etc. From the allocation as found for the Second and Third Plans, one may guess that a large part of the total under the group "Others" in the First Plan was for plant protection.

42 GOP, PC, Final Evaluation of the Second Five-Year Plan, p. 183.

this field. Taking the first point it may be mentioned that our analysis regarding mechanization is more appropriate to tractor-mechanization in so far as it competes with labour-use. If mechanization can be made complementary to labour, its importance cannot be denied.[43] So far as the role of direct government assistance is concerned, the main issue centres around the wide divergence between social and private profitability. Factor price divergence prevailing in Pakistan (Appendix A) implies that mechanization involving more capital and foreign exchange will undervalue the cost to the private sector unless the divergence can be corrected through taxation. Unfortunately, as found in Chapter 4, the taxation policy has not yet been framed to take into account the divergence between social and private profitability, and the tax on machines like tractors remains very low (20 per cent in East Pakistan and 25 per cent in West Pakistan.) But in order to correct the situation it has been estimated that a tax of well over 100 per cent on tractors would be necessary.[44] Alternatively, DGA-policy may be directed for subsidizing labour. But considering the large number of labourers involved in agriculture it seems that it would be beyond the ability of the economy to execute such a policy.

In concluding this Section it may be observed that the allocation of direct government assistance among different uses is very important. The subsidy element involved here will influence both aggregative and allocative aspects of investment decisions. In Section II, the impact of DGA on regional investment ratio was slightly

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43 As has been observed by Bose and Clark (op. cit. p.296), "Introduction of mechanical power should be made when it is complementary to labour and also when it may be necessary for certain operations which fall in the peak season of labour shortage. There is also scope for improving traditional ploughs, harrows, and other implements for cultural operations to be done better and faster."

44 Bose, S.R., and Clark II, E.H., op.cit. p.296. It seems that in East Pakistan the tax rate will have to be higher if tractor-use gives rise to higher displacement of labour which is relatively cheaper in this region than in West Pakistan.

touched upon. Here it is probably sufficient to mention that the inter-regional allocation of DGA in agriculture should take into account public investment for water development as well. Figures for the Second and Third Plans show that, excluding public investment for water development in inter-regional investment for agriculture in the government sector East Pakistan and West Pakistan have received almost equal shares.[45] But, as found in Chapter 5, a large public sector programme for water development has been implemented in West Pakistan. This may be largely responsible for the tremendous success of agricultural development in this region.[46]

DGA as a Policy Instrument

In Sections II and III, the need for direct assistance in general and the rationale of allocation of direct government assistance (DGA) in agriculture were discussed, respectively. One important question which needs serious consideration may be briefly stated as: What type of policy instrument is DGA? Limited knowledge and experience in Pakistan in this field is a great hindrance in the way of obtaining any definite conclusions. Information available allows one to make only a few qualitative remarks. However, this limitation is not peculiar to Pakistan, but refers to almost all underdeveloped countries. So far as the developed countries are concerned,

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45 The total public investment during the Second Plan for agriculture in East and West Pakistanwere Rs. 951.78 million and Rs. 903.94 million, respectively. Cf. Final Evaluation of the Second Five-Year Plan, pp.186-87. In the Third Plan, public investment for agriculture in East and West Pakistan were Rs. 1,493.94 million and Rs.1,327.31 million, respectively. Cf. Preliminary Evaluation of the Third Five-Year Plan, pp. 309-10.

46 'Tremendous success' is used here in the general sense of increase in output without implying the cost involved.

an important work in the field of financial inducement for encouraging private investment with reference to regional development in Great Britain and Canada has been carried out by Professor Wilson. [47] In considering the difference between Pakistan and the countries dealt with by Professor Wilson, his conclusions, of course, must be taken with caution in the present work. [48] However, some reference to it is probably not without significance, since there is an important similarity in the strategy of development, that is, to encourage private investment.

In any examination of DGA as a policy instrument one needs an idea of the costs involved in such a policy. In other words, given the benefit we need to know what costs are involved in government assistance in comparison to those in other policies. An important difference, however, should be made between gross and net costs. The entire amount given in the form of direct assistance is gross cost to the government. In order to get an idea of the net cost we need to exclude the amount that will be paid back, say in the form of the repayment of a loan with interest, the rent of industrial estates and so on. One may even go further and consider the net increase in output due to direct assistance. For example, the output effect of fertilizer-use was found to be very high. With reference to the PICIC loans it was found earlier that one rupee mobilizes Rs. 1.17 of private funds. So indications are that if properly applied the net cost of DGA policy should not be very high. Further, if direct government assistance can be manipulated to take away fund from

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47 Wilson, T., Policies for Regional Development, op. cit.

48 It should also be mentioned that while Professor Wilson's study refers to all types of financial inducements we are here mainly interested with direct assistance only.

the consumption-sector and direct it to the investment-sector, it will help to raise the investment ratio of the economy, and the net cost of DGA may even appear negative.

At the beginning of this Chapter, a comparison of assistance was made through taxation policy and DGA. To a firm receiving assistance, it does not matter much what type of assistance is given so long as the firm continues to receive the amount without difficulty. What matters most is the percentage of the total cost covered by the financial assistance. An industrial firm in Pakistan can expect government assistance through the provisions of a tax holiday, accelerated depreciation, loans, equity participation, etc. To an enterprise engaged in agriculture, the government assistance is provided through the subsidy given to agricultural inputs, government credit, price guarantee etc. From the information available for Pakistan it is very difficult to determine what percentage of cost is being covered through subsidy. Professor Wilson's estimate in the context of Great Britain does not show that the subsidy provided to an industrial firm is very substantial, as is evident from the following observation: "It has been estimated that, when allowance is made for assistance of all kinds, firms in the development districts of Great Britain provided about four-fifths of the capital employed from their own resources over the years 1960-62, when allowance is made, as well as may be, for all forms of assistance. Elsewhere in Great Britain the percentage was about nine-tenths." [49]

It does not seem that Pakistan has followed any scheme of providing investment grants. Government loans which have been provided through the specialized

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49 Wilson, T., Policies for Regional Development, p.67.

credit institutions have not been very significant.[50] This may be due partly to less confidence in the effectiveness of direct government assistance as an instrument of resource allocation. This may also provide an important explanation for resorting to such measures as the protection of industries through import controls, and thus assure the success of industrial development by allowing private enterprise to enjoy a high rate of return. These types of measures come within direct controls and are not generally encouraged under GATT. They have also the added disadvantage that there does exist the possibility of misallocation of resources.[51] By contrast, financial inducement through taxation policy and direct assistance are superior, as has been remarked by Professor Lewis: "Much the best way of ensuring the success of a production programme is to tax the activities one wishes to discourage, and to subsidize (in one way or another) the activities one wishes to encourage."[52]

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50 See Papanek (op. cit. pp. 87-91) for his remarks about the PICIC and IDBP which played a small role in Pakistan's industrial development especially at the early phase. So far as the agricultural sector is concerned, the main sources of credit are the friends, relatives, village moneylenders, etc., and the contribution of the government source has remained negligible. Rahman found that over 85 to 90 per cent of farm loans is provided by the private moneylenders. Cf. Rahman, M.S., "A Study of Farm Credit with particular reference to Pakistan", Unpublished B. Litt. thesis, Glasgow University 1967, p.315.
In connection with industries, some subsidy seems to have been provided through the PIDC which was discussed in Chapter 6 as a vehicle of direct government undertaking. Here the mechanism of providing subsidy is through taking private parties as partners in the PIDC ventures and the government absorbing the interest charges, management costs and even losses.
However, when loans are provided in foreign exchange, the subsidy obtained by the private sector is substantial because of the highly undervalued foreign exchange rate.

51 In the context of Pakistan, misallocation of resources seems to have been mainly in the forms of distorted industrial structure and under-utilization of capital. The pegged exchange rate along with the blanket protection given to home industries are chiefly responsible for the development. Cf. Winston, G.C., "Overinvoicing, Underutilization, and Distorted Industrial Growth," Economic Journal, March, 1971, pp. 36-58.

52 Lewis, W.A., TheTheory of Economic Growth, p.390.

By emphasising the case for financial inducement we should not, however, ignore the potential disadvantages of the policies. Firstly, from economic considerations, one cannot support permanent subsidization either through tax policy or direct assistance. The main objective of the assistance is that the enterprise concerned has the potentiality of growth and will be able ultimately to stand on its own feet. But one cannot deny that certain areas, sectors or industries have a comparative disadvantage over others. A policy of permanent subsidization may imply that 'an attempt is being made to offset in this way the disadvantages of what was, and always will be, a somewhat unsatisfactory' area, sector or industry.* Secondly, in an economy like Pakistan, the objective of any policy should be to correct the structural disequilibrium prevailing in the economy. Following our exercise in Appendix A, it is evident that in order to achieve structural equilibrium labour-employment should be encouraged and the employment of capital and foreign exchange should be discouraged. Financial inducements, provided against capital cost, instead of helping to correct the disequilibrium may make it worse.[53]

Thus, both tax policy and direct assistance as instruments of financial assistance are not free from defects. But the taxation measure has some added disadvantage in that it works as a weak incentive, even where it has worked efficiently as a deterrent.[54] The ineffectiveness of a tax holiday to increase investment in East Pakistan as observed earlier, is a case in point. On the other hand, the tremendous

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53 A qualification is necessary because the financial inducements offered may be conditioned by the number of jobs created, restrictive use of foreign exchange, etc., which may help to correct the disequilibrium.

54 U.N., World Economic Survey 1967, p.42.

* Quoted from Wilson, T., op. cit.

success of agriculture in West Pakistan is attributed mainly to the large public sector programme including irrigation which has been channelled in the form of direct government assistance.

In comparison to a tax holiday, direct assistance through government grants and loans has a special advantage for providing assistance to small enterprise, both newcomers and those which are already established. [55] Not only this, grants and loans also directly help the small concerns to gain the benefits from tax concessions. According to Professor Wilson: "The usefulness of such loans is likely to be all the greater because tax concessions, which may strengthen the liquidity of a firm which has more than one factory and is already profitable, are not likely to provide much initial help to a small concern that has just started operations." [56]

The above conclusion seems to be of special significance in Pakistan. In Chapter 6, while discussing the inadequacy of private investment in achieving the target rate of growth for East Pakistan it was observed that the development of Bengalee enterprise may be helpful for the growth of private investment in that province. In Section II of the present Chapter it was found that credits offered by the commercial banks have concentrated in a few large accounts. [57] It may therefore be

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55 Professor Wilson observed that "It is rather the smaller concerns both newcomers and firms already establishedin the area, that may benfit from the additional source of credit." Policy for Regional Development, p.61.

56 Ibid, p.61.

57 As late as 1968-69, the highest concentration of advances remained in the range of Rs. 10 million and above. Loan accounts in this group numbering 91 at the end of June 1969 absorbed Rs. 228.55 (24.16 per cent of the total). Cf. State Bank of Pakistan Bulletin, March 1970, p. xxi.

argued that in order to fulfil the objective of encouraging private enterprise, especially Bengalee enterprise in particular and small enterprise in general, direct government assistance in the form of credit and foreign exchange may play an effective role.

Earlier in this Chapter, the role of direct government assistance in resource allocation for establishing structural equilibrium was mentioned. It is true that at the present stage of the economy it will be partically impossible to subsidize labour-employment in the whole private sector. This should not, however, deny the significance of the policy. It provides an implication which needs to be compared with the role of taxation policy. It is apparent that inducement through tax policy linking assistance to capital expenditure will have the effect of encouraging capital-intensive industries. Such a bias is likely to be aggravated in the face of the concealed subsidy which exists in the rate of borrowing in Pakistan. It is true that a prospective increase in employment may be put forward as a criterion for providing a tax holiday or accelerated depreciation. But the practical difficulties of applying such a criterion must be realized. The case for an increase in the rate of interest has already been argued. So far as the wage rate is concerned it was mentioned that it would be difficult to lower the wage level. Consequently the case for some direct assistance in the form of an Employment Premium at least in the industrial sector will need to be considered if labour-use is to be encouraged. By suggesting this it is not implied that DGA alone can achieve all that is required. Firstly, the co-operation of other policy measures will be required. Secondly, the face value of direct assistance does not necessarily imply its actual value to a

private enterprise.[58] The second point, however, involves the first in the sense that in order to assure the real value of say, a government grant, - or for that matter, any direct assistance - equal to its face value, adjustment of other policy measures will be necessary.

In conclusion, it may be stressed once again that the analysis of direct government assistance does not mean that all that matters is DGA. In fact, for the success of the development strategy as has been adopted for Pakistan, a judicious working of all policy measures that are found to be suitable should be undertaken. As far as DGA policy itself is concerned, it is found that there is room for operating the policy to help in achieving the development objectives of the country. Indeed, in some form or other the policy has been operated in Pakistan. But it does not seem that any serious conscious effort has been made to improve the effectiveness of the policy. Our analysis shows that if properly pursued the DGA policy can be worked in both directions: raising the investment ratio and directing the investment in the manner desired. It is true that limited knowledge and experience did not permit a rigorous analysis of DGA and the conclusions will need further tests. But it is hoped that the present analysis has focussed on an important issue which should attract the attention of the planners of Pakistan.

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58 In the context of development area of Great Britain, Professor Wilson has tried to estimate the value of government grant in comparison to its face value. He takes a simplified example with initial fixed capital costs of £1,000,000. The life of the project is assumed 10 years. He supposes that 25 per cent of the capital costs is given as an initial grant and that if the grant is 'deducted from the amount that may subsequently be claimed for tax, its future depreciation allowances will come to only £750,000. If its capital is to be maintained intact, it will then have to save from taxed profits another £250,000.' Assuming that the firm's profits are taxed at 50 per cent and that future benefits should be discounted at 6 per cent, Professor Wilson found that the real relative advantage of a 25 per cent initial grant to a firm in a development district is not 25 per cent but only 15.8 per cent. Cf. Policies for Regional Development, pp.58-59.

Chapter 8

SUMMARY AND CONCLUSIONS

The main object of this Chapter is to make a brief review of our study. It probably need not be mentioned that in a study like the present, dealing with the role of government development expenditure in an economy like that of Pakistan, the issues involved are large and at times complicated. The main aim has been to concentrate attention on the allocative side of the development problem.

The Chapter is arranged in the following manner: Section I enumerates the main findings of the study. The major limitations of the work are pointed out in Section II. Finally, in Section III, four important policy implications, as emerge from the study, are mentioned.

I Findings of the Study

1. The development strategy of Pakistan has put emphasis on the growth of private enterprise. The increase in and the active role of government development expenditure is viewed as complementary, supplementary and directive to private investment. The trend lines observed for the growth of public and private investment in the period 1949-50 to 1969-70 show that the rate of growth of public investment has been faster. As a percentage of GNP, public investment increased from 1.5 per cent in 1949-50 to 5.2 per cent in 1959-60; in 1969-70, the figure was 8.4 per cent. The respective figures for private investment are 2.6 per cent, 3.6 per cent and 5.7 per cent.

2. Following the Harrod-Domar growth model, the investment growth strategy aims at obtaining the required investment ratio (I) given the target rate of growth (g) and the capital-output ratio (k). That is, $I = gk$. Since the average rate of savings

is lower than the required investment it is necessary to achieve a higher marginal rate of savings than the average rate of savings. The strategy of maintaining a higher marginal rate of savings is reflected in the sectoral growth strategy of Pakistan. The industrial sector, which is considered to have a higher marginal rate of savings, has been encouraged.

3. The economy seems to have a clear-cut regional growth objective with a higher target rate of growth for East Pakistan than for West Pakistan. But viewing the growth of the investment ratio at a regional level it does not appear that the Perspective Plan objective of achieving parity in per capita income between East Pakistan and West Pakistan by 1985 will be fulfilled unless serious efforts are made. The task involved is not only one of raising the investment ratio of East Pakistan to a level higher than that of West Pakistan, but also of raising private investment in East Pakistan to a significantly higher level.

4. Based on the marginal propensities to save, import and pay taxes in East Pakistan, three alternative estimates of the regional multiplier have been made. It is found that the value of the regional multiplier in East Pakistan will lie between 0.89 and 1.30. The high marginal propensity to import (between 0.54 and 0.71) is mainly responsible for such a low value for the regional multiplier in East Pakistan.

5. In order to consider the size of investment in a mixed economy, what one needs is to find an optimum mix between private and public investment. Theoretically, given the total size of investment, such an efficient allocation will be determined by the marginal productivity consideration. However, in an underdeveloped economy like that of Pakistan where the problem is to raise the total investment ratio, the assumption of the given investment size does not hold. Here we face the problem of maximizing total investment. This leads us directly to the hypothesis that public invest-

ment may be viewed as supplementary, complementary and directive to private investment. So long as government development expenditure fulfils this criterion, its expansion is desirable.

6. At the sectoral level, the ideal principle is to force expenditure in such a direction that the marginal social benefit of each rupee spent is equal everywhere. It is true that the application of the cost-benefit criterion involves numerous difficulties, but it must be stressed that this criterion alone can help us to consider systematically the costs and benefits from alternative sectoral allocations of investment. However, so far as intra-sectoral allocation of investment is concerned, things are not so difficult. The production alternatives are close substitutes within a sector and calculations of cost-benefit become comparatively easy. If the benefits are equal, the alternative with the least cost should be selected by applying the cost-effectiveness approach. If the benefits from different alternative investment opportunities are different, the problem can be handled by applying the Net Present Value and/or the Internal Rate of Return criteria.

7. As in sectoral allocation, there is the necessity of finding an efficient theoretical criterion for allocating government development expenditure among the regions. It must be admitted that to solve the problem of regional allocation through some definite theoretical criterion is not a simple task. If the economy concerned has a distinctive regional growth objective, as is found in Pakistan, the inter-regional allocation of government development expenditure should reflect the regional growth objective. If separate target rates of growth are proposed for different regions, the regional allocation of government development expenditure will be called upon to help in achieving the objective.

8. The analysis of the growth of government expenditure in Pakistan shows that both total government expenditure and government development expenditure are increasing functions of GNP. As a percentage of GNP, the total government expenditure increased from 13.57 per cent in 1949-50 to 19.31 per cent in 1969-70. The corresponding increase for government development expenditure is from1.43 per cent to 8.42 per cent during the same period. Income elasticity of government expenditure for the period 1949-50 to 1969-70 is found as 1.77. The corresponding figure for government development expenditure is 9.90. Estimates based on the five-year period level show, however, that the income elasticity of government development expenditure has gradually declined, from 9.76 in 1950-55 to 1.32 in 1965-70.

9. The measurement of government development expenditure at the regional level shows that the relative share of East Pakistan has always been lower, the figure being less than one-third in the 1950's. Since the population of East Pakistan is higher than that of West Pakistan, per capita government development expenditure turns out to be much lower in the former region. The regression of per capita government development expenditure on GRP, however, shows that the per capita as a function of regional income has a faster rate of growth in East Pakistan. This trend seems to be an essential requirement, considering the regional growth objective of the country.

10. A comparative study of government expenditure policy with other policies such as direct controls and taxation policy shows that in the context of Pakistan, government expenditure policy has a distinctive role to play. Statistical tests carried out at aggregative level for the period 1950-51 to 1969-70 indicate that more than 80 per cent of the variation in private investment is due to government development expenditure. An area where an observation is comparatively safe is the role of government

development expenditure in narrowing down both the savings-investment gap and the foreign exchange earning and expenditure gap in Pakistan.

11. The allocation of government development expenditure into (a) infrastructural development, (b) direct government undertaking, and (c) direct government assistance provides a functional classification of the total. Such a classification is a logical approach of developing a systematic government expenditure policy in a mixed and underdeveloped economy like that of Pakistan. The hypothesis that government expenditure policy can be effectively used as an instrument of resource allocation can be tested by observing the relationship between private investment and government development expenditure in its three facets. Firstly, expenditure for infrastructural development can generate external economies and thereby encourage private investment. Secondly, expenditure for direct government undertaking can come to supplement private investment which is considered deficient in any industry, sector or region. Thirdly, expenditure in the form of direct government assistance can be manipulated to influence private investment in the desired direction.

12. In Pakistan, approximately 75 per cent of public investment in the First, Second and Third Plans has been allocated for the development of infrastructural facilities such as water and power, transport and communications, housing, education, health and social welfare. Including the Indus Basin Development, the share of public investment for infrastructural development in the Second and Third Plans would appear much higher. An analysis of inter-sectoral allocation shows that of the total public investment for infrastructural development, the water and power sector has always enjoyed the highest share, with about 40 per cent or more. The second highest share has been allocated to the transport and communications sector; its share increased from

27 per cent in the First and Second Plans to 32 per cent in the Third Plan. The physical planning and housing sector has been allocated the third highest share - 14 per cent in the First Plan, 18 per cent in the Second Plan and 12 per cent in the Third Plan. Next in order of priority come education, health and social welfare sectors which together comprised 16 per cent in the First Plan, 14 per cent in the Second Plan and 18 per cent in the Third Plan.

13. The rationale of the sectoral allocation for infrastructural development is questionable. Following the cost-benefit criterion, what is required is a comparison between different alternative investment opportunities. It seems that serious attention has not yet been paid to improve the sectoral allocation on cost-benefit calculations. Administrative influence or departmental bargaining capacity probably played an important part in the allocation of public investment for infrastructural development. The introduction of a television service or the construction of a new capital at Islamabad, neglect for primary education or inland water-transport, provide examples of misallocation of public investment at the sectoral level.

14. The regional allocation of public investment for infrastructural development has always been higher in West Pakistan than in East Pakistan. In the First Plan of the total public investment for the development of infrastructural facilities, East Pakistan was allocated 40 per cent as against 60 per cent for West Pakistan. The corresponding shares in the Second Plan are 43 per cent for East Pakistan and 57 per cent for West Pakistan; and in the Third Plan, 49 per cent for East Pakistan and 51 per cent for West Pakistan. The increase in allocation as found for East Pakistan in the Second and Third Plans is, however, deceptive because the Indus Basin Development in West Pakistan has been kept outside the Plan allocation. In fact, including the Indus Basin Development, West Pakistan has a share of 67 per cent of the actual public investment for infrastructural

development during the Second Plan period. The corresponding figure during the Third Plan period is 61 per cent for West Pakistan and 39 per cent for East Pakistan.

15. The role of direct government undertaking in Pakistan needs to be viewed in a complementary sense. It is in this context that there is room for a significant role of direct government undertaking in (a) maintaining a balance of inter-industrial growth and (b) achieving the regional growth objective. So far as (a) is concerned, direct government undertaking may help in the development of investment and related goods industries where private investment is not adequate. The need for a complementary role of direct government undertaking for achieving the regional growth objective arises because of the lagged growth of private investment in East Pakistan.

16. Investment allocation for direct government undertaking for large-scale industries is subject to criticism. The lower allocation for investment and related goods industries, especially in the First and Second Plans, appears as bad planning. Whether or not the strategy of allocating fund for the development of such consumer goods as sugar manufacturing has been sound is also questionable. At the regional level, it is found that East Pakistan has been allocated a higher share than West Pakistan. In the First Plan, of the total allocation for large-scale manufacturing in the public sector, the respective shares of East Pakistan and West Pakistan were 71 per cent and 29 per cent. The corresponding figures for the Second Plan are 61 per cent for East Pakistan and 39 per cent for West Pakistan; and in the Third Plan 71 per cent and 29 per cent respectively. The logic for a higher allocation in favour of East Pakistan is that it will help to raise the investment-ratio by providing leadership through government undertaking. But considering the growth of private investment in East Pakistan, it is hard to convince oneself that much success has been achieved. A large number of factors - such

as lack of infrastructural facilities, direct controls, lower allocation of government expenditure for direct assistance, lack of native Bengalee enterprise, reluctance of West Pakistani enterprise to invest in East Pakistan, etc. - have contributed to the lagged growth of private investment in East Pakistan.

17. The question of public sector efficiency is an important issue in a study of direct government undertaking. The need for public investment does not automatically guarantee that the enterprise will be performed as efficiently in the public sector as in the private sector. However, adequate information is not available which could allow firm conclusions to be reached concerning the efficiency of the public sector in relation to that of the private sector in Pakistan. At best, it may be said that any expansion of government undertaking, at the national or regional level, will necessitate a significant improvement in public-sector efficiency. This would involve improvement in the selection, undertaking and operation of projects.

18. Direct government assistance in the form of loans and subsidies provides an important instrument of government expenditure policy in its complementary role. This instrument may be used to assist in achieving such objectives as raising the investment ratio, improving factor allocation, encouraging new or small enterprise, and so forth.

19. In Pakistan almost the entire public sector expenditure for agriculture is in the form of direct government assistance, confined mainly to promoting and assisting private enterprise. An analysis based on the Plan allocation for agriculture shows that as much as 50 per cent of the total is channelled mainly for irrigation through large water development. Including government investment under the Indus Basin Development, the relative share for water development would appear much higher. Such a large share

for water development is questionable if considered against the lower productivity accruing from water. Investment in fertilizers, on the other hand, shows high productivity, but the allocation made for this input is significantly small when compared with the allocation for water.

20. Excluding water development, the public sector allocation for agriculture appears to be equally distributed between East Pakistan and West Pakistan. But the vast water development that has been carried out in the public sector has been almost entirely confined to West Pakistan. In other words, including water development, public investment for the development of agriculture has always been higher in West Pakistan.

21. In the face of factor-proportion use failing to reflect factor-availability of the economy, a conscious and serious effort is necessary to correct the situation. Government assistance may be tied up with the use of the relatively surplus factor. In a country like Pakistan which suffers from serious structural disequilibrium, the importance of the policy cannot, therefore, be ignored. In fact, if judiciously pursued, the subsidy aspect of government expenditure policy can be of considerable assistance in achieving the twin requisites of economic development: raising the investment ratio and directing the investment in the manner desired.

II Limitations

The main limitations of the work may be presented under two broad categories: Theoretical and Statistical.

In the theoretical basis of the study, an attempt has been made to find an investment outline which can be used as a guide at both aggregative and allocative levels. At the aggregative level, an exercise in the form of the Harrod-Domar growth model

is helpful to see the required investment ratio for achieving the target rate of growth. So far as the allocative level is concerned, one needs to apply the social marginal productivity criterion. The application of such a criterion at the allocative level is, however, not simple. In an attempt to keep the present study at a broad level, no project studies have been attempted. This should not imply however, that project-studies are unimportant. On the contrary, it is at the project level that one is in a strong position to make the necessary calculation and thereby apply the social productivity criterion in a rigorous quantitative manner. Further, in so far as the public investment part of economic planning can be considered as a collection of project-units, a study at project level will be of assistance not only in improving the investment allocation but also in developing a quantitative framework of government expenditure policy. (In consultation with Professor Wilson, I have proposed to pursue a research topic which is expected to involve a quantitative framework of government expenditure policy based on studies at project level . The proposed research may be helpful in finding an answer to the limitations encountered in the present study.)

The statistical limitations of the present work have arisen due partly to the lack of adequate data and partly to the approach of the planners in Pakistan. It is generally admitted that data with regard to the underdeveloped countries are imperfect and inadequate. Pakistan cannot be considered an exception. This point will be taken up further in the introductory note of Appendix B, and it is probably sufficient to mention here that in our study the limitation was constantly faced. The second source of the statistical limitation has arisen due mainly to the approach of the Planning Commission to public investment in Pakistan. The method by which the planners, particularly of the Second and Third Plans, have attempted to consider the public sector investment invites serious criticism. By keeping a large part of government development expendi-

ture outside the Plan, the planning approach in Pakistan fails to identify the total government development expenditure. Since our analysis of the three-fold classification depends largely on the Five Year Plans of Pakistan, the approach in planning of not identifying the total development expenditure puts a limitation on the present work at the statistical level.

III Policy Implications

A number of policy implications can be drawn based mainly on the findings of the study as mentioned in the preceding two Sections. Four such areas are enumerated below which are considered to be of special importance.

Firstly, it is necessary that government development expenditure be viewed in its entirety. In the case of Pakistan, it is not known whether a government expenditure policy which takes the entire government development expenditure has been attempted or not. There is also the important question of the rationale of allocation. A well formulated government expenditure policy will demand that the total public-sector investment is allocated on the basis of the marginal productivity consideration. If part of the government development expenditure is kept outside the Plan, the planners are denied the opportunity of drawing a total investment programme by viewing the alternative investment opportunities at sectoral and sub-sectoral levels.

Secondly, the study points out that the formulation of government expenditure policy at the functional level is a good approach to planning economic development in such a mixed economy as that of Pakistan. The functional classification of government development expenditure into infrastructural development, direct government undertaking, and direct government assistance, is convenient in viewing the role of the government sector in relation to that of the private sector. Government development

expenditure for infrastructural development and direct government assistance can provide respectively, indirect and direct subsidy to the private sector, whilst direct government undertaking can fill in the shortage of private investment in directly productive activities. Such a functional classification can be helpful not only in raising the investment ratio but also in improving the factor-proportion use and in directing investment in the desired sectors, industries and regions.

Thirdly, if a higher growth rate in East Pakistan is the objective of the economy, this region should have a higher investment-ratio than West Pakistan (assuming that there is no significant difference in the inter-regional capital-output ratio). Government expenditure policy can play a significant role in this regard, particularly if economic development is conceived in terms of the "one-country-one-economy" approach. In the past, of the total public investment West Pakistan has been allocated a higher share for infrastructural development and direct government assistance. This has probably remained a very important factor for encouraging private investment in this region. In order to attract private investment in East Pakistan, the policy that has been pursued in the past should be reversed. It must be realized that a higher allocation for East Pakistan is necessary not only to cure the neglect of the past, but also to encourage private investors, who are at present reluctant to invest in East Pakistan.

Fourthly, in order to improve the allocation of public investment, cost-benefit studies at project level should be undertaken. This need is particularly felt considering the fact that departmental bargaining strength or administrative influence seem to have given rise to misallocation of investment. It is true that considerable work will be involved, but there is no avoiding this if investment allocation is to be improved. Moreover, the research for this can be undertaken at group-level under the initiative of the Planning Commission.

BIBLIOGRAPHY

I Books

ACKLEY, G., Macroeconomic Theory, The Macmillan Company, New York, 1961.

AHMAD, K.U., Expenditure Classification and Investment Planning, Unpublished Ph.D. thesis, University of London 1964 (1966?).

ANDRUS, J.R. and MOHAMMED, A.F., The Economy of Pakistan, Stanford University Press 1958.

BAUER, P.T. and YAMEY, B.S., The Economics of Underdeveloped Countries, Cambridge University Press 1957.

BHAGWATI, J., The Economics of Underdeveloped Countries, Weidenfeld and Nicolson, London 1966.

BIERMAN (Jr.) H. and SMIDT, S., The Capital Budgeting Decisions: Economic Analysis and Financing of Investment Projects, The Macmillan Company 1960 (Second Edition 1966).

BRAINBANTI, R., Research on the Bureaucracy of Pakistan, Duke University Press, Durham N.C. 1966.

CHOWDHURY, M.K., The Approach to Planning in Pakistan, Unpublished Ph.D. thesis, University of Manchester 1967.

DORFMAN, R., SAMUELSON, P.A. and SOLOW, R.M., Linear Programming and Economic Analysis, The Rand Corporation, McGraw Hill Book Company 1958.

ECKSTEIN, O., Water Resource Development: The Economics of Project Evaluation, Harvard University Press 1958.

———— Public Finance, Prentice Hall 1964.

HANSEN, A.H., A Guide to Keynes, McGraw Hill Book Company 1953.

HANSON, A.H., Public Enterprise and Economic Development, Routledge and Kegan Paul, London 1959.

HAQ, M., The Strategy of Economic Planning: A Case Study of Pakistan, Oxford University Press 1963 (Second Impression 1966).

HARROD, R.F., Towards a Dynamic Economics: Some Recent Developments of Economic Theory and their Application to Policy, Macmillan and Company, London 1948.

HICKS, U.K., Development Finance: Planning and Control, Clarendon Press, Oxford 1965.

HIRSCHMAN, A.O., The Strategy of Economic Development, Yale University Press, New Haven 1958.

——— Development Projects Observed, The Brookings Institute, Washington 1967.

ISLAM, A.I.A., Regional Development in Pakistan with special reference to the effects of Import Licensing and Exchange Control, Unpublished Ph.D. thesis, University of London 1969.

ISLAM, N., A Short-Term Model for Pakistan Economy, Oxford University Press 1965.

JOHNSON, H.J., Money, Trade and Economic Growth, George Allen and Unwin Ltd., London 1962.

KARATAS, C., A Study of Turkish Planning with particular reference to project evaluation technique, Unpublished Ph.D. thesis, University of Glasgow 1970.

KINDLEBERGER, C.P., Economic Development, McGraw Hill Inc., Second Edition 1965.

KRUTILLA, J.V., and ECKSTEIN, O., Multipurpose River Development: Studies in Applied Economic Analysis, The Johns Hopkins Press, Baltimore 1958.

LEWIS (Jr.) S.R., Economic Policy and Industrial Growth in Pakistan, George Allen and Unwin Ltd., London 1969.

——— Pakistan: Industrialization and Trade Policies, Oxford University University Press 1970.

LEWIS, W.A., The Theory of Economic Growth, George Allen and Unwin Ltd., London 1955.

——— Development Planning: The Essentials of Economic Policy, George Allen and Unwin Ltd., 1966.

LITTLE, I.M.D., and MIRRLESS, J.A., Manual of Industrial Project Analysis in Developing Countries, Vol. II: Social Cost Benefit Analysis, OECD, Paris 1955.

McKEAN, R.N., Efficiency in Government through Systems Analysis, John Wiley and Sons, New York 1958.

——— Public Spending, McGraw Hill Book Company 1968.

MARGLIN, S.A., Public Investment Criteria, George Allen and Unwin Ltd., London 1967.

MASON, E.S., Economic Planning in Underdeveloped Areas: Government and Business, Fordham University Press 1958.

MEIER, G.M., The International Economics of Development: Theory and Policy, Harper and Row 1968.

MERRETT, E.J., and SYKES, A., The Finance and Analysis of Capital Projects, Longman Green and Company Ltd., London 1953.

MISHAN, E.J., Cost-Benefit Analysis, George Allen and Unwin Ltd., 1971.

MUSGRAVE, R.A., The Theory of Public Finance: A Study in Public Economy, McGraw Hill Book Company 1959.

MYINT, H., The Economics of the Developing Countries, Hutchinson and Company Ltd., 1964.

MYRDAL, G., Economic Theory and Underdeveloped Regions, Methuen, London 1968.

———— Asian Drama: An enquiry into the poverty of nations, Allen Lane, London 1968.

NAYIMUDDIN, M., A Study of Fiscal Policy in Pakistan 1950-51 to 1963-64: with special reference to its contribution to Economic Development, Unpublished Ph.D. thesis, University of Manchester 1966.

NURKSE, R., Problems of Capital Formation in Underdeveloped Countries, Basil Blackwell, Oxford 1953.

PAKISTAN INSTITUTE OF DEVELOPMENT ECONOMICS, A Measure of Inflation in Pakistan, PIDE Monograph No. 4, Karachi 1961.

PAPANEK, G.F., Pakistan's Development: Social Goals and Private Incentives, Oxford University Press 1968 (Harvard University Press 1967).

PEACOCK, A.T., and WISEMAN, J., The Growth of Public Expenditure in the United Kingdom, George Allen and Unwin Ltd., 1961 (Revised Second Edition 1967).

PREST, A.R., Public Finance in Underdeveloped Countries, Weidenfeld and Nicholson, London 1962.

QAYUM, A., Theory and Policy of Accounting Prices, North Holland Publishing Company, Amsterdam 1960.

RAHMAN, M. Akhlaqur, The Private Sector of East Pakistan: An Analysis of Lagged Development, UBL Research Monograph No. 3, Karachi 1970.

RAHMAN, M. Anisur, East and West Pakistan: A Problem in the Political Economy of Regional Planning, Occasional Papers in International Affairs, No. 20, July 1968. Published by the Center for International Affairs, Harvard University.

RAHMAN, M.S., A Study of Farm Credit with particular reference to Pakistan, Unpublished B. Litt. thesis, University of Glasgow 1967.

RICHARDSON, H.W., Regional Economics: Location Theory, Urban Structure and Regional Change, Weidenfeld and Nicolson, London 1969.

RYAN, W.J.L., Price Theory, Macmillan and Company Ltd., London 1958.

SEN, Choice of Techniques: An aspect of the theory of planned economic development, Basil Blackwell, Oxford 1960. (Third Edition 1968).

SETH, K.L., The Pattern of Economic Development in Pakistan, Sterling Publishers (Private) Ltd., Delhi 1967.

TINBERGEN, J., The Design of Development, The Johns Hopkins Press, Baltimore 1958.

WATERSTON, A., Planning in Pakistan: Organization and Implementation, The Johns Hopkins Press, Baltimore 1963.

———— Development Planning: Lessons of Experience, The Johns Hopkins Press, Baltimore 1965.

WHITE, J., Pledged to Development, Overseas Development Institute Ltd., London 1967.

WILSON, T., Policies for Regional Development, Oliver and Boyd, Edinburgh and London 1964.

WOONACOTT, R.J., and WOONACOTT, T.H., Econometrics, John Wiley and Sons, Inc. 1970.

YEOMANS, K.A., Applied Statistics: Statistics for the Social Scientists, Vols. I and II, Penguin Books Ltd., Harmondsworth 1968.

YOUNGSON, A. J., Overhead Capital: A Study in Development Economics, Edinburgh University Press 1967.

II Articles

ADLER, J.H., "Fiscal Policy in a Developing Country," in K. Berrill (ed.). Economic Development with special reference to East Asia: Proceedings of a Conference held by the International Economic Association, The Macmillan Company, London 1964.

AHMAD, S., "Accountancy and Self Financing in WPIDC," Forward: Journal of the West Pakistan Industrial Development Corporation, September 1970.

ALLEN, K.J., "The Regional Multiplier - Some Problems in Estimation," in J.B. Cullingworth and S.C. Orr (Eds.), Regional and Urban Studies, George Allen and Unwin Ltd., London 1969.

ANDIC, S. and VEVERKA, J., "The Growth of Government Expenditure in Germany since the Unification," Finanzarchiv 1963/64.

ARCHIBALD, G.C., "Regional Multiplier Effects in the UK," Oxford Economic Papers, March 1967.

BELL, D.E., "Allocating Development Resources: Some Observations based on Pakistan Experience," Public Policy 1959.

BERGAN, A., "Personal Income Distribution and Personal Saving in Pakistan 1963/64," Pakistan Development Review, Summer 1967.

BLOT, D, and DEBEAUVAIS, M., "Educational Expenditure in Developing Areas: Some Statistical Aspects," in OECD, Financing of Education for Economic Growth, Paris 1966.

BOSE, S.R., "Pakistan's Development - The Role of Government and Private Enterprise," Pakistan Development Review 1968.

——— and CLARK, E.H. (II), "Some Basic Considerations of Agricultural Mechanization in West Pakistan," Pakistan Development Review 1969.

BROWNRIGG, M., "The Regional Income Multiplier: An Attempt to Complete the Model," University of Stirling Discussion Paper No. 3.

CHAKRAVARTY, S., "The Use of Shadow Prices in Programming Evaluation," in P.N. Rosenstein-Rodan (ed.), Capital Formation and Economic Development, George Allen and Unwin Ltd., London 1964.

CHENERY, H.B., "The Application of Investment Criteria," Quarterly Journal of Economics 1953.

——— "Development Policies and Programmes," Economic Bulletin for Latin America, March 1958.

CHENERY, H.B., "Comparative Advantage and Economic Policy," American Economic Review, 1961. Reprinted in American Economic Association and Royal Economic Society (Eds.), Surveys of Economic Theory, Vol. II, Macmillan 1965.

———— and KRETSCHMER, K.S., "Resource Allocation for Economic Development," Econometrica, October 1956.

CHENERY, H.B. and STROUT, A.M., "Foreign Assistance and Economic Development," American Economic Review, September 1966.

CHOWDHURY, A.H.M.N, "Some Reflections on Income Redistributive Intermediation in Pakistan," Pakistan Development Review, Summer 1969.

———— "Financing Economic Development in Pakistan," In E.A.G. Robinson and M. Kidron (Eds.), Economic Development in South Asia: Proceedings of a Conference held by the International Economic Association, Macmillan 1970.

DOMAR, E.D., "Capital Expansion, Rate of Growth and Employment," Econometricq, April 1946. Reprinted in E.D. Domar (ed.), Essays in the Theory of Economic Growth, Oxford University Press 1957.

ECKAUS, R.S., "The Factor-proportions Problem in Underdeveloped Areas," American Economic Review, September 1955. Reprinted in A.N. Agarwala and S.P. Singh (eds.), The Economics of Underdevelopment, Oxford University Press 1958.

ECKSTEIN, O., "Investment Criteria for Economic Development and the Theory of Intertemporal Welfare," Quarterly Journal of Economics 1957.

———— "A Survey of the Theory of Public Expenditure Criteria," in National Bureau of Economic Research, Public Finances: Needs, Sources and Utilization, Princeton University Press 1961.

FALCON, W.P., Farmer Response to Price in a Subsistence Economy: The Case of West Pakistan, American Economic Review (Papers and Proceedings) 1964.

FELDSTEIN, M.S., "The Social Time Preference Discount Rate in Cost Benefit Analysis," Economic Journal, June 1964.

GALENSON, W. and LEIBENSTEIN, H., "Investment Criteria, Productivity and Economic Development," Quarterly Journal of Economics 1955.

GREIG, M.A., "The Regional Multiplier and Employment Effects of a Pulp Mill and Paper Mill," Scottish Journal of Political Economy, February 1971.

GRIFFIN, K.B., "Financing Development Plans in Pakistan," Pakistan Development Review, Winter 1965. Reprinted in A.R. Khan (Ed.) The Strategy and Technique in Development Planning, PIDE: Readings in Development Economics, No. 1.

——— and GLASSBURNER, B., "An Evaluation of Pakistan's Third Five Year Plan," Journal of Development Studies, July 1966.

GUPTA, S.P., "Public Expenditure and Economic Growth - A Time-Series Analysis," Public Finance, No. 3/1967.

HAQ, M., "Problems of Formulating a Development Strategy in Pakistan," OECD, Development Plans and Programmes, Studies in Development No. 1, 1964.

HEAD, J.G., "Public Goods and Public Policy," Public Finance, No. 3/1962.

HENDERSON, P.D., "Notes on Public Investment Criteria in the United Kingdom," Bulletin of Oxford University Institute of Economics and Statistics, February 1965.

HOROWITZ, D., "Government Expenditure in Countries of Accelerated Growth," in A.T. Peacock and G. Hauser (eds.), Government Finance and Economic Development, OECD, 1963.

HUDA, M.N., "Planning Experience in Pakistan," Pakistan Development Review, Autumn 1968.

ISLAM, A.I.A., "An Estimation of the Extent of Overvaluation of the Domestic Currency in Pakistan at the official rate of exchange, 1948/49 - 1964/65," Pakistan Development Review, Spring 1970.

JOHNSTON, J. and BRUCE, F., "The Seed-Fertilizer Revolution and Labour Force Absorption," American Economic Review, September 1969.

KAHN, A.E., "Investment Criteria in Development Programmes," Quarterly Journal of Economics, February 1951.

KANEDA, H., "Economic Implications of the 'Green Revolution' and the Strategy of Agricultural Development in West Pakistan," Pakistan Development Review, Summer 1969.

KHAN, A.R., "The Framework of Planning in Pakistan with special reference to the Third Five Year Plan (1965-70)," Oxford Economic Papers, March 1966.

KHAN, A.R. "Some Problems of Choice of Technique in a Mixed Economy: The Case of Pakistan," in E.A.G. Robinson and M. Kidron (eds.) Economic Development in South Asia, op. cit.

KHAN, A.M., "Agricultural Revolution and Role of Manufacturing Industries," Forward, February 1970.

KHAN, T.M., "Growth of National and Per Capita Income in Pakistan," in E.A.G. Robinson and M. Kidron (eds.) Economic Development in South asia, op. cit.

——— and BERGAN, A., "Measurement of Structural Change in the Pakistan Economy: A Review of National Income Estimates 1949/50 to 1963/64," Pakistan Development Review, Summer 1966.

LEOPARD, P.L., "A Note on the Demand for Fertilizer in West Pakistan," Pakistan Development Review, Winter 1969.

LEWIS, S.R., and SOLIGO, R., "Growth and Structural Change in Pakistan's Manufacturing Industry 1954-64," Pakistan Development Review, Spring 1965.

LEWIS, W.A., "Economic Development with Unlimited Supplies of Labour," Manchester School, May 1954. Reprinted in A.N. Agarwala and S.P. Singh (Eds.) The Economics of Underdevelopment, op. cit.

LITTLE, I.M.D., "The Real Cost of Labour and the Choice between Consumption and Investment," Quarterly Journal of Economics, February 1961.

MARTIN, A. and LEWIS, W.A., "Patterns of Public Revenue and Expenditure," Manchester School, September 1956.

MARGLIN, S.A., "The Opportunity Cost of Public Investment," Quarterly Journal of Economics, May 1963.

MARGOLIS, J., "Secondary Benefits, External Economies and the Justification of Public Investment," Review of Economics and Statistics, August, 1957.

MISHAN, E.J., "A Proposed Normalization Procedure for Public Investment Criteria," Economic Journal, December 1967.

MUSGRAVE, R.A., "Cost Benefit Analysis and the Theory of Public Finance," Journal of Economic Literature, September 1969.

——— and CULBERTSON, J.M., "The Growth of Public Expenditure in the USA: 1890-1948," National Tax Journal, June 1953.

MYINT, H., "Dualism and the Internal Integration of the Underdeveloped Economies," Paper prepared for the Conference on the Dual Economy held at Glasgow University in September, 1969.

NOVE, A., "Internal Economies," Economic Journal, December 1969.

PAPANEK, G.F., "Development Theory and DAS Experience," in G.F. Papanek (ed.) Development Theory and Practice, Harvard University Press 1968.

——— and QURESHI, M.A., "The Use of Accounting Prices in Planning," in US Papers prepared for the UN Conference on the Application of Science and Technology for the Benefit of the Less Developed Areas (Science, Technology, and Development, Vol. 8.)

PARKINSON, J.R., "An Alternative Estimate of Development Expenditure during the Second Plan," (Mimeo) Karachi, August 1966.

POWER, J.H., "Industrialization in Pakistan: A Case of Frustrated Take Off?" Pakistan Development Review, Summer 1963.

PREST, A.R., "The Role of Labour Taxes and Subsidies in Promoting Employment in Developing Countries," International Labour Review, April 1971.

——— and TURVEY, R., "Cost-Benefit Analysis: A Survey," Economic Journal, December 1965. Reprinted in American Economic Association and Royal Economic Society (eds.) Surveys of Economic Theory, Vol. III, Macmillan 1965.

QURAISHI, B.A., and KHAN, M.J., "Estimates of Fertilizer Application to Wheat Crop: The Results of a Survey in Lyallpur District," Pakistan Development Review, Spring 1970.

RAHMAN, M. Akhlaqur, "The Role of the Public Sector in the Economic Development of Pakistan," in E.A.G. Robinson and M. Kidron (eds.), Economic Development in South Asia, op. cit.

RAHMAN, M. Anisur, "East Pakistan: The Roots of Estrangement," South Asian Review (The Journal of the Royal Society for India, Pakistan and Ceylon) April 1970.

RANIS, G., "Investment Criteria, Productivity and Economic Development: An Empirical Comment," Quarterly Journal of Economics, May 1962.

RAQUIBUZZAMAN, M., "The Economic Implications of a Complete Free Trade and an Alternative Form of Free Trade in Sugar Through 1980," Pakistan Development Review, Autumn 1970.

RASUL, G., "The Long-Term Perspective for the Economy of Pakistan," in Review by Panel of Economists, Planning in Pakistan. Produced for the Planning Commission by the Department of Films and Publications, Karachi, (undated, probably 1967).

REDDY, K.N., "Growth of Government Expenditure and National Income in India: 1872-1966," Public Finance, No. 1/1970.

ROBINSON, W.C., "Disguised Unemployment Once Again: East Pakistan, 1951-1961," American Journal of Agricultural Economics, August 1969.

ROSENSTEIN-RODAN, P.N., "Notes on the Theory of the 'Big Push,'" in H.E. Ellis (ed.) Economic Development for Latin America, St. Martin's Press, New York, 1961.

SAMUELSON, P.A., "The Pure Theory of Public Expenditure," Review of Economics and Statistics, November 1954.

———— "Aspects of Public Expenditure Theories," Review of Economics and Statistics, November 1958.

SCHULTZ, T.W, "Capital Formation by Education," Journal of Political Economy 1960.

———— "Investment in Human Capital," American Economic Review, March 1961.

SCITOVSKY, T., "Two Concepts of External Economies," Journal of Political Economy, April 1954. Reprinted in A.N. Agarwala and S.P. Singh (eds.), the Economics of Underdevelopment, op. cit.

SEN, A.K., "Some Notes on the Choice of Capital Intensity in Development Planning," Quarterly Journal of Economics, November 1957.

STEELE, D.B., "Regional Multipliers in Great Britain," Oxford Economic Papers, July 1969.

TAIRA, K., "A Note on the Analytical Properties of Galenson-Leibenstein Investment Criterion," Bulletin of the Oxford University Institute of Economics and Statistics, May 1965.

TINBERGEN, J., "The Relevance of Theoretical Criteria in the Selection of Investment Plans," in MIT, Investment Criteria and Economic Growth, Asia Publishing House 1961.

TURVEY, R., "Present Value versus Internal Rate of Return - An Essay in the Theory of Third Best," Economic Journal, March 1963.

WAGNER, A., "The Nature of Fiscal Policy," in A.R. Musgrave and A.T. Peacock (eds.) Classics in theTheory of Public Finance, Macmillan 1967.

WATANABE, S., "Entrepreneuship in Small Enterprises in Japanese Manufacturing," International Labour Review, December 1970.

WELLISZ, S., "Resources Allocation in Traditional Agriculture: A Study of Andhra Prodesh," Journal of Political Economy, July/August 1970.

WILLIAMSON, A., "Public Expenditure and Revenue: An International Comparison," Manchester School, January 1961.

WILSON, T., "The Regional Multiplier - A Critique," Oxford Economic Papers, November 1968.

WINSTON, G.C., "Overinvoicing, Underutilization and Distorted Industrial Growth," Pakistan Development Review, Winter 1970.

——— "Capital Utilization in Economic Development," Economic Journal, March 1971.

III Official Publications

EAST PAKISTAN, Planning Department, Annual Plan for East Pakistan 1969-70, Dacca 1969.

EAST PAKISTAN INDUSTRIAL DEVELOPMENT CORPORATION, Progress Report 1967- 68, Dacca 1969.

HOUSE BUILDING FINANCE CORPORATION, Sixteenth Annual Report Ending 30th June, 1968.

INDUSTRIAL DEVELOPMENT BANK OF PAKISTAN, Eight Years of IDBP, Undated, Probably 1969.

INTERNATIONAL LABOUR OFFICE, Report to the Government of Pakistan on a Manpower Survey, Geneva 1956.

INDIA, Planning Commission, Third Five Year Plan, Undated, probably 1961.

——— Ministry of Information and Broadcasting, Fourth Five Year Plan: Draft Outline - Programmes and Targets, Delhi 1966.

——— Planning Commission, Fourth Five Year Plan 1959-74.

PAKISTAN, Census Commissioner, Population Census of Pakistan 1961, Census Bulletin No. 4: Literacy and Education.

——— Census Commissioner, Population Census of Pakistan 1961, Census Bulletin No. 5: Economic Characteristics.

——— Central Board of Revenue, Tax in Pakistan: A Brief Outline (with particular reference to Tax Concessions to New Industries and Incentives to Foreign Investment,) Karachi 1961, (Revised Edition 1965).

——— Central Statistical Office, Census of Manufacturing Industries 1959-60.

——— Central Statistical Office, Monthly Statistical Bulletins (Selected Issues).

——— Central Statistical Office, Pakistan Statistical Yearbook 1964, and 1967.

——— Central Statistical Office, Twenty Years of Pakistan in Statistics 1947-67, Karachi 1968.

——— Credit Enquiry Commission, Report, Karachi 1959.

——— Department of Films and Publications, The West Pakistan Unit, Undated, Probably 1956.

PAKISTAN, Department of Films and Publications, Years of Progress 1958-1964, Karachi 1964.

——— Department of Supply and Development, Pakistan Welcomes Foreign Investment, Undated, Probably 1959.

——— Ministry of Food and Agriculture, The Report of the Pakistan Agricultural Inquiry Committee 1951-52, Karachi 1952.

——— Ministry of Food and Agriculture, Survey Report on Farm Power, Machinery and Equipment in Pakistan, Rawalpindi 1967.

——— Ministry of Finance, Highlights of Pakistan's Second Five Year Plan 1960-65, Rawalpindi 1962.

——— Ministry of Finance, Central Budget 1968-69: An Outline.

——— Ministry of Finance, The Budget 1968-69 (As Approved by the National Assembly), Islamabad 1968.

——— Ministry of Finance, The Budget in Brief 1968-69, Islamabad 1968.

——— Ministry of Finance, Government Sponsored Corporations 1968-69, Islamabad 1969.

——— Ministry of Finance, Pakistan Economic Survey 1968-69, and 1969-70.

——— Ministry of Finance, The Budget (Final) 1969-70, Islamabad 1969.

——— Ministry of Finance, The Budget in Brief (Final) 1969-70, Islamabad 1969.

——— Ministry of Industries, Financial Assistance to Industries, Undated, probably 1960.

——— Ministry of Industries, Guide to Investment in Pakistan, Karachi 1961.

——— Ministry of Industries, Priority List of Industries of Comprehensive Investment Schedule (1965-1970), Karachi 1968.

——— Ministry of Law, The Constitution of the Islamic Republic of Pakistan 1962.

——— Planning Board, The First Five Year Plan (1955-60), December 1967.

——— Planning Commission, Preliminary Evaluation Report: Review of Experience of the Working of the Plan during the First Four Years 1955-56 to 1958-59, Karachi 1960.

——— Planning Commission, The Second Five Year Plan 1960-65, June 1960.

PAKISTAN, Planning Commission, The Second Five Year Plan (Revised Estimates) 1961.

———— Planning Commission, The Third Five Year Plan 1965-70, June 1965.

———— Planning Commission, Evaluation of the Second Five Year Plan (1960-65), May 1966.

———— Planning Commission, Final Evaluation of the Second Five Year Plan (1960-65), December 1966.

———— Planning Commission, Revised Phasing, Sectoral Priorities and Allocations of the Third Five Year Plan (1965-70), March 1967.

———— Planning Commission, Annual Plan 1968-69, June 1968.

———— Planning Commission, The Mid-Plan Review of the Third Five Year Plan (1965-70), April 1968.

———— Planning Commission, Socio-Economic Objectives of the Fourth Five Year Plan (1970-75), November 1968.

———— Planning Commission, The Fourth Five Year Plan (1970-75), July 1970.

———— Planning Commission, Preliminary Evaluation of the Third Five Year Plan (1965-70), August 1970.

———— State Bank of Pakistan, Monthly Bulletins, (Selected issues).

———— State Bank of Pakistan, Report of Currency and Finance, (Selected issues).

TURKEY, State Planning Organization, The First Five Year Development Plan (1963-67), Ankara 1963.

UNITED KINGDOM, Ministry of Overseas Development, The Indus Basin Development Fund Agreement, Karachi, September 1960. Cmnd. 1527.

———— Ministry of Overseas Development, The Indus Basin Development Fund (Supplemental) Agreement 1964, Cmnd. 2799.

UNITED NATIONS, Manual on Economic Development Projects, New York 1958.

———— Department of Economic and Social Affairs, World Economic Survey 1967, New York 1967.

———— Economic Commission for Asia and the Far East, Formulating Industrial Development Programmes (With special reference to Asia and the Far East), Bangkok 1961.

UNITED NATIONS, Economic Commission for Asia and the Far East, Economic Survey of Asia and the Far East 1960 and 1968.

———— Statistical Yearbook 1969, New York 1970.

WEST PAKISTAN INDUSTRIAL DEVELOPMENT CORPORATION, WPIDC, An Introduction, Undated, Probably 1969.

WORLD BANK, Water and Power Resources of West Pakistan: A Study in Sector Planning, Vol. III: Background Methodology Supplemental Papers. Published for the World Bank as Administrator of the Indus Basin Development Fund by The Johns Hopkins Press, Baltimore 1969.

APPENDIX A

A NOTE ON ACCOUNTING PRICES

In analysing government development expenditure it has been argued that accounting or shadow prices should be used for investment decisions. Here we have assumed that, due to structural disequilibrium existing in the economy, market prices fail in most cases to reflect the intrinsic value of input and output. Consequently, investment decisions based on market prices may not be optimum. Thus there arises the necessity of estimating accounting prices of factors and commodities that enter into investment decisions. As far as public investment is concerned it would merely be an accounting exercise to calculate the cost- and return-streams on the basis of such prices; and to determine the Net Present Value (NPV) it would be necessary to discount the cash flows at the accounting rate of interest. In the private sector, accounting prices can provide a guide-line, on the basis of which government policy actions may be directed. The intention is to see that in investment decisions the proportion of factor-use reflects the factor-availability.

The main objective of this Appendix is to give some idea of the use and estimation of accounting prices with reference to Pakistan. An exercise of this kind is particularly helpful in seeing the divergence of prices of some important factors such as (a) labour, (b) capital and (c) foreign exchange. At the outset it should be mentioned that to make an exact estimation of accounting prices is not a simple task, because serious methodological problems are involved in estimating such prices. As we shall see in Section I, for an efficient solution one needs an estimate based on a general equilibrium approach. Partial solutions can be helpful for obtaining a second best estimate of accounting prices. An idea

in this regard is provided in Section II. As will be seen, the planners of the First Plan of Pakistan tried to estimate the accounting prices of factors like capital, foreign exchange and labour through some partial approaches. The initiative taken by the planners of the First Plan seems to have been abandoned in the preparation of the Second and Third Plans. In Section III, it is found that even by applying some crude measure one observes that market prices hardly reflect social prices. It is also found that the deviation is not the same in East Pakistan and West Pakistan. This strongly suggests that accounting prices in Pakistan should be estimated at both national and regional levels.

I Introduction

In order to avoid using market prices as a tool for allocating resources, one often comes across partial rules based on some single factor such as labour, capital, etc.[1] For example, it is suggested that an investment programme using a labour-intensive technique or yielding a low capital-output ratio should be given priority in the development programme. In fact, in many underdeveloped countries investment decisions are based on such partial rules. But, as has been shown by Kahn[2] and Chenery,[3] the use of partial rules based on single factor analysis may often lead to erroneous conclusions. Moreover, as external economies are

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1 For a summary of the partial rules see UN, Manual on Economic Development Projects, New York 1958, pp.219-33.

2 Kahn, A.E., "Investment Criteria in Development Programmes," Quarterly Journal of Economics 1951, pp 38-50.

3 Chenery, H.B., "The Application of Investment Criteria," Quarterly Journal of Economics 1953, pp.85-93.

generated from new investments it becomes necessary that one should correct the errors in the existing price system as well as estimate prices in the future which would result from the optimal use of available resources. So, for an efficient solution, what one needs is an estimate based on general equilibrium through a linear programming approach using alternative production functions, factor supply schedules, and final demand schedules to derive simultaneously all prices and quantities of factor and product, as well as desirable production functions.[4]

It should however be mentioned that there are severe limitations in trying to apply a general equilibrium solution in actual planning. As far as Pakistan is concerned, the statistical information available is not at all adequate. This is probably the main reason why the planners of the First Plan tried to estimate accounting prices based on some partial approaches, as we shall see in the next Section. But this does not mean that formal programming methods can not be applied at all in actual planning. On the contrary, as has been observed by Chenery, the programming methods can be used "to determine the proper accounting prices for some of the principal inputs - labour, capital, foreign exchange, and a few industrial materials - and to revise sector programmes."[5]

By allowing the planners to view the whole economy and not one particular aspect of it, resource allocation through linear programming provides a consistent basis for planning development. Here lies the importance of the introduction of

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4 The method of solution in the framework of linear programming model is discussed in Dorfman, R., Samuelson, P. and Solow, R., Linear Programming and Economic Analysis, The Rand Corporation, McGraw Hill Book Co., 1958 Chapter 4. For an empirical approach to programming see Chenery, H.B., "Development Policies and Programmes," Economic Bulletin for Latin America 1958, pp. 61-71.

5 Chenery, H.B., "Development Policies and Programmes," p. 71.

the technique for improving investment decisions in Pakistan. It is true that enormous difficulties are likely to be faced in the beginning, but a start in this direction will be helpful at least for two reasons. Firstly, it can locate the areas in which attempts should be made to collect data. Secondly, it can provide a basis for scientific thinking along the lines of factor-use based on factor-availability.

II The Approach towards Accounting Prices in the First, Second and Third Plans

As mentioned earlier, a knowledge of social prices is necessary because market prices may be misleading and investment decisions based on market prices will not be able to take proper account of the factor availabilities. For example, if the total investment programme cannot absorb the labour-supply the social wage rate will be lower than the market wage rate. Similarly, if the demand for imports can not be met by the foreign-exchange earning, the social price for foreign exchange will be higher than the market price. If there is a divergence between social prices and market prices, investment decisions based on market prices will fail to maximize social profitability. In the context of Pakistan, it seems that the divergence is significant. In this Section and in the next, our main concern will be to gain some idea of the social prices for labour, capital and foreign exchange in Pakistan.

The First Plan (1955-60) was framed at a time when the planning machinery of Pakistan was in its formative stages. There was also the difficult problem of finding proper data. Understandably, it was not possible on the part of the planners of the First Plan to apply an overall programming technique. But they did attempt to apply some partial approaches, as may be seen from the paragraphs that follow,

to estimate accounting prices of capital, labour and foreign exchange.[6]

In order to determine the accounting price for capital, the planners considered the prevailing rate of interest as well as the rate of return. Sufficient information regarding the marginal productivity of capital was not available to the planners. They seem to have taken note of the 12 to 15 per cent rate of return which was considered as a minimum acceptable rate for the proposed government industrial projects, including some private investments, in the First Plan. Just how the rate is able to provide a basis of accounting rate of interest was checked against the market rate of interest. In Pakistan, the central bank discount rate was as low as 3 to 4 per cent with little regard to productivity of capital; the interest rate charged by the commercial banks ranged from 4 to 10 per cent, while money lenders charged 25 to 40 per cent or more. Considering that the rates of interest prevailing in the unorganised market contains a high risk premium and involve high costs of management, the planners rejected the high rates as found in the unorganised market and considered that an accounting rate of interest within the range of 10 to 15 per cent at which industrialists and business men at times borrowed funds from each other.

In order to determine the accounting price for labour, the planners' approach was to deal with unskilled labour only.[7] They tried to get some idea of the opportunity cost of labour through different approaches, such as the marginal productivity of labour in the subsistence sector, the cost of replacing the marginal labour with

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6 The main source of information is a paper by Papanek, G.F., and Qureshi, M.A. "The Use of Accounting Prices in Planning," in Science, Technology and Development, US Papers prepared for the UN Conference on the Application of Science and Technology for the Benefit of the Less Developed Areas. Vol. 8. pp.95-105. See also Chowdhury, M.K., The Approach to Planning in Pakistan pp.272-9

7 So far as the estimation of the accounting wage rate for skilled labour is concerned, the planners thought that it was not very essential.

capital, and the cost of urbanizing per worker. They found that an estimate of accounting wage rate would be positive by applying any of the approaches. They then tried to get an idea of the rate of unemployment at that time which was estimated to be above 20 per cent of the labour force. This may have influenced the planners in rejecting the market wage rate. However, it is not clear whether or not the planners had made any attempt to establish a categorical accounting wage rate. It is probable that they avoided having to determine an accounting wage rate by applying two estimates for cost-benefit calculations. The first estimate involved obtaining the productivity of investment by deducting all costs except the cost of capital from the value of output. This means that the market wage rate was used for calculations. The second estimate was that of measuring the total contribution of the investment to national income. This amounted to saying that the labour cost was zero.

So far as the accounting price for foreign exchange is concerned, the planners decided that it should be 66.6 per cent higher than the official rate of foreign exchange prevailing in 1954-55. They seem to have considered three approaches in reaching their conclusion. First, they obtained information concerning the rate prevailing in the free market, which was about 100 per cent above the official rate. Since a high risk was involved in black market transactions, the planners thought that the free market rate was too high and should be taken as an upper limit. Second, the planners applied a variant of the purchasing power parity theory. For this they selected a commodity such as rice which was an important item of domestic production and consumption. In order to find some approximation of the accounting rate of foreign exchange, the planners estimated the price per ton of rice and then compared it with the price on the international market. The third approach was to find an approximation of the accounting rate of foreign

exchange based on the opportunity of cost of balancing the foreign exchange gap in the Plan period. For this they first tried to estimate the cost of foreign exchange earning through an important export item such as jute products. Since India was competing with Pakistan in the world market, the price at which the former would be willing to sell her products was taken as the world price of jute products. The estimate thus obtained was compared with the cost of foreign exchange earning through some other exports like textiles as well as the cost of replacing some important imports like fertilizers, paper, newsprint, etc. It seems that the main intention of the planners was to find a range of values for the accounting price for foreign exchange. This was done by comparing the foreign exchange prices derived from jute products with the marginal import requirements and exports. The rates thus found were compared again with other estimates such as the internal price of rice quoted in the international market.

The above estimates of (a) accounting interest rate, (b) accounting wage rate, and (c) accounting foreign exchange rate may be thought of as having been made separately. But consistency of estimate needs inter-dependence in calculation. In other words, prior calculation of other estimates is necessary for estimating, say, accounting interest rate. As a practical solution the planners of Pakistan seem to have applied some relative estimates through a series of successive approximations. An idea of the calculation procedure for the relative estimate of accounting prices may be obtained from the following: "It will usually be easiest to start with the calculation of the accounting rate for foreign exchange if this differs from the prevailing rate. The accounting exchange rate can then be used for the calculation of the accounting interest rate, using either the market price or the best guess of a suitable accounting price for labour. Using the accounting interest rate

and the accounting exchange rate, the accounting wage rate can then be calculated. Using these rates in turn, one can derive a second approximation of the accounting interest rate. In this way, the calculation can be progressively refined." [8]

From the above discussion regarding the approach of the planners of the First Plan it appears that through separate and relative estimates they tried to find out the divergence between the social price and the market price of labour, capital and foreign exchange. The exercise was important in two main respects: Firstly, the estimates provided the planners with the benefit of hindsight to assist them in making their decisions on the priorities to be attached for investment in different sectors and areas. Secondly, it showed that the structural disequilibrium in the economy was significant and even some partial approaches may be of use in gaining some idea of the divergence and in determining the social price of the primary factors as a percentage of the market prices. Apart from these, the use of the accounting price in the context of the First Plan, was however, highly limited. It is probably in the public sector industrial programme that some application of the accounting prices was made. But so far as the rest of the investment programme was concerned it seems certain that accounting prices were not used. Secondly, it seems certain that in practice no attempt was made to implement accounting prices through a system of taxes and subsidies. Thirdly, no serious attempt was made to make separate estimates at the regional level. Probably the only correction they tried to make at the regional level was in respect of the wage rate which they thought would be lower in East Pakistan than in West Pakistan. So far as the accounting

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8 Papanek, G.F., and Qureshi, M.A., "The Use of Accounting Prices in Planning," p. 101.

foreign exchange rate was concerned, the planners tried to apply the same rate to both East Pakistan and West Pakistan, although it was certain that the premium required over the official rate of exchange would have been much higher in West Pakistan.

Thus we find that the approach towards accounting prices, although in the right direction, left much to be done. The planners of the First Plan, however, were aware of this and hoped that the practice they helped to inaugurate would be continued and that the process of calculating accounting prices could progressively be refined. But the hopes of the planners were not realized. As early as 1956 the use of the accounting price for foreign exchange was abandoned.[9] The decision was taken, following the devaluation of the Pakistani currency, since the planners thought that the new exchange rate - fixed at 33.3 per cent higher due to devaluation - was much closer to the accounting rate of foreign exchange.[10] But the residue of the accounting approach that remained was also abandoned by the planners of the Second Plan. As mentioned by Chowdhury, the planners of the Second Plan made no attempt to calculate accounting prices.[11] The same view has been expressed by Papanek, who also mentions the Third Plan. According to Papanek, no accounting prices were calculated for the Second and Third Five-Year Plans

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9 Chowdhury, M.K., The Approach to Planning in Pakistan, p.291. See also Bell, D.E., "Allocating Development Resources: Some Observations based on Pakistan Experience," Public Policy 1959, p.97.

10 One can argue that the decision to abandon the accounting foreign exchange rate not only ignored the difference of about 33.3 per cent based on the earlier estimate by the planners but also failed to recognise the acute foreign exchange scarcity which was prevailing in West Pakistan.

11 The observation is based on the opinion of Professor J.R. Parkinson and Dr. R.H. Khondker who were associated with the preparation of the Second Plan. Cf. Chowdhury, M.K., The Approach to Planning in Pakistan, p.277.

and little effort was devoted to systematic cost-benefit calculations.[12]

Although little is known about the basis of investment decisions in the Second and Third Plans it seems that the planners tried to solve the allocation problem entirely on the basis of market prices taking "priority planning" [13] as their criterion of allocation. It is true that in a country like Pakistan where structural disequilibrium is obvious, priority planning, if based on impartial judgement, can give a broad indication of those areas where investment is necessary. Such investment decisions may not deviate greatly from an optimum development programme. Further, priority planning avoids the necessity of determining accounting prices and of applying rigorous quantitative techniques and thus things can be simplified for the planners. But such an approach lacks a scientific basis and provides an opportunity for distorting investment decisions by non-economic pressure.[14] Calculation of accounting prices and their application through rigorous quantitative techniques allow the planners to make allocations by strengthening the basis of their investment decisions. This was probably the main reason why the planners of the First Plan,

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12 Papanek, G.F., "Development Theory and DAS Experience," in Papanek, G.F. (ed.) Development Policy - Theory and Practice, Harvard University Press, 1968, p. 351. The main reason for the neglect of accounting approach seems to be that the planning agencies in Pakistan were heavily involved in work on foreign aid, fiscal policy, price policy and a shift to indirect control. However, according to Papanek since 1966 Investment decisions have been receiving some attention.

13 In 'priority planning' some sectors or areas are given priority over others. For example, the Plans of Pakistan emphasize that import substitutes and export expanding industries should be given priority.

14 Referring to public project decisions it has been remarked recently by a member of the Harvard Advisory Group that "There are flagrant examples of projects which have been or are to be undertaken strictly for political reasons in defiance of economic logic." Cf. Rotner, E.R., in the Book Review section of Pakistan Development Review, Spring 1970, p.115.

as mentioned earlier, suggested that the accounting technique already started by them be continued and improved.

III Some Approximation of Accounting Prices

In The Design of Development, Tinbergen has remarked that, "even if it is not possible to make any sensible estimate of an accounting price, it may be useful to make a set of alternative calculations using plain guesses for the accounting prices."[15] As shown in the preceding Section, the planners of the First Plan made a start in this direction. Subsequently, things did not move as one wished them to. But this does not imply that the planners of the Second and Third Plans were not aware of the divergence between social and market prices - a fact which is so obvious in the economy of Pakistan. It is almost certain that in preparing priorities of investment the planners considered the existence of this divergence. Haq, who was closely associated with the Planning Commission, even went to the extent of making some estimates of shadow prices for unskilled labour, foreign exchange and capital.[16] Compared with the estimates by the planners of the First Plan which were based on information of the early 1950's, Haq's estimates as summarised below were based mainly on information available in the early 1960's.

Since unemployment (disguised and revealed) at that time was about 20 per cent of the total labour force in Pakistan, Haq estimated that the accounting wage

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15 Tinbergen, J., The Design of Development, The Johns Hopkins Press, Baltimore, 1958, p.86.

16 Haq, M., The Strategy of Economic Planning, pp. 40-49. Chowdhury, M.K., (op. cit., p.293), observed that the procedure applied by Haq has been used to calculate accounting prices and to use them in assessing projects and proposals which have been submitted before the Planning Commission for the Third Plan.

rate should be 20 per cent lower than the market wage rate. In estimating accounting foreign exchange rate, a series of successive approximations were used. An estimate measuring the excess demand over current earnings shows that on the eve of the Second Plan, the accounting rate for foreign exchange would be 53 per cent above the official exchange rate. A consideration based on the ultimate aim of eliminating dependence on foreign aid shows that an accounting foreign exchange rate for the Second Plan would be about 42 per cent above the official exchange rate. So far as the accounting rate of interest is concerned, Haq estimates that a rate of between 8 and 10 per cent would be more appropriate than the prevailing bank rate of 4 per cent. He was also aware of the necessity of having a different accounting wage rate and an accounting foreign exchange rate for East Pakistan and West Pakistan. He remarked that since unemployment was 33 per cent in East Pakistan and 8 per cent in West Pakistan and since there was little prospect of labour mobility between the two regions, different accounting wage rates should be used for the two regions. Although he did not mention any estimate of the accounting foreign exchange rate for East Pakistan and West Pakistan he seems to have been certain that the rate would be much higher for West Pakistan than for East Pakistan.[17]

In the paragraphs that follow an attempt will be made to give an idea of the accounting prices for capital, labour and foreign exchange. At the outset it should be mentioned that the basis of the estimation is weak. Since the weaknesses are apparent no attempt will be made to indicate them. The calculations are considered

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17 In an article prepared for an OECD Conference, he stated that on rough estimation "the shadow price of foreign exchange in East Pakistan will be about at par with the official rate of exchange while the price may be about 140 per cent higher in the case of West Pakistan." Cf. Haq, M., "Problems of Formulating a Development Strategy in Pakistan," in OECD, Development Plans and Programmes, Paris 1964, p.123.

to be useful however for providing an idea of the divergence between social and market prices, especially on a regional basis. The time-period considered for the estimates would cover approximately the mid-sixties.

Accounting Price for Capital. It was found earlier that the planners of the First Plan (henceforth called the PFP-estimate) considered 10 to 15 per cent as a reasonable accounting rate of interest, while Haq considered a rate of between 8 and 10 per cent. Both the PFP-estimate and the Haq-estimate were at the national level. In order to extend these estimates to a regional level one needs information like the marginal productivity of capital, market rates of interest, etc., separately for East Pakistan and West Pakistan. Since adequate data at the regional level are lacking, an attempt may be made to make an estimate at the national level based on a simplified equation, as shown below, and extend it to East Pakistan and West Pakistan.

Following Solow[18] we consider a simplified equation with one unknown and three known variables. The unknown variable is the accounting rate of interest. The known variables are:

s = savings ratio,

g = growth rate,

p = ratio of profits to total income.

$$\text{Accounting Rate of Interest} = \frac{g}{s/p}$$

In other words, the accounting rate of interest is a function of g, s and p. Given the values of g and s, the higher p is, the higher will be the accounting rate of

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18 The formula has been used by Chakravarty in the context of India. Cf. Chakravarty, S., "The Use of Shadow Prices in Programming Evaluation," in Rosenstein-Rodan, P.N. (ed.), Capital Formation and Economic Development, George Allen and Unwin Ltd., London 1964, p.60.

interest. Alternatively, given the value of s/p, the higher g is, the higher will be the accounting rate of interest. The formula is useful for showing that the accounting rate of interest depends upon the supply of savings determined by s, and the demand for savings determined by g and p.

The value of g in Pakistan in the mid-sixties was around 5 per cent (Background Table 8). So far as the value of s/p is concerned, it is reasonable to estimate that this should be kept within the range 0.5 - 0.3; the savings ratio would be around 0.1 and the profits ratio between 0.2 and 0.3.[19]

Once we have obtained the values of the variables s, p and g, the accounting rate of interest can be determined. For operation purposes, the value of s/p may be varied to determine an upper and a lower limit.

$$\text{Upper limit} = \frac{0.05}{0.30} = 0.17 \text{ approx.}$$

$$\text{Lower limit} = \frac{0.05}{0.50} = 0.10$$

An average between the upper and the lower limits gives a rate of 13.5 per cent. This rate falls within the considered range of 10 to 15 per cent, as found in the PFP-estimate.

In order to extend the estimate to East Pakistan and to West Pakistan, an idea of the value of g, s and p at the regional level is required. As found in Chapter I, there are conflicting views concerning the productivity of capital between the regions. Regarding s, the data are also not very clear. The ratio of total invest-

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19 An idea of the values of s may be obtained from Background Table 19 and of p from GOP, CSO, Census of Manufacturing Industries 1959-60, as quoted in Haq, M., op. cit., p.107, Table 21.

ment to GRP has always been higher in West Pakistan than in East Pakistan. But it is believed that, at least in the fifties, the savings ratio was higher in East Pakistan than in West Pakistan. In view of the difficulties involved in obtaining unbiased data at the regional level, we propose to use the value of s/p found at the national level. As far as the value of g is concerned, it is established that the rate of growth has been higher in West Pakistan than in East Pakistan. Information available indicate that a fair estimate is obtained if the value of g is kept at 4 per cent for East Pakistan and 6.5 per cent for West Pakistan.[20]

The above values may now be used to obtain an estimate of the accounting rate of interest at the regional level, as shown below.

	West Pakistan	East Pakistan
Upper Limit	$\frac{0.065}{0.30}$ = 0.22 approx.	$\frac{0.04}{0.30}$ = 0.13 approx.
Lower Limit	$\frac{0.065}{0.50}$ = 0.13	$\frac{0.04}{0.50}$ = 0.08
Average	17.5 per cent	10.5 per cent

The estimates thus found at the regional level show that the accounting price for capital is much higher in West Pakistan than in East Pakistan. The reasons are implicit in the data used for calculation. Given an equal productivity of capital at the regional level, the higher growth rate in West Pakistan has not been accompanied by a proportionately higher savings ratio, implying higher demand and lower supply of savings.

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20 GOP, PC, Annual Plan 1968-69, p.9.

Accounting Price for Labour. Following the PFP- and Haq-estimates, we propose to make some approximation of the accounting wage rate for unskilled labour only. Secondly, as in the estimate for the accounting interest rate, an approach based on upper and lower limits will be attempted.

In order to get an idea of the lower limit of the accounting wage rate of unskilled labour we adopt the Little-Mirrless approach of estimating the social cost of employing labourers calculated by the authors in carrying out the case study of a rayon plant in Pakistan.[21] The approach assumes that the unskilled labour consumes the entire wage. Thus conceived, it involves the application of a formula by taking some standard conversion factor for consumption at world prices which was estimated to be 62.5 per cent of the actual wage. Accordingly, if the actual wage rate is represented by w and consumption at accounting prices by c, then

$$c = \frac{62.5}{100} w.$$

In the context of Pakistan, the authors would like to make some modification because the shadow rate "expressed as a percentage of c should be rather high, and so 80 per cent was chosen. The shadow wage is therefore equal to $\frac{8c}{10}$, i.e. 1/2 w." [22] But for present purposes, 50 per cent of the market wage rate may be considered as the lower limit of shadow wage rate, as Little and Mirrless have themselves observed: "If anything, 50 per cent may be on the low side, because the standard conversion factor almost certainly underestimates the ratio of world to domestic prices for the typical family budget of an unskilled worker." [23]

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21 Little, I.M.D., and Mirrless, J.A., Manual of Industrial Project Analysis in Developing Countries, Vol. II: Cost Benefit Analysis, p.225. The basic formula is shown in p.162.

22 Little, I.M.D., and Mirrless, J.A., op. cit., p. 225.

23 Ibid, p. 225.

For estimating an upper limit the Haq-approach may be used. According to this, "if a certain percentage of the labour force remains unemployed at the ruling wage rate, then the wage rate should be 'reduced' by the same percentage so as to employ all the labour force with the same wage fund as before." [24] Thus, taking unemployment in the mid-sixties as about 22 per cent of the total labour force (Background Table 4), the accounting wage rate would be 78 per cent of the market wage rate. An application of the approach at the regional level would show that since unemployment in East Pakistan is about one-third of the total labour force, the accounting wage rate in East Pakistan would be about two-thirds of the market wage rate; on the other hand, the accounting wage rate in West Pakistan would be as high as 92 per cent of the market wage rate considering the fact that unemployment is only 8 per cent of the labour force.

The Haq approach may give an incorrect result if it is found that the market wage rate in the region with higher unemployment is higher. Fortunately, in our case the region with higher unemployment (that is, East Pakistan), has the lower wage rate. For example, in 1959-60, in the large scale industrial sector, the average wage rate was found to be Rs. 1,060 per annum in East Pakistan as compared with Rs. 1,260 in West Pakistan (including Karachi).[25] But, as may be seen, the wage difference is not an exact reflection of the difference in the unemployment rate. The main advantage of the approach is that itconsiders the wage-fund in such a manner that, given the wage-bill, the entire labour force can be employed. Thus for our purposes the values found for the accounting wage rate by applying the Haq approach has been taken as the upper limit.

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24 Haq, M., The Strategy of Economic Planning, p.42.

25 GOP, CSO, Census of Manufacturing Industries 1959-60, as quoted in Haq, M., op. cit., p.107.

Given the upper and lower limits, the average of the two may help to give an approximation of the accounting wage rate. It may be mentioned that while we have obtained different values at national and regional levels for the upper limit, this is not so for the lower limit. This is, of course, a limitation. However, since we are trying merely to get a rough idea, the use of the same lower limit will probably not make a significant difference.

The data at the national level show that 78 per cent of the market wage rate would be the upper limit of the accounting wage rate and 50 per cent would be the lower limit. The average of the two limits gives an accounting wage rate of 64 per cent of the market wage rate. In East Pakistan, the upper limit is considered as 67 per cent and the lower limit as 50 per cent; the average of the two gives a rate of 58.5 per cent of the market wage rate in East Pakistan. In West Pakistan, the upper and lower limits are taken as 92 per cent and 50 per cent, respectively; this gives an accounting wage rate of 71 per cent of the market wage rate in West Pakistan.

Accounting Price for Foreign Exchange. Estimating the accounting price for foreign exchange in Pakistan becomes a difficult process. Two main reasons may be advanced. Firstly, there is a strict control on imports at commodity and country level, and it is difficult to know exactly what would have been the demand for foreign exchange without controls. Secondly, in West Pakistan the price level is lower than in East Pakistan although the former has suffered a considerable foreign exchange deficit for a long time (Background Tables 10 and 14). The possible existence of some non-economic factor which may be responsible for the phenomenon makes an application of the purchasing power parity approach rather difficult.

The presence of difficulties does not, however, imply that the task of determining an accounting foreign exchange rate can be ignored. As already argued in the thesis, there is a serious foreign exchange constraint and in order to avoid the risk of mis-allocation of investment fund, one must perform the task of estimating the intrinsic value of foreign exchange. Both the PFP-estimate and the Haq-estimate indicate that home currency is overvalued in terms of the official rate of foreign exchange. The PFP-estimate considered a premium of 66.6 per cent over the official rate of foreign exchange in 1954-55. Haq estimated that the accounting price for foreign exchange would be 42 per cent higher than the official rate. Both these estimates, however, appear very low when compared with the estimation made by Islam,[26] calculating the extent of overvaluation of the domestic currency at the official rate of exchange from 1948-49 to 1964-65, as shown below.

(In Percentage)

	Markup of Scarcity Price of Foreign Exchange on its Official Price		Markup of Scarcity Price of Foreign Exchange on its Official Price
1948-49	1.17	1956-57	0.92
1949-50	1.68	1957-58	1.21
1950-51	1.61	1958-59	0.94
1951-52	1.47	1959-60	0.74
1952-53	2.16	1960-61	0.80
1953-54	1.74	1961-62	0.88
1954-55	1.64	1962-63	0.92
1955-56	1.12	1963-64	0.92
		1964-65	1.19

26 Islam, A.I.A., "An Estimation of the Extent of Overvaluation of the Domestic Currency in Pakistan at the Official Rate of Exchange 1948/49 - 1964/65," Pakistan Development Review, Spring 1970, p.58. The following formula was used by Islam

$$\frac{(\dot{e} - \hat{e})}{\hat{e}} \cdot 100 = [(\alpha - \beta - \lambda) - 1] \cdot 100$$

where

$\dot{e}$ = scarcity price of a unit of foreign exchange
$\hat{e}$ = official rate of exchange
α = ratio of actual market price to c & f value
β = normal profit as a proportion of c & f value
λ = cost of distribution as a proportion of c & f value.

Since here we are interested only in obtaining some approximation of the accounting price for foreign exchange, no serious consideration of whether or not Islam's estimation is better than that by the planners of the First Plan or that by Haq will be entered into. For present purposes, it is obvious that the official rate of foreign exchange in Pakistan highly overvalues the domestic currency.

The estimates shown above are at the national level. At the regional level, it is doubtful whether the national estimate could show the relative scarcity of foreign exchange faced separately by East Pakistan and West Pakistan. As may be seen from Background Table 14, the foreign trade balance of East Pakistan has enjoyed a surplus in most years, to be contrasted with a deficit faced by West Pakistan. Following Haq's approach of measuring excess demand over current earnings [27] we can estimate the accounting price for foreign exchange in East Pakistan and West Pakistan, taking the data of Background Table 14. The five-year period 1964-65 to 1968-69, will be taken as the basis of our estimation. During this period the total export earnings of East Pakistan were Rs. 737 crore and imports Rs. 775 crore. On the other hand, the total exports of West Pakistan during the same period amounted to only Rs. 730 crore, as against total imports of Rs. 1,656 crore. So the measure of excess demand over current earnings turns out to be 5.15 per cent ($= \frac{775 - 737}{737}$) for East Pakistan, compared with 126.84 per cent ($= \frac{1,656 - 730}{730}$) for West Pakistan.

The above approach can, of course, be seriously challenged. But in the context of Pakistan, one cannot deny that the problem of foreign exchange constraint is a more serious matter for West Pakistan than for East Pakistan. In the World Bank study

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27 Haq, M., The Strategy of Economic Planning, p.45. The approach is a very simplified one and may be expressed symbolically as follows:
Premium required over the foreign exchange rate (in percentage)

$$= \frac{M - E}{E} \cdot 100$$

where

E is exports and M is imports.

conducted in connection with the Indus Basin Development Programme, it has been found that a development programme in West Pakistan needs to consider a premium rate close to 100 per cent on the current foreign exchange rate.[28] The findings of the World Bank study may also be compared with the observation by Haq that the shadow foreign exchange rate for West Pakistan may be about 140 per cent higher than the official rate. As far as East Pakistan is concerned, Haq observed that the "shadow price for foreign exchange in East Pakistan will be about at par with the official rate of exchange." His observation compares favourably with the estimation/accounting foreign exchange rate for East Pakistan as shown above taking the five-year period 1964-65 to 1968-69.

The estimates thus found for the accounting prices for capital, labour and foreign exchange at national and regional levels may be improved by attempting some relative measure. This will have the merit of estimating, say, the accounting rate of interest from the separately computed values for accounting wage rate and accounting foreign exchange rate. The value thus found for the accounting rate of interest can be used in determining the accounting foreign exchange rate or the accounting wage rate and the process may be repeated in this way. The values thus obtained for/accounting rates from proportional estimation can be used as a basis for comparison with the values estimated separately. This will at least be an improvement in obtaining consistency in the estimation of accounting prices for labour, capital and foreign exchange. But in order to establish this, it would be necessary to have some practical application, and action from some authority such as the Planning Commission will be required.

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28 World Bank, Water and Power Resources of West Pakistan: A Study in Sector Planning, Vol. III, The Johns Hopkins Press 1969, pp. 68-70.

A note on the relevance of the differential foreign exchange rate at the regional level (or for that matter, any other shadow rate) with reference to regional development may be added. Confusion may sometimes arise in that a lower accounting foreign exchange rate would discourage industrialization in East Pakistan and a higher accounting foreign exchange rate would encourage industrialization in West Pakistan, since foreign exchange benefits would be higher in West Pakistan than in East Pakistan. But it should be remembered that investment decisions are based not only on benefit-streams but also on cost-streams. A higher accounting foreign exchange rate will also reveal a higher cost if the foreign exchange component of the cost-stream is significant. Industrial projects have a bad reputation in this regard. Further, once separate target growth rates for East Pakistan and West Pakistan are proposed, the task before the planners is to allocate resources for each region in order to achieve the target (Chapter I). Estimates based on accounting techniques are directed towards a better allocation of the given investment-fund.

In conclusion, it may be mentioned once again that the estimates of accounting prices shown above are not refined ones and should be treated as arbitrary. It is only through an overall analysis in the framework of a programming model, as mentioned in Section I, that one can make accurate estimates. For this, concentrated effort at the government level will be necessary. Since no such estimate has yet been made and since market prices fail to provide a correct indication for resource allocation, we consider that even some guesses as the above constitute a valuable exercise. There is obvious scope for its improvement, and it is argued strongly that the efforts of the Planning Commission will be of considerable assistance.

APPENDIX B

BACKGROUND TABLES AND CHARTS

The main objective of this Appendix is to provide the statistical information which has been the basis for most of the analysis of the study. The Appendix is divided into three Sections. Section I provides an introductory note on the sources, limitations and uses of the statistical information. The Tables and Charts are presented in Sections II and III respectively.

I Introductory Note

The statistical information provided here depends largely on both primary and secondary sources. The CSO[1] may be mentioned first as being the most important primary source. Other important primary sources include Ministry of Finance,[2] the State Bank of Pakistan[3] and the Planning Commission.[4] The secondary sources consulted cover a large number of books and articles, references

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1 Central Statistical Office (Government of Pakistan, Karachi) publishes Monthly Statistical Bulletin and Statistical Yearbook which provide data covering various aspects of the economy. Besides these, the CSO publications also cover specific topics.

2 The Budget, The Budget in Brief, Pakistan Economic Survey, etc., are important publications of the Ministry of Finance.

3 The Report of Currency and Finance (Annual) and the Monthly Bulletin are two important publications of the State Bank of Pakistan.

4 Five Year Plans, Annual Plan, Evaluation of planning achievement are important publications of the Planning Commission. From 1968-69 the Planning Departments of the Governments of East and West Pakistan have started publishing Annual Plans for East and West Pakistan, respectively.

to most of which are given in the Bibliography. However, the use of secondary sources has been restricted to those areas where data from primary sources are not available or are inadequate.

In the course of our research data-availability has remained a constant problem an idea of which may be given in the following paragraphs.

Firstly, it seems that planning exercises in Pakistan are at times still based on guesses. As late as 1968, that is, (after thirteen years of comprehensive planning), the Planning Commission observed that "Very little information is available about the size or sectoral distribution of private capital formation, flow of funds in the private sector, investment in stocks, size and pattern of private consumption, value added in some agricultural sub-sectors particularly livestock, growth of small-scale industries sector and import requirements for full utilization of industrial capacity." [5] About the extent of unemployment the Third Plan remarked that "It is difficult to establish its real magnitude due to the inherent difficulties of measuring employment in a largely traditional society. Nevertheless it is clear that the employment problem is of a serious nature and proportion." [6]

Secondly, it seems that some of the agencies of Pakistan which provide statistical information at times either do not find it important or hesitate to publish data. This is particularly marked with regard to inter-regional data involving East Pakistan and West Pakistan. The problem is further complicated by the need

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5 GOP, PC, Annual Plan 1968/69, June 1968, p.34.

6 GOP, PC, The Third Five Year Plan, p.217.

for caution in accepting the regional data provided by the Government or related bodies. Rahman has observed recently that attempts have been made to conceal facts concerning disparities between East Pakistan and West Pakistan and the general economic condition of East Pakistan.[7]

Thirdly, one often faces the problem of data-discrepancy. At times, even the same source gives different figures for the same estimate. For example, gross domestic savings as a percentage of GNP for 1959-60 was shown as 5.9 in the Third Five Year Plan,[8] while in the Evaluation of the Second Five Year Plan the figure of 6.5 was shown,[9] yet both these publications are of the Planning Commission. The estimate of inter-regional growth rate achieved during the Second Plan is another good example. In the following Table the figures quoted are shown in three publications of the Planning Commission, each giving a different estimate.

Annual Average Rate of Growth during the Second Plan

(1960-61 to 1964-65)

(In percentage)

	Evaluation of the Second Five-Year Plan, May 1966, p.9 (1)	Mid-Plan Review of the Third Five-Year Plan, Apr. 1968, p.33 (2)	Annual Plan 1968/69, June 1968, p.9 (3)	(4)
East Pakistan	5.0	5.4	4.4	
West Pakistan	5.5	5.0	6.4	

7 Rahman, M.A., "East Pakistan: The Roots of Estrangement," South Asian Review, April 1970, p.236.

8 GOP, PC, The Third Five Year Plan, p.7.

9 GOP, PC, Evaluation of the Second Five Year Plan, p.11.

Column 4 is left blank in the hope that a fourth estimate may be found somewhere else.

In the Tables and Charts that follow we have tried to provide systematic statistical information in the light of the trend of economic development that has taken place in Pakistan. The statistical information should obviously be taken with caution. It is not claimed that all the data are one hundred per cent accurate. Nor would it be wise to suggest that all the Tables can pass a rigorous mathematical test. But it can safely be claimed that the statistical information is sufficiently representative in character. In the absence of better alternative estimates this information is very useful for viewing the trend of development in the economy and to allow broad conclusions to be drawn.

II Background Tables

This Section contains 28 Tables dealing mainly with population and labour force, Gross National Product (GNP) and Gross Regional Product (GRP), foreign trade, savings and investment, and government expenditure.

Data shown in the Tables against the time, say 1951-52, correspond to the fiscal year, that is from the beginning of July of a particular year to the end of June of the next year.

In preparing the Tables, the main objective has been to provide adequate statistical information which could allow one to see the trend of development of the economy. So, in order to avoid criticism, alternative estimates have also been shown in places.

Table 1

Estimates of Population

(In Million)

	East Pakistan (1)	West Pakistan (2)	Pakistan (3)=(1)+(2)
1949-50	42.25(=)	35.31(-)	77.56(-)
1950-51	43.29(42.42)	36.18(34.39)	79.47(76.81)
1951-52	44.35(43.23)	37.07(35.20)	81.42(78.43)
1952-53	45.44(44.06)	37.98(36.02)	83.42(80.08)
1953-54	46.56(44.90)	38.91(36.87)	85.47(81.77)
1954-55	47.70(45.76)	39.87(37.74)	87.57(83.50)
1955-56	48.86(46.63)	40.86(38.63)	89.72(85.26)
1956-57	50.06(47.52)	41.87(39.54)	91.93(87.06)
1957-58	51.29(48.43)	42.90(40.47)	94.19(88.90)
1958-59	52.56(49.36)	43.95(41.42)	96.51(90.78)
1959-60	53.85(50.30)	45.03(42.40)	98.88(92.70)
1960-61	55.25(51.25)	46.20(43.40)	101.45(94.65)
1961-62	56.69(52.22)	47.40(44.42)	104.09(96.64)
1962-63	58.16(53.21)	48.63(45.47)	106.79(98.68)
1963-64	59.67(54.22)	49.89(46.54)	109.56(100.75)
1964-65	61.22(55.24)	51.19(47.63)	112.41(102.88)
1965-66	62.87(56.29)	52.57(48.76)	115.44(105.04)
1966-67	64.57(57.36)	53.99(49.90)	118.56(107.26)
1967-68	66.31(58.44)	55.45(51.08)	121.76(109.52)
1968-69	68.10(59.55)	56.95(52.28)	125.05(111.83)
1969-70	69.94(60.68)	58.49(53.51)	128.43(114.19)

Sources: From 1949-50 to 1963-64 - Khan,T.M. and Bergan,A.,"Measurement of ....National Income Estimates 1949/50 to 1963/64",Pakistan Development Review, Summer 1966,pp.199-204. From 1964-65 to 1969-70 - Computed by assuming 2.6 percent growth rate of population for the first year and 2.7 percent for the rest. Cf. Khan,T.M.,"Growth of National and Per Capita Income in Pakistan", op.cit.,p.57. It may be mentioned that while Khan has considered the estimate upto 1967-68, we have extended it upto 1969-70. Figures in parentheses show population estimates made by the Home Affairs Division. Cf. GOP, CSO, Pakistan Statistical Yearbook 1967, p.2.

Note: Khan-Bergan and Khan estimates of population are in line with the estimates of the Planning Commission. The estimates of the Home Affairs Division as shown in parentheses refer to the population figures of the mid-year, e.g., 1951 mid-year figure is shown in the Table as for 1950-51.

Table 2

Estimates of Labour Force (Selected Years)

(In Million)

	East Pakistan		West Pakistan		Total	
	Estimate I	Estimate II	Estimate I	Estimate II	Estimate I (1)+(3)	Estimate II (2)+(4)
	(1)	(2)	(3)	(4)	(5)	(6)
1951	12.89	13.77	9.50	11.51	22.39	25.28
1955	14.40	15.16	11.70	12.68	26.10	27.84
1961	17.44	17.12	12.76	14.32	30.20	31.44
1965	21.2	19.47	15.5	16.28	36.7	35.75
1970	24.7	22.24 (22.38)	17.6	18.60 (18.72)	42.3	40.84 (41.10)

Sources:

Estimate I - Pakistan Statistical Yearbook 1967, pp.20, 23-24 and the Fourth Five-Year Plan of Pakistan, p.111.

Estimate II - Computed from the population estimates shown in Background Table 1 on the basis of I.L.O. Survey which found that the ratio of labour force to population was 31.8 percent. Cf. International Labour Office, Report to the Government of Pakistan on a Manpower Survey, Geneva 1956. Figures in parentheses for 1970 have been computed on the basis of a labour-population ratio of 32.0 percent which has been considered as normal assuming that economic development will bring more women in the labour-market and the composition of population will change in favour of the working age group. Cf. Haq, M., The Strategy of Economic Planning, p.243.

Notes: For 1951 Census, civilian labour force comprised of all those persons of 12 years or over. On the other hand, in 1961 census persons in the age group of 10 and 11 were included. The Fourth Plan estimate, as shown for 1965 and 1970 (p.111) also considers labour force of 10 years and over. Labour force figures for 1951, 1955 and 1961 shown in Pakistan Statistical Yearbook, op.cit., excluded the former North West Frontier Regions.

Table 3

Distribution of Labour Force by Economic Groups

(In Percentage)

	1951		1955		1961		1965	
	East Pak. (1)	West Pak. (2)	East Pak. (3)	West Pak. (4)	East Pak. (5)	West Pak. (6)	East Pak. (7)	West Pak. (8)
Agriculture	84.67	65.35	72.99	54.57	84.26	59.31	73.39	57.85
Mining	0.01	0.97	-	0.16			-	0.10
Manufacturing	3.87	9.68	7.08	15.04			6.34	13.68
Construction	1.11	0.66	0.51	4.48	14.74	40.69*	2.41	3.42
Commerce	3.89	6.83	5.73	8.33			7.98	9.44
Transport	1.61	1.11	1.77	2.32			2.72	4.69
Services	3.82	8.75	9.76	13.85			6.92	9.94
Unclassified	0.99	7.52	2.15	1.24			0.24	0.88
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Sources and Notes:

Figures for 1951 refer to Census and are computed from the distribution of labour for 1951 Census as shown in Pakistan Statistical Yearbook 1967, p.23, Table 11.

Figures for 1955 refer to Sample-Survey and are computed from labour force figures supplied by the Department of Manpower and Employment, Ministry of Helath, Labour and Social Welfare as quoted in Pakistan Statistical Yearbook 1967, p.24, Table 12.

Figures for 1961 refer to Census and are computed from labour force figures shown in Population Census of 1961: Bulletin No.5, Economic Characteristics, p.vii, Statement 3.

Figures for 1965 refer to Sample-Survey as quoted in Pakistan Statistical Yearbook 1967, p.50, Table 21.

*The source does not show any breakdown of non-agricultural labour force.

Agriculture includes animal husbandry, fishery and forestry.

Construction includes utilities such as electricity, gas, water, sanitary services.

Due to rounding off the total may not always equal to 100.0.

Table 4

Estimates of Unemployment (Selected Years)

(In Million)

	1950			1955			1960			1965		
	East Pak. (1)	West Pak. (2)	Total (3)	East Pak. (4)	West Pak. (5)	Total (6)	East Pak. (7)	West Pak. (8)	Total (9)	East Pak. (10)	West Pak. (11)	Total (12)
Total Labour Force	13.3	10.7	24	14.5	12.0	26.5	15.8	13.5	29.3	-	-	32.5 (37.25)
Employed	9.9	10.4	20.3	10.2	11.5	21.7	10.6	12.4	23.0	-	-	(29.70)
Unemployed	3.4	0.3	3.7	4.3	0.5	4.8	5.2	1.1	6.3	-	-	(7.55)
Unemployed as % of Total Labour Force	25	3	15	30	4	18	33	8	22	-	-	22 (20)

Sources: (a) Haq, M., The Strategy of Economic Planning, op.cit., pp.108 and 249, Tables 22 and A29. In Table 22(p.108), the source refers years as 1949-50, 1954-55 and 1959-60.

(b) Figures in parentheses are from GOP, The Third Five Year Plan, p.25, Table 8.

Notes: The estimate of source (a) is primarily based on projection. An important reason of the difference between Haq-estimate and Third Plan-estimate is the difference in population estimate.

Table 5

Sectoral Distribution of National Income

(Rs. in Crore: 1959-60 Factor Cost)

	1949-50		1954-55		1959-60		1964-65		1969-70	
	Absolute (1)	% (2)	Absolute (3)	% (4)	Absolute (5)	% (6)	Absolute (7)	% (8)	Absolute (9)	% (10)
Agriculture	1,466.9	59.85	1,565.4	56.08	1,675.3	53.23	1,976.1	48.14	2,459.3	45.32
Mining	2.7	0.11	4.5	0.16	7.0	0.23	13.1	0.31	15.8	0.29
Manufacturing	143.3	5.85	222.0	7.95	293.0	9.31	471.1	11.48	653.0	12.03
(Large Scale)	(34.6)	(1.41)	(100.2)	(3.59)	(156.5)	(4.97)	(315.6)	(7.69)	(476.1)	(8.77)
(Small Scale)	(108.7)	(4.44)	(121.8)	(4.36)	(136.5)	(4.34)	(155.5)	(3.79)	(176.9)	(3.26)
Construction	23.8	0.97	41.5	1.49	65.1	2.06	192.1	4.68	272.8	5.03
Public Utility(i.e., electricity, gas, water, sanitary services)	3.3	0.14	4.7	0.17	10.7	0.34	28.3	0.69	46.4	0.86
Transport	123.9	5.06	158.8	5.69	185.7	5.90	242.4	5.91	359.5	6.62
Trade	285.6	11.66	326.1	11.68	366.5	11.65	510.9	12.45	670.5	12.36
Banking and Insurance	7.7	0.32	11.1	0.40	22.4	0.71	35.7	0.87	83.0	1.53
Ownership of Dwellings	138.7	5.66	155.9	5.58	177.2	5.63	201.7	4.91	229.6	4.23
Public Administration and Defence	106.3	4.34	124.3	4.45	133.1	4.23	179.0	4.36	331.0	6.10
Services	148.0	6.04	177.3	6.35	211.2	6.71	254.4	6.20	305.7	5.63
GDP	2,450.2	100.00	2,791.6	100.00	3,147.2	100.00	4,104.8	100.00	5,426.6	100.00
Net Factor Income from the rest of the World	-3.6	-	-0.8	-	-3.3	-	+1.0	-	+1.0	-
GNP	2,446.6	-	2,790.8	-	3,143.9	-	4,105.8	-	5,427.0	-

Sources and Notes: Absolute figures are taken from Pakistan Economic Survey 1969-70, pp.2-3 as quoted from CSO. Relative figures have been computed. GDP at factor cost is equal to GDP at market prices minus indirect taxes and inclusion of subsidies. Figures for 1969-70 are provisional.

Table 6

Estimates of Consumption

(Rs. in Crore: 1959-60 Prices)

	Estimate I	Estimate II		
		Government	Private	Total
	(1)	(2)	(3)	(4)
1949-50	2,347.6	-	-	-
1950-51	2,434.3	218	2,098.3	2,316.3
1951-52	2,406.5	283.4	2,175.6	2,459.0
1952-53	2,452.9	311.8	2,201	2,512.8
1953-54	2,592.6	291.3	2,342.3	2,633.6
1954-55	2,608.8	250	2,292.8	2,542.8
1955-56	2,585.4	293	2,273.4	2,566.4
1956-57	2,746.7	246.4	2,598.3	2,844.7
1957-58	2,741.9	246.1	2,592.8	2,838.9
1958-59	2,770.4	253.4	2,594.0	2,847.4
1959-60	2,865.9	288.97	2,679.1	2,968.07
1960-61	2,934.6	280.7	2,771.9	3,052.6
1961-62	3,047.3	302.4	2,838.2	3,140.6
1962-63	3,165.4	340.4	2,901.5	3,241.9
1963-64	3,374.4	454.4	3,087.5	3,541.9
1964-65	3,475.8	472.3	3,222.4	3,694.7
1965-66	3,752.8			
1966-67	3,798.3			
1967-68	4,086.1			
1968-69*	4,340.7			
1969-70**	4,659.6			

Sources and Notes:

Col.(1) - Computed from Background Tables 8 and 20; Consumption = GNP - Investment.

Cols.(2) and (3) - Chowdhury, M.K., "The Approach to Planning in Pakistan", op.cit., p.319. Chowdhury cites Central and Provincial Budgets and Five Year Plans of Pakistan as sources for his estimate.

*Provisional.

**Estimate.

Table 7

Regression of Consumption on GNP

(Rs. in Crore: 1959-60 Factor Cost)

	Consumption Y	GNP X
1950-51	2,434.3	2,537.3
1951-52	2,406.5	2,539.5
1952-53	2,452.9	2,613.9
1953-54	2,592.6	2,777.6
1954-55	2,608.8	2,790.8
1955-56	2,585.4	2,783.4
1956-57	2,746.7	2,949.7
1957-58	2,741.9	2,971.9
1958-59	2,770.4	3,014.4
1959-60	2,865.9	3,143.9
1960-61	2,934.6	3,308.6
1961-62	3,047.3	3,504.3
1962-63	3,165.4	3,628.4
1963-64	3,374.4	3,928.4
1964-65	3,475.8	4,105.8
1965-66	3,752.8	4,296.8
1966-67	3,798.3	4,513.3
1967-68	4,086.1	4,851.1
1968-69	4,340.7	5,128.7
1969-70	4,659.6	5,427.6

$Y_i = 515.83 + 0.7417X_i$

$R = 0.9973$

Table 8

Estimates of Rate of Growth(g) and Price Change(p)

(GNP: Rs. in Million)

	At Current Factor Cost (1)	At Constant Factor Cost of 1959-60 (2)	g (3)	In Percentage $\Delta p+g$ (4)	Δp (5)
1949-50	19,893	24,466			
1950-51	20,740	25,373	3.70	4.25	0.55
1951-52	22,500	25,395	0.08	8.48	8.40
1952-53	21,802	26,139	2.92	-3.10	-6.02
1953-54	21,836	27,776	6.26	0.15	-6.11
1954-55	21,147	27,908	0.47	-3.15	-3.62
1955-56	22,658	27,834	-0.26	7.14	7.40
1956-57	26,593	29,497	5.97	16.92	10.95
1957-58	28,400	29,719	0.75	6.79	6.04
1958-59	28,023	30,144	1.43	-1.32	-2.75
1959-60	31,439	31,439	4.26	15.40	10.14
1960-61	34,786	33,086	5.23	10.64	5.41
1961-62	36,485	35,043	5.91	4.88	-1.03
1962-63	38,642	36,284	3.65	5.91	2.24
1963-64	41,284	39,284	8.26	6.83	-1.43
1964-65	45,535	41,058	4.51	10.29	5.78
1965-66	49,690	42,968	4.65	9.12	4.47
1966-67	58,203	45,133	5.03	17.13	12.10
1967-68	61,579	48,511	7.46	5.80	-1.66
1968-69*	68,310	51,287	5.72	10.93	5.21
1969-70**	74,971	54,276	5.82	9.75	3.93

Sources and Notes:

Cols.(1) and (2) - CSO as quoted in the Pakistan Economic Survey 1969-70, pp.2-5 (Statistical Section).

Col.(3) is based on the equation $Y_t = Y_1(1+g)$, where Y_t is GNP in the current year and Y_1 is GNP in the previous year. So, g may be calculated as $g = \frac{Yt - Y_1}{Y_1}$.

Col.(4) has been computed from Col.(1) as $\Delta p+g = \frac{X_t - X_1}{X_1}$,

where X_t is GNP at current factor cost in current year and X_1 is GNP at current factor cost in previous year.

Col.(5) = Col.(4) - Col.(3).

*Revised Estimate. **Provisional Estimate.

Table 9

National Income Deflator

(1959-60 = 100)

	National Income Deflator (1)	General Wholesale Price Index (2)
1949-50	81.31	
1950-51	81.74	
1951-52	88.60	
1952-53	83.41	
1953-54	78.61	
1954-55	75.77	
1955-56	81.40	
1956-57	90.15	95.37
1957-58	95.56	95.62
1958-59	92.96	93.94
1959-60	100.00	100.00
1960-61	105.14	102.99
1961-62	104.11	105.88
1962-63	106.50	104.80
1963-64	105.09	104.62
1964-65	110.90	112.43
1965-66	115.64	117.54
1966-67	128.96	133.88
1967-68	126.94	128.58
1968-69	133.19	136.07
1969-70	138.13	140.32*

*Average of July-March.

Sources:

Col.(1) - Computed from GNP figures shown in Background Table 8 on the basis of the following:

Deflator = $\frac{X_t}{Y_t} \cdot \frac{Y_b}{X_b}$, where X and Y represent GNP at current and constant factor cost, respectively; t and b represent current year and base year, respectively. Cf. PIDE Monograph No.4: A measure of Inflation in Pakistan, March 1961, pp.20-23.

Col.(2) - GOP, Pakistan Economic Survey 1969-70, pp.100 and Statistical Section 78.

Table 10

General Price Index in East and West Pakistan

(Wholesale Prices)

1959-60 = 100

	East Pakistan	West Pakistan
1956-57	100.92	90.03
1957-58	96.02	95.38
1958-59	94.53	92.80
1959-60	100.00	100.00
1960-61	102.83	104.77
1961-62	106.78	104.65
1962-63	106.16	102.86
1963-64	102.55	106.35
1964-65	111.27	113.55
1965-66	122.77	112.03
1966-67	141.48	124.36
1967-68	129.71	126.00
1968-69	141.13	129.54
1969-70*	146.27	132.35

*Average of July-March.

Sources:

From 1956-57 to 1959-60 - GOP, Pakistan Statistical Yearbook 1964, p.330.

From 1960-61 to 1968-69 - CSO Statistical Bulletin, May 1970, pp.1044-45.

For 1969-70 - GOP, Pakistan Economic Survey 1969-70, p.100.

Table 11

Estimates of Gross Regional Product(GRP): East Pakistan and West Pakistan

(Rs. in Crore: 1959-60 Factor Cost)

	East Pakistan (1)	West Pakistan (2)
1949-50	1,237.4(1,236.0)	1,209.1(1,210.6)
1950-51	1,281.2	1,256.3
1951-52	1,322.0	1,227.5
1952-53	1,362.7	1,251.3
1953-54	1,407.7	1,372.7
1954-55	1,381.6	1,410.6
1955-56	1,323.4	1,459.4
1956-57	1,440.7	1,509.8
1957-58	1,420.1	1,551.5
1958-59	1,382.4	1,632.3
1959-60	1,497.2(1,494.5)	1,646.7(1,649.4)
1960-61	1,583.6	1,711.0
1961-62	1,679.7	1,794.7
1962-63	1,682.5	1,910.4
1963-64	1,867.1	2,009.0
1964-65	1,882.0	2,224.0
1965-66	1,952.0	2,347.0
1966-67	2,024.0(1,876.4)	2,489.0(2,636.9)
1967-68	2,186.0(2,023.5)	2,642.0(2,827.6)
1968-69	2,231.9(2,067.0)	2,800.5(3,061.7)

Sources:

From 1949-50 to 1963-64 - Khan, T.M. and Bergan, A., "Measurement of Structural Change in the Pakistan Economy: A Review of the National Income Estimates 1949/50 to 1963/64", Pakistan Development Review, Summer 1966, pp.199-202. From 1964-65 to 1967-68 - Rahman, M.A., "The Role of the Public Sector in the Economic Development of Pakistan", in E.A.G.Robinson and M.Kidron(eds.), Economic Development in South Asia, op.cit., p.75. For 1968-69 - Computed by taking 2.1 percent growth rate for East Pakistan and 6.0 percent growth rate for West Pakistan; the growth rates are shown in Government of East Pakistan, Annual Plan 1969-70, p.3 and GOP, PC, Annual Plan 1968-69, p.9.

Figures in parentheses for 1949-50 and 1959-60 are from the Third Five Year Plan of Pakistan, p.11. Figures in parentheses from 1966-67 to 1968-69 are from Annual Plan for East Pakistan 1969-70, p.3; the Annual Plan, however, shows GRP for East Pakistan only. So to obtain the GRP of West Pakistan, GRP of East Pakistan have been deducted from the GNP figures shown in Background Table 8.

Table 12

GNP and GRP Per Capita

(In Rs.: 1959-60 Factor Cost)

	Estimate I			Estimate II		
	East Pak. (1)	West Pak. (2)	Pakis-tan (3)	East Pak. (4)	West Pak. (5)	Pakis-tan (6)
1949-50	293	342	315	287	338	311
1950-51	296	347	319			
1951-52	298	331	312			
1952-53	300	329	313			
1953-54	302	353	325			
1954-55	290	354	319			
1955-56	271	357	310			
1956-57	288	361	321			
1957-58	277	362	316			
1958-59	263	371	312			
1959-60	278	366	318	278	366	318
1960-61	287	370	326			
1961-62	296	376	337			
1962-63	284	393	340			
1963-64	313	403	359			
1964-65	307	434	365	293	426	365
1965-66	310	446	372	295	427	372
1966-67	313	461	381	290	448	381
1967-68	330	476	398	307	468	399
1968-69	328	492	410	311	491	411
1969-70				314	507	423

Sources:

Estimate I - Figures for East Pakistan and West Pakistan are computed from Background Tables 1 and 11. Per capita GNP for Pakistan are computed from Background Tables 1 and 8.

Estimate II - Figures for 1949-50 and 1959-60 are taken from GOP, PC, The Third Five Year Plan, p.11, Table 12. Figures from 1964-65 to 1969-70 are given in the Preliminary Evaluation of the Third Five Year Plan, op.cit., p.201, Table 6.2.

Table 13

Foreign Trade of Pakistan

(Rs. in Crore)

	Exports (1)	Imports (2)	Balance (3)
1949-50	120	129	- 9
1950-51	255	162	+ 93
1951-52	201	223	- 22
1952-53	151	139	+ 12
1953-54	129	111	+ 18
1954-55	122	110	+ 12
1955-56	178	132	+ 46
1956-57	161	233	- 72
1957-58	142	205	- 63
1958-59	132	157	- 25
1959-60	184	247	- 63
1960-61	180	318	-138
1961-62	184	311	-127
1962-63	225	382	-157
1963-64	230	443	-213
1964-65	241	537	-296
1965-66	271	421	-150
1966-67	291	520	-229
1967-68	334	466	-132*
1968-69	330	487	-157*

Sources and Notes:

Cols.(1) and (2) - Background Table 14.

Col.(3) = Col.(1) - Col.(2).

*CSO estimate as shown in GOP, Pakistan Economic Survey 1969-70 (Statistical Section, p.93) shows a deficit of Rs.158 crore for 1967-68 and Rs.166 crore for 1968-69.

Due to summation and rounding off slight variation may be marked if compared with the CSO estimate showing total figures.

Inter-period comparison is not possible due to the difference in price level.

Table 14

Foreign Trade by Regions

(Rs. in Crore)

	East Pakistan			West Pakistan		
	Exports (1)	Imports (2)	Balance (3)	Exports (4)	Imports (5)	Balance (6)
1949-50	63	38	+25	57	91	- 34
1950-51	121	45	+76	134	117	+ 17
1951-52	109	76	+33	92	147	- 55
1952-53	64	37	+27	87	102	- 15
1953-54	65	29	+36	64	82	- 18
1954-55	73	32	+41	49	78	- 29
1955-56	104	36	+68	74	96	- 22
1956-57	91	82	+ 9	70	151	- 81
1957-58	99	74	+25	43	131	- 88
1958-59	88	55	+33	44	102	- 58
1959-60	108	66	+42	76	181	-105
1960-61	126	101	+25	54	217	-163
1961-62	130	87	+43	54	224	-170
1962-63	125	102	+23	100	280	-180
1963-64	122	145	-23	108	298	-190
1964-65	127	170	-43	114	367	-253
1965-66	151	133	+18	120	288	-168
1966-67	157	157	Nil	134	363	-229
1967-68	148	133	+15	186	333	-147
1968-69	154	182	-28	176	305	-129

Sources and Notes:

Exports and Imports Figures - From 1949-50 to 1962-63 are taken from CSO Statistical Bulletin, August 1965, pp.1980-81, Tables 2 and 3. From 1963-64 to 1968-69 are taken from ibid, November 1969, p.2235, Table 1.1.

Cols.(3) and (6) - Computed.

Figures have been rounded off.

Figures are in current prices and inter-period direct comparison is not possible.

Table 15

Net Barter and Income Terms of Trade of Pakistan

	1954-55 = 100					1959-60=100		
	Pm (1)	Px (2)	Qx (3)	N= $\frac{Px}{Pm}$ (4)	I=N.Qx (5)	Pm (6)	Px (7)	N= $\frac{Px}{Pm}$ (8)
1949-50						52.2	66.5	127.4
1950-51						65.8	139.4	211.9
1951-52						90.9	109.6	120.6
1952-53						56.2	82.4	146.6
1953-54						45.4	70.2	154.6
1954-55	100.0	100.0	100.0	100.0	100.0	44.8	66.8	149.1
1955-56	138.0	118.8	125.7	86.1	108.2	53.8	97.4	181.0
1956-57	170.9	131.8	109.0	77.1	84.0	94.9	87.8	92.5
1957-58	168.5	143.4	87.4	85.1	74.4	83.3	77.6	93.2
1958-59	161.4	128.3	95.9	79.5	76.2	64.1	72.3	112.8
1959-60	157.8	126.5	143.1	80.2	114.8	100.0	100.0	100.0
1960-61	168.9	186.0	108.8	110.2	119.9	129.5	97.5	75.3
1961-62	160.4	156.0	114.8	97.3	111.7	126.3	99.6	78.9
1962-63	168.9	144.3	158.5	85.5	135.5	155.2	121.3	78.2
1963-64	159.4	141.2	167.8	88.6	148.7	180.0	124.5	69.2
1964-65	141.4	157.9	189.3	111.7	211.4	218.4	130.8	59.9
1965-66	167.6	158.5	200.6	94.6	189.8	171.0	146.9	85.9
1966-67	157.4	185.9	207.0	118.1	244.5	210.9	156.7	74.3
1967-68	159.6	162.1	-	101.6	-	189.2	167.6	88.6
1968-69*	148.6	173.7	-	116.9	-	197.9	176.8	89.3

*Provisional

Px = Index of unit value of exports
Pm = Index of unit value of imports
Qx = Index of quantum of exports
N = Net barter terms of trade
I = Income terms of trade

Sources:
Cols.(1), (2) and (4) - Pakistan Economic Survey 1969-70, p.103, Table 47(Statistical Section).
Col.(3) - Pakistan Statistical Yearbook 1967, p.242, Table 77.
Cols.(6) and (7) - Pakistan Economic Survey 1969-70, p.93, Table 42(Statistical Section).
Cols.(5) and (8) - Computed.

Table 16

Net Barter and Income Terms of Trade: East Pakistan

(1954-55 = 100)

	Px (1)	Pm (2)	Qx (3)	$N = \frac{Px}{Pm}$ (4)	$I = N.Qx$ (5)
1954-55	100.00	100.00	100.00	100.00	100.00
1955-56	122.76	133.00	117.38	92.30	108.34
1956-57	137.19	167.46	98.84	81.92	80.97
1957-58	145.62	155.82	93.30	93.45	87.19
1958-59	133.59	152.01	96.10	87.88	84.45
1959-60	128.20	141.87	121.18	90.36	109.50
1960-61	223.15	161.55	94.93	138.13	131.13
1961-62	172.22	154.13	108.09	111.74	120.78
1962-63	152.41	166.92	123.45	91.31	112.72
1963-64	149.18	144.97	120.74	102.90	124.24
1964-65	177.78	148.08	108.41	120.06	130.16
1965-66	171.40	156.14	124.98	109.77	137.19
1966-67	213.62	136.07	118.40	156.99	185.88

Symbols - Same as in Background Table 15.

Sources:

Cols.(1), (2) and (4) - GOP, Pakistan Statistical Yearbook 1967, p.242, Table 76.

Col.(3) - Ibid, p.242, Table 77.

Col.(5) - Computed.

Table 17

Net Barter and Income Terms of Trade: West Pakistan

(1954-55 = 100)

	Px (1)	Pm (2)	Qx (3)	$N = \frac{Px}{Pm}$ (4)	$I = N.Qx$ (5)
1954-55	100.00	100.00	100.00	100.00	100.00
1955-56	112.43	139.57	148.41	80.55	119.54
1956-57	121.33	175.12	173.45	69.28	120.17
1957-58	140.30	186.54	86.93	75.21	65.38
1958-59	118.57	168.08	114.50	70.35	80.55
1959-60	122.50	166.83	316.22	73.43	232.20
1960-61	127.31	172.61	188.55	73.76	139.07
1961-62	129.24	168.91	137.56	76.51	105.25
1962-63	129.56	168.61	305.64	76.84	234.85
1963-64	125.37	168.14	401.23	74.78	300.04
1964-65	127.75	140.11	543.43	91.18	495.50
1965-66	137.03	177.14	509.53	77.36	394.17
1966-67	133.82	165.83	543.13	80.65	438.03

Symbols - Same as in Background Table 15.

Sources - Same as in Background Table 16.

Table 18

Inter-Regional Trade: East Pakistan

(Rs. in Crore)

	Exports to West Pakistan (1)	Imports from West Pakistan (2)	Balance (3)
1949-50	5.05	23.56	-18.51
1950-51	6.29	27.25	-20.96
1951-52	6.63	25.40	-18.77
1952-53	14.92	21.84	- 6.92
1953-54	15.19	38.69	-23.50
1954-55	19.82	30.50	-10.68
1955-56	23.83	33.38	- 9.55
1956-57	24.40	53.17	-28.77
1957-58	26.95	70.14	-43.19
1958-59	28.87	68.58	-39.71
1959-60	36.24	56.94	-20.70
1960-61	36.35	82.55	-46.20
1961-62	40.20	85.51	-45.31
1962-63	47.15	95.72	-48.57
1963-64	51.12	89.52	-38.40
1964-65	53.71	87.45	-33.74
1965-66	65.18	120.86	-55.68
1966-67	73.89	132.48	-58.59
1967-68	78.50	123.30	-44.80
1968-69	87.13	138.53	-51.40

Sources and Notes:

Cols.(1) and (2) - GOP, Pakistan Economic Survey 1969-70, p.92, Table 41 (Statistical Section), as quoted from CSO.

Col.(3) = Col.(1) - Col.(2).

The Table may be used for Inter-Regional Trade of West Pakistan by changing imports figures to exports and vice-versa. In other words, West Pakistan will always show surplus balance.

Inter-period comparison is not possible due to difference in prices.

Table 19

Domestic Savings and Foreign Assistance(Selected Years)

	Rs. in Crore: 1959-60 Prices			As % of GNP			Percentage Distribution	
	Domestic Savings (1)	Foreign Assistance (2)	Total (3)	Domes. Sav. (4)	Forei. Assis. (5)	Total (6)	Domes. Sav. (7)	Foreig Assis. (8)
1949-50	112.0	-	112.0 (99)	4.6	-	4.6 (4.1)	100	-
1954-55	190.0	30.0	220.0 (182)	6.8	1.1	7.9 (6.5)	86	14
1959-60	185.0	158.0	343.0 (278)	5.9	5.0	10.9 (8.8)	54	46
1964-65	383.0	256.0	639.0 (630)	9.5	6.3	15.8 (15.3)	60	40
1969-70				9.7	3.8	13.5 (14.1)	72	28

Sources:

For 1949-50, 1954-55, 1959-60 and 1964-65 - Absolute and relative figures are taken from the Third Five-Year Plan of Pakistan, op.cit., pp.7-8, Tables 7 and 8. Percentage distribution between domestic savings and foreign assistance is computed.

For 1969-70 - Figures of domestic savings and net resource transfer from abroad as percentages of GNP are shown in the Fourth Five-Year Plan of Pakistan, op.cit., p.42, Table 2. The source also gives percentage distribution figures which have been presented here as rounded off.

Figures shown in parentheses are taken from Background Tables 20 and 21.

Table 20

Estimates of Gross Investment: Public and Private Sectors

(Rs. in Crore)

	Current Prices			1959-60 Factor Cost		
	Public Sector (1)	Private Sector (2)	Total (3)	Public Sector (4)	Private Sector (5)	Total (6)
1949-50	29	52	81	35	64	99
1950-51	26	58	84	32	71	103
1951-52	48	70	118	54	79	133
1952-53	65	69	134	78	83	161
1953-54	64	82	146	81	104	185
1954-55	63	75	138	83	99	182
1955-56	73	88	161	90	108	198
1956-57	89	94	183	99	104	203
1957-58	131	89	220	137	93	230
1958-59	137	90	227	147	97	244
1959-60	164	114	278	164	114	278
1960-61	183	210	393	174	200	374
1961-62	221	255	476	212	245	457
1962-63	231	262	493	217	246	463
1963-64	318	264	582	303	251	554
1964-65	356 (360)	343	699 (703)	321 (325)	309	630 (634)
1965-66	320	308	628	277	267	544
1966-67	548 (461)	374	922 (835)	425 (357)	290	715 (647)
1967-68	501	469	970	395	370	765
1968-69*	593	457	1,050	445	343	788
1969-70**	631	430	1,061	457	311	768

*Provisional. **Estimate.

Sources:

Col.(1) - Background Table 28.

Col.(2) - Background Table 22.

Rest - Computed. National Income Deflator shown in Background Table 9 have been used for converting the figures in current prices to 1959-60 factor cost.

Table 21

Gross Investment as Percentage of GNP

	Public Investment (1)	Private Investment (2)	Total (3)
1949-50	1.5	2.6	4.1
1950-51	1.3	2.8	4.1
1951-52	2.1	3.1	5.2
1952-53	3.0	3.1	6.1
1953-54	2.9	3.8	6.7
1954-55	3.0	3.5	6.5
1955-56	3.2	3.9	7.1
1956-57	3.4	3.5	6.9
1957-58	4.6	3.1	7.7
1958-59	4.9	3.2	8.1
1959-60	5.2	3.6	8.8
1960-61	5.3	6.0	11.3
1961-62	6.1	7.0	13.1
1962-63	6.0	6.8	12.8
1963-64	7.7	6.4	14.1
1964-65	7.8(7.9)	7.5	15.3(15.4)
1965-66	6.4	6.2	12.6
1966-67	9.4(7.9)	6.4	15.8(14.3)
1967-68	8.1	7.6	15.7
1968-69	8.7	6.7	15.4
1969-70	8.4	5.7	14.1

Sources and Notes:

Computed from Background Tables 8 and 20.
Figures have been rounded off.

Table 22

Regional Estimates of Private Investment

(Rs. in Crore)

	Current Prices			1959-60 Factor Cost		
	East Pakistan (1)	West Pakistan (2)	Total (3)	East Pakistan (4)	West Pakistan (5)	Total (6)
1949-50	14	38	52	17	47	64
1950-51	15	43	58	18	53	71
1951-52	19	51	70	21	58	79
1952-53	19	50	69	23	60	83
1953-54	22	60	82	28	76	104
1954-55	20	55	75	26	73	99
1955-56	24	64	88	29	79	108
1956-57	27	67	94	30(27)	74(74)	104
1957-58	27	62	89	28(28)	65(65)	93
1958-59	27	63	90	29(29)	68(68)	97
1959-60	37	77	114	37(37)	77(77)	114
1960-61	46	164	210	44(45)	156(157)	200
1961-62	56	199	255	54(52)	191(190)	245
1962-63	58	204	262	54(55)	192(198)	246
1963-64	55	209	264	52(54)	199(197)	251
1964-65	82 95*	261 320*	343 415*	74(74)	235(230)	309
1965-66	68 96*	240 302*	308 398*	59(55)	208(214)	267
1966-67	82 105*	292 315*	374 420*	64(58)	226(235)	290
1967-68	104 112*	365 335*	469 447*	82(80)	288(290)	370
1968-69	119*	338*	457*	89(84)	254(261)	343
1969-70	120*	310*	430*	87(82)	224(234)	311

Sources and Notes: Current Prices - From 1949-50 to 1959-60 : Haq,M., The Strategy of Economic Planning,p.255; From 1960-61 to 1962-63 : GOP, PC, Annual Plan 1968-69,p.16; From 1963-64 to 1967-68 : Mid-Plan Review of the Third Five-Year Plan, p.39; Figures with asterisk : Preliminary Evaluation of the Third Five-Year Plan, p.207. Rest - Computed by using Background Tables 9 and 10. Figures have been rounded off. For 1960-61 to 1962-63, the regional breakdown of the total is based on the percentage distribution found in the CSO study, 22 percent for East Pakistan and 78 percent for West Pakistan (Table 4.1).

Table 23

Gross Investment as % of GRP : East Pakistan

	Public Sector (1)	Private Sector (2)	Total (3)
1949-50	-	1.4	-
1950-51	0.8	1.4	2.2
1951-52	1.3	1.6	2.9
1952-53	1.8	1.7	3.5
1953-54	1.8	2.0	3.8
1954-55	1.9	1.9	3.8
1955-56	2.0	2.2	4.2
1956-57	2.1(1.9)	2.1(1.9)	4.1(3.8)
1957-58	2.9(2.9)	2.0(2.0)	4.9(4.9)
1958-59	3.2(3.1)	2.1(2.1)	5.3(5.2)
1959-60	3.3(3.3)	2.5(2.5)	5.8(5.8)
1960-61	4.2(4.3)	2.8(2.8)	7.0(7.1)
1961-62	4.8(4.7)	3.2(3.1)	8.0(7.8)
1962-63	4.9(4.9)	3.2(3.3)	8.1(8.2)
1963-64	6.2(6.3)	2.8(2.9)	9.0(9.2)
1964-65	6.5(6.4)	3.9(3.9)	10.4(10.3)
1965-66	6.4(6.0)	3.0(2.8)	9.4(8.8)
1966-67	9.4(8.6)	3.2(2.9)	12.2(11.5)
1967-68	8.1(7.9)	3.8(3.7)	11.9(11.6)
1968-69	10.0(8.5)	4.0(3.8)	14.0(12.3)

Sources and Notes: Col.(1) - Table 3.4. Col.(2) - Computed from Background Tables 11 and 22. Figures in parentheses are based on infestment figures deflated at 1959-60 prices by using Regional Price Index as shown in Background Table 10. Figures have been rounded off.

Table 24

Gross Investment as % of GRP: West Pakistan

	Public Sector (1)	Private Sector (2)	Total (3)
1949-50	-	3.9	-
1950-51	1.8	4.2	6.0
1951-52	3.0	4.7	7.7
1952-53	4.4	4.8	9.2
1953-54	4.1	5.7	9.8
1954-55	4.0	5.2	9.2
1955-56	4.3	5.4	9.7
1956-57	4.6(4.6)	4.9(4.9)	9.5(9.5)
1957-58	6.2(6.2)	4.2(4.2)	10.4(10.4)
1958-59	6.3(6.3)	4.2(4.2)	10.5(10.5)
1959-60	7.0(7.0)	4.7(4.7)	11.7(11.7)
1960-61	6.3(6.3)	9.1(9.2)	15.4(15.5)
1961-62	7.3(7.3)	10.6(10.6)	17.9(17.9)
1962-63	7.1(7.3)	10.1(10.4)	17.2(17.7)
1963-64	9.4(9.2)	9.9(9.8)	19.3(19.0)
1964-65	8.9(8.8)	10.6(10.3)	19.5(19.1)
1965-66	6.5(6.7)	8.9(9.1)	15.4(15.8)
1966-67	9.4(9.7)	9.1(9.4)	18.5(19.1)
1967-68	8.2(8.3)	10.9(11.0)	19.1(19.3)
1968-69	8.7(9.0)	9.1(9.3)	17.8(18.3)

Sources and Notes:

Col.(1) - Table 3.4.
Col.(2) - Computed from Background Tables 11 and 22.
Figures in parentheses are based on Regional Price Index of West Pakistan as shown in Background Table 10.
Figures have been rounded off.

Table 25

Gross Capital-Output Ratio

	Rs. in Crore: 1959-60 Factor Cost		
	I (1)	ΔY (2)	$k = \frac{I}{\Delta Y}$ (3)
1950-51 to 1954-55	764	344.2	2.220
1955-56 to 1959-60	1,153	353.1	3.265
1960-61 to 1964-65	2,478	960.9	2.576
1965-66 to 1969-70	3,580	1,321.8	2.708
1950-51 to 1969-70	7,975	2,981.0	2.675

I = Investment

ΔY = Change in Output

k = Capital-Output Ratio

Sources:

Col.(1) - Computed from Background Table 20.

Col.(2) - Computed from Background Table 26.

Col.(3) - Computed from Cols.(1) and (2).

Table 26

Regression of Growth of Output on Investment

(Rs. in Crore: 1959-60 Factor Cost)

	Investment X	Growth of Output Y
1950-51	103	90.7
1951-52	133	2.2
1952-53	161	74.4
1953-54	185	163.7
1954-55	182	13.2
1955-56	198	-7.4
1956-57	203	166.3
1957-58	230	22.2
1958-59	244	42.5
1959-60	278	129.5
1960-61	374	164.7
1961-62	457	195.7
1962-63	463	124.1
1963-64	554	300.0
1964-65	630	177.4
1965-66	544	191.0
1966-67	715	216.5
1967-68	765	337.8
1968-69	788	277.6
1969-70	768	298.9

$Y_i = 1.1536 + 0.3709X_i$

$R = 0.8432$

Table 27

Total Government Expenditure

(Rs. in Crore : Current Prices)

	Government of Pakistan							Government of East Pak.			Government of West Pak.			TOTAL	
	Revenue Expenditure (1)	Capital Expenditure (2)	Gross Total (1) + (2) = (3)	Financial Assistance by the Central Government: To East Pakistan (4)	To West Pakistan (5)	Total (4)+(5) =(6)	NET TOTAL (3) - (6) = (7)	Revenue Expenditure (8)	Capital Expenditure (9)	TOTAL (8) + (9) = (10)	Revenue Expenditure (11)	Capital Expenditure (12)	TOTAL (11)+ (12)= (13)	(7)+ (10)+ (13)= (14)	
1947-48	23.60	12.05	35.65	-	-	-	35.65	8.67	1.51	10.18	24.10	7.64	31.74	77.57	'47-48
1948-49	64.70	49.85	114.55	0.10	6.92	7.02	107.53	16.05	0.79	16.84	30.13	2.62	32.75	157.12	'48-49
1949-50	85.60	106.41	192.01	0.10	6.40	6.50	185.51	17.86	13.31	31.17	30.70	22.57	53.27	269.95	'49-50
1950-51	126.62	49.95	176.57	2.38	7.11	9.49	167.08	19.03	3.55	22.58	32.97	12.91	45.88	235.54	'50-51
1951-52	144.23	90.62	234.85	5.05	8.59	13.64	221.21	22.75	6.19	28.94	37.64	8.84	46.48	296.63	'51-52
1952-53	132.01	86.41	218.42	4.93	7.25	12.18	206.24	25.83	10.65	36.48	41.10	20.33	61.43	304.15	'52-53
1953-54	110.87	91.32	202.19	9.56	20.50	30.06	172.13	26.02	13.34	39.36	44.70	43.94	88.64	300.13	'53-54
1954-55	117.26	66.43	183.69	12.89	20.17	33.06	150.63	28.47	7.22	35.69	43.53	29.77	73.30	259.62	'54-55
1955-56	143.34	70.66	214.00	10.92	33.36	44.28	169.72	28.51	7.91	36.42	47.73	22.96	70.69	276.83	'55-56
1956-57	133.07	95.54	228.61	31.33	33.92	65.25	163.36	33.85	19.52	53.37	54.81	25.50	80.31	297.04	'56-57
1957-58	152.18	158.25	310.43	45.97	44.87	90.84	219.59	27.63	32.73	60.36	61.47	34.37	95.84	375.79	'57-58
1958-59*	156.52	130.11	286.63	39.52	57.36	96.88	189.75	41.68	18.83	60.51	70.26	50.58	120.84	371.10	'58-59
1959-60	184.65	177.36	362.01	42.29	47.63	89.92	272.09	37.70	23.39	61.09	65.43	51.76	117.19	450.37	'59-60
1960-61	189.42	183.58	373.00	54.37	63.60	117.97	255.03	43.70	43.36	87.06	70.04	53.66	123.70	465.79	'60-61
1961-62	198.68	209.33	408.01	52.04	58.46	110.50	297.51	49.91	29.17	79.08	80.31	61.59	141.90	518.49	'61-62
1962-63	179.53	249.07	428.60	106.42	91.64	198.06	230.54	67.25	80.27	147.52	110.57	78.56	189.13	567.19	'62-63
1963-64	233.72	276.69	510.41	130.15	121.04	251.19	259.22	101.33	117.32	218.65	148.31	119.69	268.00	745.87	'63-64
1964-65	273.62	268.05	541.67	117.97	108.60	226.57	315.10	109.12	96.42	205.54	160.13	100.15	260.28	780.92	'64-65
1965-66	449.81	288.06	737.87	88.07	66.09	154.16	583.71	113.13	78.01	191.14	173.37	84.58	257.95	1,032.80	'65-66
1966-67	376.55	509.14	885.69	153.53	89.35	242.88	642.81	120.16	140.04	260.20	177.89	145.20	323.09	1,226.10	'66-67
1967-68	400.06	462.02	862.08	185.00	117.79	302.79	559.29	136.74	144.66	281.40	185.79	183.19	368.98	1,209.67	'67-68
1968-69**	439.07	552.24	991.31	185.65	144.31	329.96	661.35	168.89	193.59	362.48	194.14	164.66	358.80	1,382.63	'68-69
1969-70***	488.30	587.93	1,076.23	219.08	161.30	380.38	695.85	205.08	182.60	387.68	215.36	148.64	364.00	1,447.53	'69-70

Sources and Notes: GOP, Ministry of Finance, The Budget in Brief(Final) 1969-70(Statistical Section) - Col.(1) : pp.10-13. Col.(2) : pp.22-25. Col.(4) : pp.38-41. Col.(5) : pp.42-45. Col.(8) : pp.72-75. Col.(9) : pp.88-91. Col.(11) : pp.80-83. Col.(12) : pp.96-99. Rest - Computed. Figures have been rounded off. * Source figures shown for 15 months have been reduced by 1/5th for consi stency. **Revised Estimate. ***Budget Estimate.

Table 28

Government Development Expenditure

(Rs. in Crore: Current Prices)

	Government of Pakistan			Government of East Pakistan			Government of West Pakistan			TOTAL	
	Capital Development Expenditure (1)	Revenue Development Expenditure (2)	Total (1)+(2)=(3)	Capital Develop.Expenditure (4)	Revenue Dev.Expendi. (5)	Total (4)+(5)=(6)	Capital Dev. Expen. (7)	Revenue Dev.Expen. (8)	Total (7)+(8)=(9)	(3)+(6)+(9)=(10)	
1948-49	5.50	-	5.50	1.19	1.36	2.55	5.41	-	5.41	13.46	1948-49
1949-50	11.60	-	11.60	2.47	1.52	3.99	12.90	-	12.90	28.49	1949-50
1950-51	7.66	-	7.66	3.82	1.86	5.68	12.71	-	12.71	26.05	1950-51
1951-52	22.08	-	22.08	7.01	2.53	9.54	16.42	-	16.42	48.04	1951-52
1952-53	26.66	-	26.66	12.55	3.74	16.29	21.84	-	21.84	64.79	1952-53
1953-54	28.06	-	28.06	11.32	3.60	14.92	20.69	-	20.69	63.67	1953-54
1954-55	29.26	-	29.26	5.06	3.44	8.50	25.52	-	25.52	63.28	1954-55
1955-56	41.42	-	41.42	4.70	3.56	8.26	23.15	-	23.15	72.83	1955-56
1956-57	43.80	-	43.80	13.68	3.75	17.43	27.30	-	27.30	88.53	1956-57
1957-58	72.90	-	72.90	23.43	4.64	28.07	29.84	-	29.84	130.81	1957-58
1958-59*	65.74	-	65.74	20.82	5.46	26.28	45.17	-	45.17	137.19	1958-59
1959-60	81.73	-	81.73	26.24	7.52	33.76	48.95	-	48.95	164.44	1959-60
1960-61	75.38	0.01	75.39	34.39	7.85	42.24	56.92	8.50	65.42	183.05	1960-61
1961-62	95.84	5.01	100.85	47.12	11.22	58.34	51.92	10.25	62.17	221.36	1961-62
1962-63	38.48	6.56	45.04	73.10	13.10	86.20	83.42	15.88	99.30	230.54	1962-63
1963-64	51.92	12.13	64.05	88.42	22.14	110.56	111.00	32.82	143.82	318.43	1963-64
1964-65	69.02	21.50	90.52	103.91	25.52	129.43	99.87 (103.62)	36.41	136.28 (140.03)	356.23 (359.98)	1964-65
1965-66	89.77	29.68	119.45	73.90	22.63	96.53	71.32	32.63	103.95	319.93	1965-66
1966-67	174.33 (115.72)	16.55 (17.64)	190.88 (133.36)	136.28 (129.47)	33.12	169.40 (162.59)	157.49 (135.57)	30.00 (29.56)	187.49 (165.13)	547.77 (461.08)	1966-67
1967-68	142.07	21.63	163.70	122.37	37.66	160.03	135.41	42.23	177.64	501.37	1967-68
1968-69**	166.95	28.03	194.98	184.14	49.23	233.37	116.00	48.16	164.16	592.51	1968-69
1969-70***	175.94	34.60	210.54	192.15	56.66	248.81	130.36	41.48	171.84	631.19	1969-70

*Source figures shown for 15 months have been reduced by 1/5th. **Revised Estimate. ***Budget Estimate.

Sources: GOP, Ministry of Finance, The Budget in Brief(Final) 1969-70 (Statistical Section) - Col.(1): pp.22-25(The source shows capital development expenditure including Capital Account Development Assistance to Provinces.The figures shown in Col.(1) are computed after subtracting the Assistance to Provinces.) Col.(2):pp.10-13. Col.(4):pp.88-91. Col.(5):pp.72-75. Col.(7):pp.96-99. Col(8):pp.80-83. Rest - Computed. Figures shown in parentheses are taken from GOP, Ministry of Finance, The Budget in Brief 1968-69, pp.24, 13, 87, 95 and 79.

III Background Charts

In this Section we present five Charts. The first four Charts show the growth of total investment in absolute and relative terms, total government expenditure and government development expenditure as a percentage of GNP, respectively. Original observations are plotted on the OO' curve. The trend line is shown by TT'. The equations of the trend linear regression and the correlation coefficient (R) observed in each case may be seen from the following Table. The figures in parenthesis show the standard error of R.

	Source of Statistical Information	N	Y_i	R
Chart 1	Background Table 20	21	$-29.3944+37.6246X_i$	0.9663 (0.01)
Chart 2	Background Table 21	21	$3.0336+0.6398X_i$	0.9598 (0.02)
Chart 3	Table 3.1	21	$10.3992+0.4434X_i$	0.8464 (0.06)
Chart 4	Table 3.3	21	$0.8418+0.3949X_i$	0.9730 (0.01)

The fifth Chart shows the regression of growth of output (Y) on investment (X). Background Table 26 provides statistical information. There are 20 observations from 1950-51 to 1969-70. The trend linear equation observed is

$$Y_i = 3.2576 + 0.3581X_i$$

The correlation coefficient is 0.8140 and the standard error of the correlation coefficient is 0.08.

Chart 1

Growth of Investment (Rs. in Crore: At 1959-60 Factor Cost)

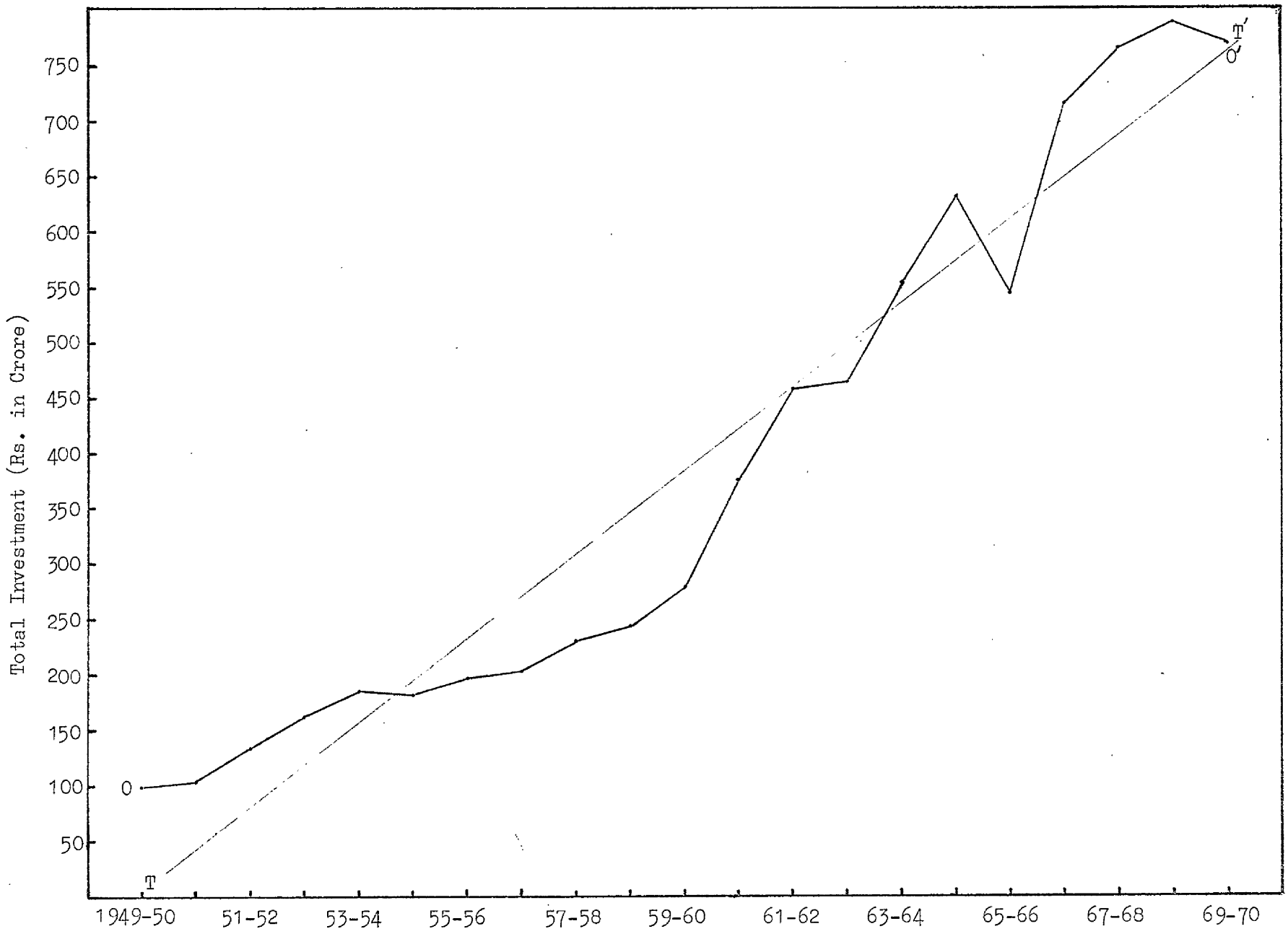

Chart 2

Growth of Investment: As % of GNP

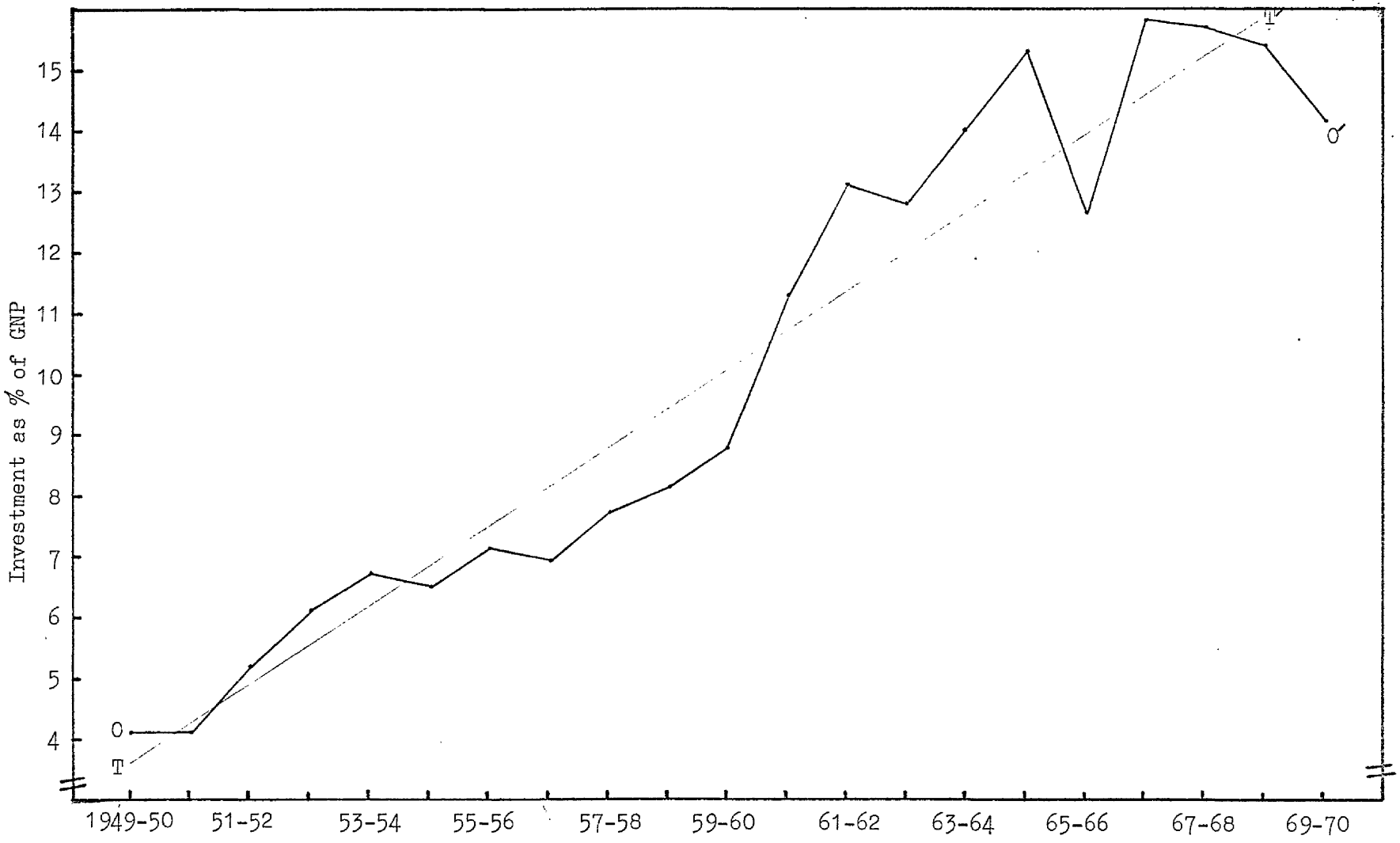

Chart 3

Growth of Government Expenditure (As % of GNP)

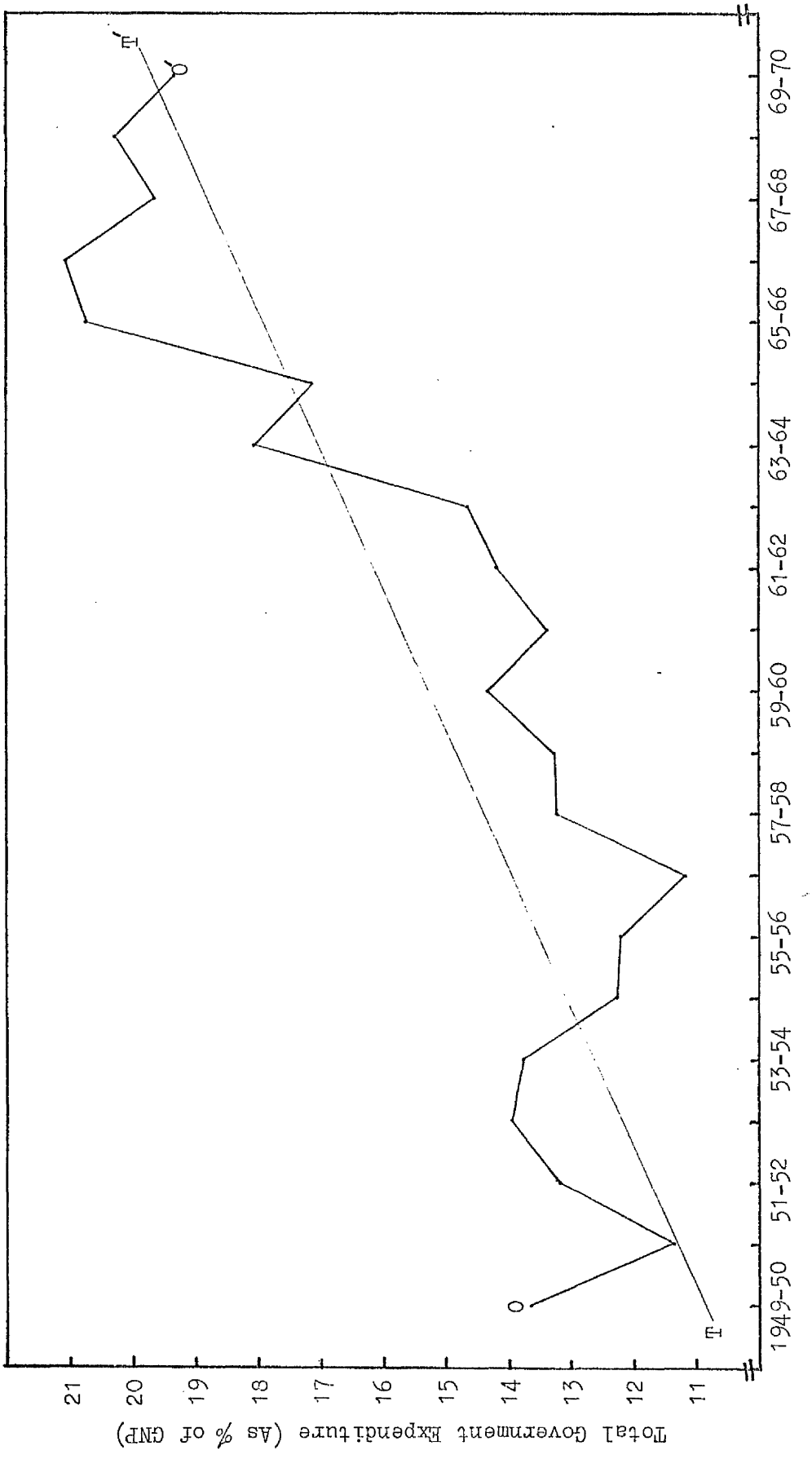

Chart 4

Growth of Government Development Expenditure (As % of GNP)

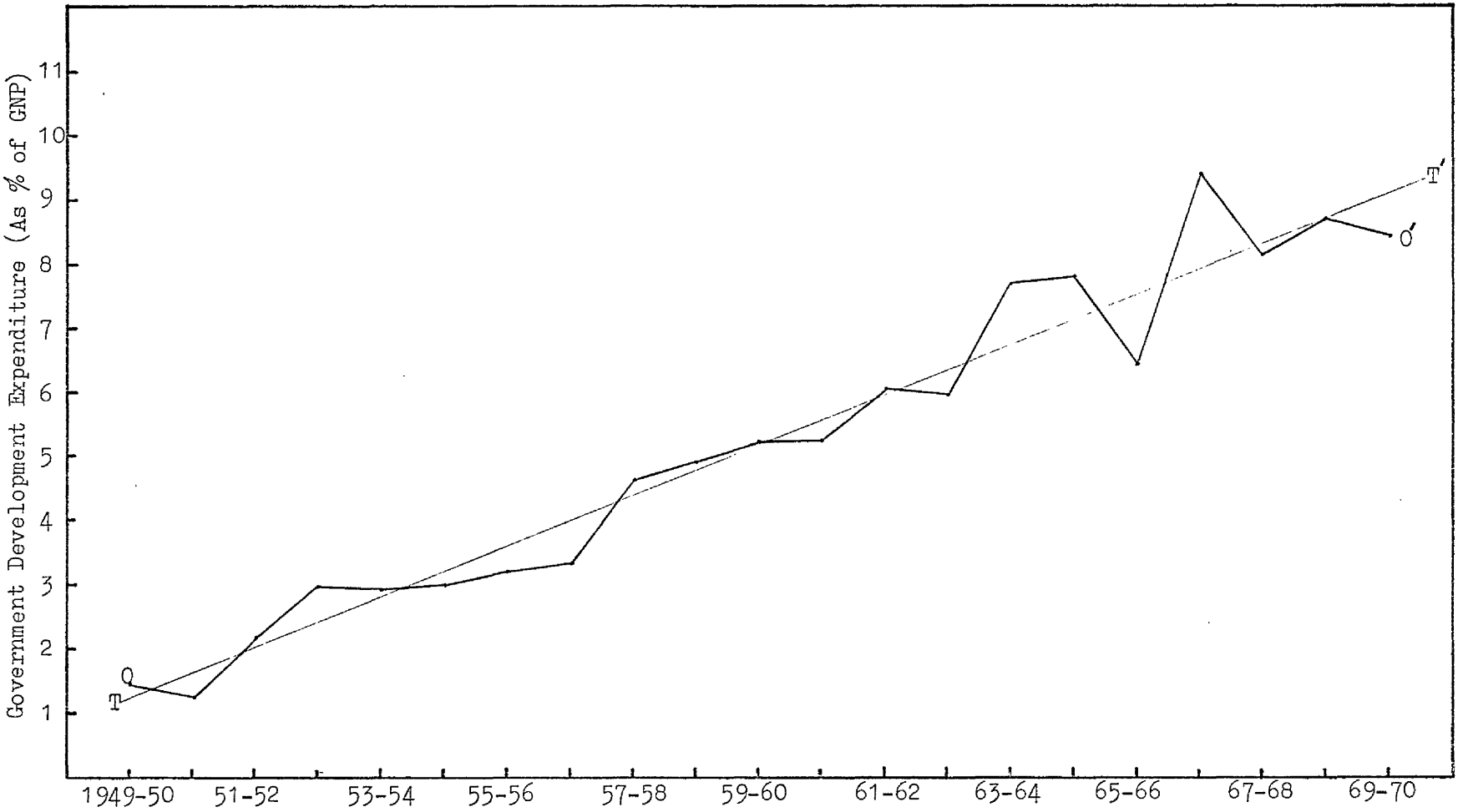

Chart 5

Regression of Growth of Output on Investment (Rs. in Crore)