SAVING IN PAKISTAN, 1950-77:

ESTIMATION AND ANALYSIS

by

Mohammad Zia Masoom Qureshi

A thesis submitted for the degree of
Doctor of Philosophy in Economics in
the University of Oxford

University College,
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ABSTRACT

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A thesis submitted for the degree of Doctor of Philosophy in Economics

Mohammad Zia Masoom Qureshi. University of Oxford. Trinity Term, 1980

The thesis consists of two parts entitled 'Estimation' and 'Analysis'. The 'Estimation' part is devoted to developing a new set of estimates of saving in Pakistan over the period 1950-77. For this purpose, the economy has been divided into three sectors, namely the private non-corporate sector (including mainly households and unincorporated businesses), the corporate sector and the government sector. Saving in the private non-corporate sector has been estimated from data collected on the sector's acquisition of various types of financial and real assets. Estimates of corporate saving have been built up from corporate profit and loss accounts. Saving in the government sector has been estimated from government budget documents and annual accounts of public sector enterprises. These estimates provide for the first time continuous and consistent information on the sectoral origin and asset-structure of saving in the country. The estimates available thus far were too aggregative in character, having been derived indirectly from the national accounts by subtracting net capital inflow from gross domestic investment.

The 'Analysis' part of the thesis is devoted to a detailed analysis of saving behaviour in the country over the period covered by the new set of estimates. Trends in the rates, sectoral composition and asset-structure of saving are studied. Econometric estimation of aggregate and sectoral savings functions with time-series data is the main tool of analysis used in identifying major influences on past saving behaviour. The mechanisms underlying various arguments in the functions are noted and subjected to empirical tests. The regression results are discussed and related to the actual time paths of the relevant variables. Evidence based on cross-section data is examined in the case of some factors which could not be included in the regression analysis either because of lack of proper data or because of the time-series nature of the exercise. The policy implications of the results of the analysis are studied and, on the basis of the findings, the mix of public financial policies employed in the past is critically assessed.

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All the basic data needed for this study were collected during a six-month visit to Pakistan in 1978. I am extremely grateful to Mr. M.L. Qureshi, then Director of the Pakistan Institute of Development Economics, for offering me a place at the Institute for the length of my stay. The Institute Library has a very large collection of official and semi-official sources of basic data on the economy of Pakistan and it was there that a large part of the data preparation was completed. Data not available at the Institute, clarifications and further details, where needed, were obtained directly from the relevant institutions. These include the Investment Corporation of Pakistan, the Ministry of Finance, the National Savings Organisation, the Office of the Controller of Capital Issues, the Office of the Registrar of Joint Stock Companies, the Planning Commission, the State Bank of Pakistan and the State Life Insurance Corporation of Pakistan. Although it is not possible to list each separately, I wish to express my appreciation to the many officials who helped me at these institutions.

I must also express my gratitude to the Rhodes Trust for awarding me a scholarship that made it all possible financially. The Trust also met part of the expenses connected with my research visit to Pakistan. The travel costs of the visit were met through a grant from the Beit Fund. For that I am grateful to the administrators of the Fund.

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EXPLANATORY NOTES ON REGRESSION ESTIMATES

1. Unless stated otherwise, the regressions have been carried out using the method of ordinary (classical) least squares.

2. Unless stated otherwise, the statistical significance tests are at the 5 per cent level.

3. All variables defined in absolute terms are in millions of rupees and all variables defined as ratios or rates are in percentages.

4. Savings and income variables (denoted by S's and Y's respectively) are in gross terms (i.e. gross of capital consumption or depreciation).

5. Lags are indicated by attaching to the relevant variables subscripts with negative numerals.

6 Figures in parentheses immediately below the regression coefficients represent t-ratios.

7. In the regression equations:

R^2 = Coefficient of determination

$\bar{R}^2$ = Coefficient of determination adjusted for degrees of freedom

DW = Durbin-Watson statistic.

LIST OF ABBREVIATIONS

BIM	Board of Industrial Management
CMI	Census of Manufacturing Industries
CCI	Controller of Capital Issues
EPF	Equity Participation Fund
HBFC	House Building Finance Corporation
ICP	Investment Corporation of Pakistan
KSE	Karachi Stock Exchange
NDFC	National Development Finance Corporation
NIT	National Investment Trust
NSC	National Shipping Corporation
Pakistan (EW)	Pre-1971 Pakistan, i.e. including former East Pakistan
PICIC	Pakistan Industrial Credit and Investment Corporation
PIDC	Pakistan Industrial Development Corporation
PIC	Pakistan Insurance Corporation
PIAC	Pakistan International Airlines Corporation
PRRFC	Pakistan Refugee Rehabilitation Finance Corporation
PFC	People's Finance Corporation
SLIC	State Life Insurance Corporation of Pakistan
WPIDC	West Pakistan Industrial Development Corporation

CHAPTER I

INTRODUCTION

I.1. The Nature of the Problem

The importance of saving as a factor in the process of development is well recognised. Saving contributes to development directly by channelling national resources into capital formation and indirectly by aiding technological advancement as the fruits of modern technology are in most cases embodied in new capital goods. Few would contend that saving can promote development unaccompanied by improvements in education, socio-economic institutions, popular behaviour patterns, and the like; but equally few would dispute that the goal of sustained economic development in poor economies cannot be achieved without the eventual necessity of an increase in the national propensity to save.

Of course, the process of capital formation in an economy can also be financed with resources obtained from abroad through grants and loans. However, the ability of any economy to sustain its developmental advance depends, in the last analysis, on its capacity and willingness to raise adequate domestic resources for investment.

Recognising this, the planning authorities in many developing countries have accorded a high priority to the task of increasing the flow of domestic resources into investment. This has also been true in the case of Pakistan.[1] Raising the national rate of saving has been one of the foremost policy objectives all along the period of planned economic development in the country starting with the First Five-Year Plan in 1955/56.

Formulation of appropriate policies for the attainment of any economic objective requires that adequate statistical information is collected

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[1] In this study, 'Pakistan' refers to present-day Pakistan, i.e. excluding former East Pakistan (now Bangladesh).

on the magnitudes involved. When the objective is the promotion of the national savings effort and the channelling of savings into productive investment outlets, the policy makers require substantial information on the volume and structure of saving in the economy. This includes information on the magnitude of saving, the distribution of the overall magnitude between various sectors and groups in the economy, the differences in the propensity to save between these sectors and groups, and the types of asset formation into which the amounts saved are channelled.

Unfortunately, such detailed information on saving has been seriously lacking in Pakistan. Despite the fact that considerable emphasis was laid by the planners on the mobilisation of domestic savings, no systematic attempt was made to build up a reliable set of savings estimates that could provide the statistical information needed for informed policy making. The only estimates available on an economy-wide basis for any reasonable length of time have been derived by the relevant statistical authorities, namely the Statistics Division (formerly the Central Statistical Office) and the Planning Commission, from the national accounts following what is known as the 'indirect' or 'investment' method of estimating saving. This method derives from the ex post national income identity which states that gross national investment equals gross national saving plus net capital inflow from abroad. Gross national investment is estimated directly from data collected on various types of investment expenditure in the economy while net capital inflow is estimated from the balance-of-payments statistics. Both these estimates appear on the expenditure side of the national accounts. Given these estimates, national saving is estimated indirectly as a residual. Although the estimates of saving thus obtained do provide information on the overall magnitude of saving in the economy (subject, of course, to the general shortcomings of data in less developed countries), they contain no information on the structure of saving.

Since, by their very nature, these estimates do not lend themselves to any systematic sectoral disaggregation, no information can be derived from them about the sectoral origin of national saving. Little is, therefore, known about the relative contribution of the constituent units, e.g. households, corporate enterprises, etc., to the aggregate. The highly aggregative character of the indirect estimates of saving also means that they do not supply any information on the asset-structure of saving, that is on the types of asset formation into which savings are channelled by the savers. These estimates are, therefore, sorely inadequate for analytical purposes.

To find out about the sectoral origin and asset-structure of saving in an economy, we need estimates that have been built up following what is known as the 'direct' method of estimating saving. This method arrives at the national aggregate by directly estimating saving in individual sectors of the economy. Saving in the individual sectors can be estimated either from data on changes in their assets and liabilities, i.e. from their balance-sheets, or from data on their income and expenditure flows, i.e. from their income--expenditure accounts. When the former is the case, the estimates of sectoral saving also provide information on the asset-structure of saving in the respective sectors.

Some attempts to build up 'direct' estimates of saving in Pakistan have been made in the past. These have all, however, been very limited in scope, yielding only partial estimates of saving in the country. These estimates are partial in that they cover only a segment of national saving and that also over a relatively small number of years. Consequently, they fall much short of furnishing a continuous and consistent picture of saving in the ccuntry by sector of origin and type of asset formation.

The first such attempt was made by Lewis and Khan.[1] They drew up estimates of saving in the non-corporate private sector of the economy (i.e.

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[1] S.R. Lewis (Jr.) and M.I. Khan, 'Estimates of Non-corporate Private Saving in Pakistan: 1949-62', Pakistan Development Review, 4(1964), 1-50.

households plus unincorporated businesses) in the form of acquisition of financial assets for the period 1949-62. A similar exercise was later carried out by Ghafur[1] for the period 1959/60 - 1965/66. Although these estimates do provide some useful information on non-corporate saving in financial assets, they leave out completely the other major form in which this sector saves, i.e. direct acquisition of real (or physical) assets. Even the coverage of the non-corporate financial asset acquisition is partial. In another study, Azhar and Ziad[2] added the acquisition of real assets including residential houses and other consumer durables to the acquisition of financial assets to arrive at estimates of household saving for the period 1961-73. Although this represented an improvement over the earlier studies, the proportion of the economy covered in this study was even smaller than in the former; the new estimates related only to personal saving within the non-corporate sector, thereby leaving out all 'business' saving by household enterprises and other forms of unincorporated business. Another independent estimate of non-corporate saving was obtained by Bergan[3] from national sample survey data. The estimate, however, related to one year only, namely 1963/64. Further, since the estimate was derived from the income-expenditure side, it contained no information on the asset-structure of non-corporate saving.

Some attempts have also been made to estimate saving in the corporate sector. These include studies by Haq and Baqai,[4] and Amjad.[5] The period

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1 A. Ghafur, 'Financial Asset Accumulation by the Non-corporate Private Sector in Pakistan: 1959/60 to 1965/66', Pakistan Development Review, 9(1969), 66-86.

2 S.F. Azhar and Z. Ziad, 'Estimates of Non-corporate Private Saving in Pakistan: Household Saving', Monthly Economic Letter, vol. VII, No. 6 (June 1975), Karachi, Research Dept., United Bank Limited.

3 A. Bergan, 'Personal Income Distribution and Personal Savings in Pakistan, 1963-64', Pakistan Development Review, 7(1967), 160-212.

4 K. Haq and M. Baqai, 'Savings and Financial Flows in the Corporate Sector, 1959-63', Pakistan Development Review, 7(1967), 283-316.

5 R. Amjad, 'Growth, Profitability and Savings of Quoted Public Limited Companies, 1964-70', Pakistan Economic and Social Review, 11(1973), 417-42.

covered was 1959-63 in the case of the former and 1964-70 in the case of the latter. Both these studies were, however, restricted to estimation of saving by non-financial public limited companies listed on the Karachi Stock Exchange. No attempt was made to derive a set of estimates for saving in the corporate sector as a whole.

Mention should also be made here of a flow-of-funds study carried out at the State Bank of Pakistan.[1] This is the only study to date which has attempted an estimation of saving in the economy as a whole on the basis of separate estimates for individual sectors. The study was, however, restricted to two years only, namely 1965/66 and 1966/67.

In addition to detailed and reliable data on the volume and structure of saving, information is needed on the type of forces which exercise a determining influence on the saving decisions of different groups in the economy in order to examine the relative effectiveness of various public policy measures for savings mobilisation. Indeed, the importance of the former derives mainly from the fact that it makes possible a detailed analysis for the identification of the major determinants of saving behaviour.

Given the weak statistical base, it should not come as a surprise that little analytical work has been done on saving in Pakistan. In fact, systematic quantitative analysis of saving behaviour - be it household, corporate or public sector saving - has remained a veritable terra incognita to researchers in the country. Consequently, very little information has been available on the relative importance, in the context of Pakistan's economy, of various factors indicated by a priori reasoning to be potentially significant determinants of the saving behaviour of individuals and institutions.

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[1] Flow-of-Funds, Pakistan, 1965/66 and 1966/67, Karachi, Staff Paper, Dept. of Statistics, State Bank of Pakistan, Sept. 1969.

The only study of any note has been by Ranis.[1] He fitted simple bivariate consumption functions to income and expenditure data for a sample of households in the city of Karachi, classifying the sampled units into two occupational groups, namely workers and small entrepreneurs. Apart from this limited (but useful) study, no attempt has been made (to our knowledge) to quantify how saving - or consumption - has been related to its various possible determinants. There have, of course, been a few other studies in the country that have, in part at least, been concerned with an analysis of saving. But this has in most cases taken the form of looking at saving in the context of the general problem of economic development. The discussion of various influences on saving in these studies has either in large part been couched in the language of casual empiricism or, at best, been based on a broad examination of aggregative data (since these were the only type of relevant data available).[2] What has been lacking is a detailed and systematic quantitative analysis of the savings function in the country.

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1 G. Ranis, Urban Consumer Expenditure and the Consumption Function, Karachi, Institute of Development Economics, Monographs in the Economics of Development, No. 6, August 1961.

2 One study that deserves special mention here is by Nulty. Although it was also based on residually derived aggregative estimates of saving and did not attempt any quantitative analysis of the savings function, it provided a good general account of the trend in national saving up to the late 1960s and policy problems associated therewith (see T.E. Nulty, 'Income Distribution and Savings in Pakistan: An Appraisal of Development Strategy', unpub. Ph.D. thesis, University of Cambridge, 1971).

In this thesis, we have made an attempt in the direction of filling the indicated large gaps in information on saving in Pakistan. First, we have developed a new set of estimates on saving in the country. These estimates provide for the first time continuous and consistent information on the sectoral origin and asset-structure of national saving. The sectoral classification employed divides the national economy into three sectors, namely the non-corporate private sector (including mainly households and unincorporated businesses), the corporate sector and the government sector. The savings estimates have been arrived at by piecing together and consolidating a large body of basic data, drawn from a multiplicity of sources, on various types of balance-sheet and income-expenditure items in respect of these sectors. The estimates cover the years 1950-77, which span almost the entire period since the country became independent.

Second, we have attempted an analysis of saving behaviour in the country over the period covered by the new set of estimates. We have examined major trends in the overall and sectoral saving rates, and in the sectoral composition and asset-structure of saving as revealed by the new estimates. The sector-wise time-series estimates have been used in a detailed quantitative analysis of the non-corporate and corporate sector savings functions. The analysis tries out a number of variables in an attempt to identify major determinants of the behaviour of saving in these sectors in the past. The regression results are discussed in the light of changes over time in the relevant variables. The policy implications of the results are studied and the findings contrasted with the character of the mix of public financial policies employed over the years. Trends in government sector saving are also analysed by relating them to public taxation and expenditure policies.

The thesis, thus, represents the first attempt at a detailed study of saving in Pakistan. It draws up a detailed and continuous statistical picture with respect to the magnitude and structure of saving in the country over a period spanning almost three decades and it uses this information in a systematic quantitative analysis of the time path of saving over this period. On both counts, it makes available sizable new information where little existed before. Needless to add, given the paucity of previous empirical research in the area, much greater research is needed to fill the existing gaps in information than can be accomplished in one study. Questions which require further research have been indicated at several points and suggestions made as to how the detailed set of savings estimates developed in the thesis could serve as a bridge in the case of some of these.

I.2. The Organisation of the Thesis

In line with the major division of the subject-matter, the main body of the thesis has been divided into two parts entitled 'Analysis' (Part I) and 'Estimation' (Part II). As the titles indicate, the analysis of the past saving behaviour in the country is set out in the former while the derivation of the new set of savings estimates that form the statistical base of the analysis is explained in the latter. A brief lay-out of the two parts is given below.

Part I has been sub-divided into four chapters, numbered II to V. Chapter II looks at the main trends and patterns revealed by the new set of savings estimates. The analysis involves a careful examination of trends in the overall and sectoral saving rates, and of the changing sectoral and asset-wise composition of saving in the country.

Chapter III is devoted to an investigation of the savings function of the non-corporate private sector. Several variables are tried in time-series regressions with a view to identifying major influences on the sector's

saving behaviour in the past. The analysis also incorporates a discussion on some important factors whose influence on saving could not be determined within the framework of the time-series regression analysis.

Chapter IV is concerned with a detailed analysis of saving behaviour in the corporate sector of the economy. The method of analysis involves estimation of corporate retention functions with time-series data. Again, several regressors are tried.

The first part of Chapter V extends the regression analysis of the earlier chapters by incorporating some additional factors such as the aggregate foreign capital inflow and the overall level of taxation, using them as regressors in the aggregate (national) savings function. The rest of the chapter brings together the major findings of Part I of the thesis. The discussion assesses the importance of these findings, examines their policy implications and, in the light of this, takes a critical look at the strategy of development financing pursued in the past.

Part II contains a detailed description of the methodology and data that have been used in drawing up the sectoral and asset-wise estimates of saving in the economy. Major problems encountered in the process of developing these estimates from basic data have been discussed at length.

This part of the thesis has been sub-divided into six sections. Section A deals with some general statistical and methodological problems involved in the estimation of saving. Problems that are specific to the estimation of saving in individual sectors have been dealt with separately in the respective sections. Sections B and C set out the procedure for the estimation of saving in the non-corporate private sector in the form of financial and real asset acquisition respectively. The procedure for estimating saving in the corporate and government sectors is explained in Sections D and E respectively. Finally, Section F brings together the individual sectoral saving series to form a composite series on national saving and compares, for a consistency cross-check, this composite series with the available aggregate series derived indirectly from the national accounts.

PART I: ANALYSIS

CHAPTER II

SAVING IN PAKISTAN: TRENDS, STRUCTURE AND PROBLEMS

Part II of the thesis contains a detailed account of the estimates of saving that have been prepared as part of the research and which underlie the analysis in this and the following chapters in Part I. In this chapter we look at magnitudes such as rates of saving and the distribution of aggregates between respective components derived from these estimates in order to determine major trends in the volume and structure of saving in the economy over the period examined. This involves a careful examination of trends in the overall and sectoral saving rates, and of changes in the sectoral composition and asset-structure of saving. Major trends and patterns revealed by the data that are highlighted in the chapter set the scene, so to speak, for the subsequent chapters in Part I. These chapters are concerned with a detailed analysis of these trends and patterns in saving in the economy by relating them to the relevant economic variables, institutions and public policies.

II.1. Trends in National Saving

We start with an examination of trends in saving in the economy as a whole. Table II.1 shows the average and marginal rates of national saving over the period 1950/51 - 1976/77. It will be seen that the figures reveal a fairly high degree of fluctuation in the propensity to save in the country. This is also reflected amply in the variability of the marginal rate of saving. The finding accords with the general observation that the propensity to save tends to be a good deal more variable in developing countries than in the developed ones because of the rapid structural and institutional changes that accompany the early stages of the development process.[1] A more

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[1] Of course, part of the larger fluctuations observed in the case of developing countries may reflect greater weaknesses in the underlying data.

TABLE II.1. Average and Marginal Rates[a] of Gross National Saving in Pakistan, 1950/51 - 1976/77

(percentages)

Year	Average rate	Marginal rate	Year	Average rate	Marginal rate
1950/1	7.9	..	1967/8	9.9	11.6
1951/2	7.5	7.1	1968/9	12.9	58.4
1952/3	2.6	103.9	1969/70	12.9	12.8
1953/4	7.3	383.2	1970/1	11.9	-7.1
1954/5	6.8	107.7		(12.0)[b]	
1955/6	10.5	39.9	1971/2	10.1	-14.7
1956/7	8.3	-9.9		(9.9)	
1957/8	7.3	-4.5	1972/3	13.4	27.0
1958/9	7.9	25.8		(12.6)	
1959/60	9.0	21.0	1973/4	6.9	-15.2
1960/1	10.1	19.9		(6.0)	
1961/2	11.0	29.0	1974/5	7.8	11.1
1962/3	13.2	43.9		(6.7)	
1963/4	14.2	22.4	1975/6	10.1	22.6
1964/5	13.6	9.1		(8.8)	
1965/6	12.0	-4.8	1976/7	10.8	15.9
1966/7	9.7	-5.8		(8.4)	

Source: Tables F.1 and F.2 and GNP estimates drawn from the national accounts

[a] Expressed in terms of GNP at current market prices.

[b] Figures in parentheses are gross domestic saving rates. The difference between this rate and the corresponding gross national saving rate is negligible in earlier years. See text.

careful examination of the time path of the rate of saving[1] in the country will, however, indicate that although the rate has fluctuated substantially, these fluctuations do not exhibit a random saw-toothed pattern. Within the overall period, it is possible to distinguish sub-periods characterised by significant differences in the behaviour of the saving rate between them. There were periods when the rate recorded a rise broadly sustained over some years. Similarly, there were periods when a fall in the rate below the levels attained in the recent past more or less continued for some years. This suggests that if we abstract from year-to-year fluctuations (a large part of which may be caused by certain special events in particular

[1] When 'rate of saving' is not qualified by either 'average' or 'marginal', it should be read as average rate of saving.

years, or by some sharp, short-term changes in the relevant variables) we can identify some fairly distinct medium-term trends in the saving rate.

The saving rate generally stayed around its initial value in the early 1950s. The mid-1950s saw the rate rise by a couple of percentage points but this rise was partially offset by a fall towards the end of the decade. The rate rose sharply in the first half of the 1960s - by about four percentage points - reaching levels that have as yet remained the highest attained in the country. The rate fell appreciably at the beginning of the second half of the decade but later recovered to make up for some of the earlier fall, ending about one and a half percentage points lower than the levels recorded towards the end of the first half of the decade. The first half of the 1970s saw a substantial fall in the rate. The rate fell relatively moderately in the beginning but after a short-lived recovery plummeted to levels that were even lower than the ones prevailing in the mid-1950s. The last two years of the period under examination, i.e. the first two years of the second half of the decade, saw the rate rise again and approach the levels prevailing in the early years of the decade.

Looking at the whole of the period under examination and abstracting from year-to-year fluctuations, the above description suggests that we can roughly distinguish five sub-periods on the basis of the general direction and magnitude of change in the rate of saving. First, the early 1950s over which the rate, though fluctuating, showed no discernible trend. Second, the mid- and late-1950s over which it recorded a significant increase that was more or less sustained. Third, the first half of the 1960s which witnessed a sizable increase in the saving rate. Fourth, the second half of the 1960s which marked the beginning of a fall in the rate from the levels achieved during the first half, though the fall recorded within this period was relatively moderate. Fifth, the part of the 1970s that is included in our study period, over which the decline continued, the overall magnitude of the decline being much larger than that recorded over the preceding sub-

period. The rates prevailing towards the end of the study period were only slightly higher than the ones recorded as early as at the beginning of the second sub-period, i.e. the mid-1950s, indicating a substantial fall from the levels attained during the third sub-period.

The same picture emerges if we look at saving rates estimated over a period of a few years rather than for individual years. Table II.2. gives average and marginal rates of saving estimated over successive five-year periods. These rates may be treated as indicators of the general medium-term trends in national saving as they abstract from the year-to-year fluctuations in the saving rate noted above. The period of five years was chosen for this purpose as it corresponds to the time horizon of medium-term planning in the country as implemented through the instrument of five-year development plans.

TABLE II.2. Average and Marginal Rates of Gross National Saving in Pakistan, 1950/51 - 1974/75: Five-Year (or Plan-Period) Averages

(percentages)

Period	Average rate	Marginal rate
Pre-Plan Period (1950/51-1954/55)	6.4	..
First Plan Period (1955/56-1959/60)	8.6	15.0
Second Plan Period (1960/61-1964/65)	12.6	20.1
Third Plan Period (1965/66-1969/70)	11.6	10.1
Fourth Plan Period[a] (1970/71-1974/75)	9.5 (8.8)[b]	7.2

Source: As for Table II.1.

[a] The Fourth Five-Year Plan was shelved halfway through its course in 1972/73. The economic policy-making in the country was carried out through 'rolling' annual plans up to 1977/78 when the Fifth Five-Year Plan was launched. The term 'Fourth Plan Period' is being used here to denote a sub-period that is comparable to the preceding sub-periods of five years each.

[b] See fn. 'b' under Table II.1.

As will be seen from the table, the average rate of saving over the First Plan period was about two percentage points higher than the rate over the pre-Plan period. This rise in the average rate between the two periods was brought about by a marginal rate of saving over the former period that was more than twice the average rate over the latter period. The marginal rate

rose to a high figure of more than 20 per cent during the Second Plan period, resulting in a sizable increase of about four percentage points in the average rate of saving. The marginal rate fell during the Third Plan period to a level below the average rate recorded over the Second Plan period, resulting in a fall in the latter by about one percentage point. The marginal rate fell further to a low figure of about 7 per cent during the Fourth Plan period, resulting in an additional fall of about two percentage points in the average rate. The average rate of saving over this period was higher than that over the First Plan period, but by less than one percentage point. It was, however, about three percentage points lower than the average rate recorded over the Second Plan period.

We may draw a distinction here between gross domestic saving and gross national saving for it features prominently in the estimates of saving for some years towards the end of the period under examination. The former represents that part of a country's gross domestic product (GDP) that is not consumed, i.e. is saved. The latter adds to this magnitude incomes that are earned by the country's nationals abroad but which instead of getting spent abroad are saved and remitted back home, i.e. net factor income from abroad in the national accounts. Or, in other words, gross national saving equals the excess of gross national product (GNP) over domestic consumption. Accordingly, the gross domestic saving rate relates gross domestic saving to GDP while the gross national saving rate relates gross national saving to GNP.

In Pakistan, net factor income from abroad remained negligible in relation to GNP up to the early 1970s, never exceeding as low a figure as one-fifth of one percent of the latter, and almost always negative. As a result, the difference between the above two rates of aggregate saving also remained negligible. However, this component of GNP rose sharply in the

1970s consequent upon a rapid increase in home remittances by Pakistani workers abroad. These years saw a large outflow of Pakistani workers to foreign countries, especially to the oil-rich countries in the Middle East, in pursuit of more lucrative job opportunities. The extent of this sharp increase in workers' home remittances can be gauged from the fact that net factor income from abroad rose from less than 1 per cent of GNP to just under 6 per cent over the four-year period 1973/74 - 1977/78, or from the fact that over the same period these remittances rose from less than 15 per cent to more than 70 per cent of the country's total receipts from the export of merchandise and non-factor services. As a result of these changes, the gap between the national and domestic saving rates also widened substantially over these years. National saving rates over the period under examination are shown in Table II.1 above. For the 1970s when the difference between the two rates begins to assume significant proportions, we have also shown parenthetically in the same table the rates of domestic saving after deducting the inflow of savings from abroad in the form of workers' remittances from the corresponding estimates of gross national saving. It will be seen from the table that the difference between the two rates grows from being very small at the beginning of this period to a significantly large figure of more than two percentage points towards the end.

The point of distinguishing between the two saving rates here is as follows. It is clear from the above that the role played by the inflow of workers' savings from abroad in shoring up the rate of saving in the country in the 1970s is a phenomenon that is specific to this period alone. Further, this phenomenon has much less to do with domestic conditions and policies influencing the propensity to save than with the special circumstances associated with the generation of factor incomes giving rise to the workers' remittances. Given that in the present context we are concerned with examining the time path of the rate of saving in the economy with a view to

determining medium- and long-term trends in the rate by abstracting from relatively short-term phenomena and in turn, as we shall see later, using the findings to assess the success or failure, as the case may be, of domestic economic policies in raising the propensity to save in the economy, the above considerations seem to imply that it would be more appropriate if we adjusted the rates of saving in the 1970s for the phenomenon noted above, i.e. converted national saving rates into domestic saving rates, when comparing the rates for these years with the rates attained in earlier years. Looking at Table II.1, we see that if such an adjustment is made, the fall in the propensity to save in the 1970s becomes even more pronounced than was noted above. From Table II.2 we see that the modest positive difference between the average saving rate during the Fourth Plan period and that during the First Plan period now disappears almost completely. By the same token, the difference between the former and the relatively high levels attained during the Second Plan period becomes even greater.

One point that emerges from the above discussion is that one can get different impressions about the direction of movement in the saving rate by choosing different sub-periods or years. An important question that arises from this is whether it is possible to discern any secularly upward movement in the rate. To see if there was any statistically significant upward trend in the national saving rate over the entire period 1950/51 - 1976/77, we fitted a simple linear equation, with time 't' as the independent variable, to the series. This gave the following result:

$$\left(\frac{S}{\bar{Y}}\right)_n = \underset{(7.855)}{7.556} + \underset{(2.714)}{0.163}t \qquad R^2 = 0.227 \quad \text{(II-1)}$$

where $\left(\frac{S}{\bar{Y}}\right)_n$ is the national saving rate.

It will be observed that although the coefficient on 't' is positive and statistically significant, the size of the coefficient is quite small. This indicates a slow upward trend running through the observed annual

fluctuations in the saving rate over the period. To see if this result, i.e. a statistically significant upward trend, was not due solely to the relatively low values of the rate during the early years of this period, the same equation was fitted to the period 1955/56 - 1976/77. The year 1955/56 marks the beginning of the period of planned economic development in the country as it was the opening year of the First Five-Year Plan. The following result was obtained.

$$\left(\frac{S}{Y}\right)_n = \underset{(7.488)}{9.893} + \underset{(0.584)}{0.044t} \qquad R^2 = 0.017 \qquad (II-2)$$

The coefficient on 't' is now very small and statistically insignificant. R^2 falls almost to zero. This shows that the statistically significant upward trend in the saving rate indicated by equation II-1 above is almost entirely due to the rise in the rate that took place during the early years of the period under study, i.e. during the mid-1950s, from the relatively low levels prevailing at the time of Independence and in the early post-Independence years. This was the period when the basic economic and social infrastructure was developed and the necessary institutional, organisational and administrative framework laid in the young economy. Thus it appears that the somewhat modest increase in the saving rate that took place during these early years may be looked upon as being due largely to these basic developments in a new economy. Leaving out these few years, we observe that no significant upward trend in the saving rate is discernible over the whole of the remaining period which covers the entire course of planned economic development in the country.

This is clearly an important result. Over this period of more than two decades, real per capita income in the country rose by more than one-half of its initial value. The growth in income was accompanied by sizable structural changes and technological transformations in the economy. These developments are reflected in the rapid growth of what may be called the economy's non-traditional, or modern, sector. This is indicated by the

fact that the share of the large-scale manufacturing sector in GNP more than doubled over this period. There is also some evidence that entrepreneurial incomes in the non-traditional sector also rose relative to the national product.[1] These changes, according to the traditional (or the mainstream) theory of economic development - e.g. the Lewis model[2], 'should' have brought about a sustained increase of a significant magnitude in the rate of saving in the economy. The result assumes even greater significance when one considers that raising the rate of saving was one of the foremost objectives of the strategy of development that was followed in the country over this period. The absence of any significant secular increase in the saving rate appears to cast serious doubts on the efficacy of this strategy, at least when seen as a vehicle for the attainment of the stated objective.

The use of domestic saving rate in place of the national saving rate over the 1970s, for reasons given above, only strengthens these findings about the long-term trend in the propensity to save in the country. Fitting our equation in linear time to the time series of the saving rate with the said adjustment gave the following result for the period 1950/51 - 1976/77:

$$\left(\frac{S}{Y}\right)_d = \underset{(7.569)}{7.961} + \underset{(1.775)}{0.116t} \qquad R^2 = 0.112 \qquad \text{(II-3)}$$

where $\left(\frac{S}{Y}\right)_d$ is the domestic saving rate.

The coefficient on 't' is now significant only at the 10 per cent level. Also, it is much lower in absolute value than it was in the case of the national saving rate series. For the period of planned economic growth, i.e. 1955/56 onwards, the above equation gave the following result:

$$\left(\frac{S}{Y}\right)_d = \underset{(7.429)}{10.702} - \underset{(-0.289)}{0.024t} \qquad R^2 = 0.004 \qquad \text{(II-4)}$$

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[1] See Nulty, op. cit., pp. 55-7.

[2] W.A. Lewis, 'Economic Development with Unlimited Supplies of Labour', The Manchester School, 22 (1954), 139-91.

The evidence against any significant upward movement in the rate over the length of this period is now even stronger. In fact, the statistically insignificant coefficient on 't' now has a negative sign.

It appears desirable at this point to bring together the major findings of our examination of the time path of the saving rate in the economy. We have seen that the rate has undergone a fairly high degree of fluctuation. However, we have also seen that these fluctuations do not indicate a purely erratic pattern but instead appear to chart a historical path with a systematic inner structure that it should be possible to investigate in terms of the relevant economic variables and policies. As for the longer-term tendencies, we have noted that a slow upward drift in the saving rate is discernible when we view the period under study as a whole. This tendency, however, disappears completely if we leave out a few early years and focus attention on the period of planned development only. The latter, we have found, is characterised by fluctuations in the saving rate taking place around an almost horizontal secular trend.

Thus far we have looked only at the trends in the rate of saving in the country. It is important to look also at the levels the rate has attained over the period under study and see how well they compare with the levels attained in other developing countries over roughly the same period. In Table II.3 we have shown national saving rates relating to some groups of countries as well as to some individual countries for a few years during the 1960s and early 1970s.[1] It will be seen that saving rates in Pakistan are much below the average rates in developing countries. The developing countries are, however, quite a mixed bag, with wide differences in the levels of living. The table shows that when these countries are grouped according to the levels of per capita income, the rate of saving turns out to be consistently

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[1] There are some well known pitfalls inherent in a comparison of national accounts statistics. However, when interpreted broadly, these statistics do provide a basis for meaningful intercountry comparisons.

higher in higher income countries.[1] Comparing the saving rates in Pakistan with those in the group of low income developing countries, the income group to which this country belongs, we see that saving rates in Pakistan are still significantly lower than the average rates in the latter. Of the years shown, only in 1965, the year around which the saving rate peaked in Pakistan, does the former level with the latter.

TABLE II.3. A Comparison of Saving Rates in Pakistan with Saving Rates in some other Developing Countries (Gross National Saving/GNP at current prices - percentages)

	1960	1965	1970	1973
Industrialised countries	21.7	22.8	23.2	23.8
Developing countries	18.5	19.4	18.5	19.5
Developing countries by income groups[a]				
Higher income group	18.5	19.4	18.5	19.5
Middle income group	12.2	14.6	16.0	18.8
Lower income group	11.7	12.6	13.1	12.8
Developing countries in South Asia[b]	12.4	13.4	13.6	13.8
India	13.8	14.2	14.4	15.0
Sri Lanka	11.0	12.9	15.7	15.7
Pakistan	9.6	12.8	12.4	9.7

Source: World Tables, Baltimore, Johns Hopkins University Press, IBRD, 1976, Table 12, except for figures for Pakistan which are based on our detailed estimates of saving. The Pakistan rates have been estimated over two successive fiscal years so as to make them conform to the above calendar years.

[a] Based on GNP per capita figures for the year 1972 in terms of 1972 US dollars, with the following scheme of classification: Higher income group = above $375; middle income group = $201-375; and lower income group = $200 or less. Pakistan belongs to the last group.

[b] These comprise Afghanistan, Pakistan, India, Sri Lanka, Bangladesh and Burma.

When the saving rates in Pakistan are compared with average rates in South Asian countries, the countries which belong not only to the same per capita income group as does Pakistan but also to the same geographic region, we find that the shortfall in the former appears even greater. This is despite the fact that Pakistan, along with India, has the highest per capita

[1] This is also true when average saving rates in all developing countries taken together are compared with similar rates in the richer industrialised countries.

income in the region. Saving rates for two countries in the region, viz. India and Sri Lanka, have also been shown individually in the table. It will be seen that saving rates in India have been appreciably higher than those in Pakistan. These two countries not only have almost identical levels of per capita income but are also similar in many other economic and social respects. Even Sri Lanka, with a lower per capita income than Pakistan's, has reported rates of saving that are substantially higher than those in the latter.

Although the above comparisons have been made on the basis of figures relating to more than one year, it would have been still better if these had been based on saving rates estimated over a period of a few years rather than single years. The former allow for the possibility of some erratic year-to-year changes in the rates having a distortionary effect on the type of comparisons we are making here. Unfortunately, such saving rates for the relevant groups of countries could not be found in the available international statistical publications. Such rates were, however, derived for the individual countries shown in the table from the country-wise time-series data available in these publications. These rates only confirmed the results of the above comparisons based on single-year estimates. Thus, for example, average national saving rates over the periods 1961-65, 1966-70 and 1971-75 were 14.1 per cent, 12.5 per cent and 16.5 per cent respectively in India, and 13.3 per cent, 12.8 per cent and 12.1 per cent respectively in Sri Lanka, as compared with 12.6 per cent, 11.6 per cent and 9.5 per cent respectively in Pakistan.[1] In fact, over the period for which comparable time-series data are available on these countries, the rates of national saving in the former two countries have been consistently higher than in Pakistan even on a year-to-year basis.

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[1] Estimated from the source listed at the bottom of Table II.3 and Yearbook of National Accounts Statistics, 1977, New York, United Nations, Dept. of Economic and Social Affairs, Vol. I.

The above shows that not only has the rate of saving in Pakistan failed to register any appreciable sustained increase over the period under study but also that the average rates around which it has fluctuated from year to year have been a good deal lower than the rates generally found in other developing countries at comparable levels of per capita income. Thus, in concluding our examination of the behaviour of the aggregate saving rate in the country, it can be said that the time path of the rate tells a story of an almost complete secular stagnation - at least over the period of two decades or so of planned economic development - in the national propensity to save at relatively low levels. On the basis of our detailed analysis of past saving behaviour in different sectors of the economy later in this and in the following chapters, we shall in Chapter V look for some of the factors responsible for this phenomenon.

II.2. Sectoral Composition of National Saving

Our discussion up to this point has been concerned only with aggregate saving in the economy. In this and the following sections of this chapter we shall focus attention on various components of this aggregate. The detailed estimates of saving we have prepared enable one for the first time to study the trends and patterns relating to these components of saving in the economy on a consistent basis over a reasonably long period of time. This section looks at the sectoral composition of national saving. Trends and patterns relating to saving within the individual sectors are examined in the following sections.

Table II.4 gives a breakdown of national saving between the three sectors into which the economy has been divided in this study for the purpose of estimating and analysing saving, viz. non-corporate private sector, corporate sector and government sector.[1] In order to abstract from year-to-year fluctuations in the sectoral shares and focus on medium-term trends,

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[1] For precise definitions of these sectors, see the respective sections in Part II.

we have again used five-year averages and shown them parenthetically in the same table beneath the corresponding annual values. We first look at the contribution of non-corporate private saving. It will be seen from the table that the non-corporate sector accounts for an overwhelmingly large proportion of the total. This is, of course, to be expected in an economy with a relatively small corporate sector. The annual contribution of the non-corporate sector has rarely been below three-fourths of the total saving in the economy. Being the surplus saving sector in the economy, changes in the rates of saving in the sector have important implications for investment programmes in the other sectors. The latter, being deficit sectors, have to depend to a substantial extent on investible funds made available by the surplus sector. In accordance with the indicated relative importance of the non-corporate sector in the process of saving in the economy, this sector occupies the largest space in the analysis in the following chapters.

TABLE II.4. Sectoral Composition of Saving in Pakistan, 1950/51 - 1974/75

(percentages)

Year	Shares in gross national saving			Year	Shares in gross national saving		
	Non-corporate sector	Corporate sector	Government sector		Non-corporate sector	Corporate sector	Government sector
1950/1	72.5	1.9	25.6	1963/4	78.8	10.4	10.8
1951/2	81.2	3.1	15.7	1964/5	68.9	10.0	21.1
1952/3	163.7	12.4	-76.1		(74.5)	(9.6)	(15.9)
1953/4	106.1	7.9	-14.0	1965/6	100.1	11.6	-11.7
1954/5	83.9	9.4	6.7	1966/7	67.6	14.1	18.3
	(91.8)[a]	(6.0)	(2.2)	1967/8	67.7	16.0	16.3
1955/6	80.5	6.9	12.6	1968/9	65.8	12.5	21.7
1956/7	86.8	10.2	3.0	1969/70	66.7	11.9	21.4
1957/8	91.3	11.3	-2.6		(72.3)	(13.0)	(14.7)
1958/9	84.8	10.4	4.8	1970/1	78.6	10.7	10.7
1959/60	77.7	10.4	11.9	1971/2	75.0	11.9	13.1
	(83.7)	(9.8)	(6.5)	1972/3	84.5	11.9	1.1
1960/1	71.8	9.4	18.8	1973/4	75.8	19.4	4.8
1961/2	71.1	8.8	20.1	1974/5	97.8	21.1	-18.9
1962/3	81.0	9.1	9.9		(84.5)	(15.2)	(0.2)

Source: Table F.1

[a] Figures in parentheses are sectoral shares estimated over five-year periods and are shown against the final years of the respective periods.

As for saving in the corporate sector, it will be seen from the table that although its share in national saving is still relatively small, it has shown a fairly substantial increase over the years. Looking at our five-year averages we see that it has increased from about 6 per cent of the total in the early 1950s to over 15 per cent in the 1970s. This increase reflects a much faster growth in corporate business in the economy than in non-corporate business. This is a normal development in the course of modernisation of an economy and rapid growth of its industrial sector. The extent of the corporate sector growth in the country is examined in section II.4 below along with the patterns and trends relating to the sector's saving. Here we may only note some important implications of the growth in the relative size of this sector for the process of saving in the economy and for economic policies related to this process. Firstly, insofar as the rates of retention out of corporate income are typically higher than the rates of saving out of personal income, the relative growth of the corporate sector has, cet. par., a favourable impact on the overall rate of saving in the economy. Secondly, corporate growth can have a positive influence on personal savings as well. This influence is transmitted to the personal sector through the equity and bond markets in the form of availability of a greater variety of financial instruments of saving and opening up of new avenues of access to real investment opportunities, the net effect being the greater the broader the ownership of the corporate stock. Thirdly, the increase in the relative importance of corporate savings also points to the need for a careful assessment of the possible implications of various government economic policies for corporate retention behaviour. The need for an awareness of the possible trade-offs between corporate and personal savings on the part of the policy-making agencies has increased. Finally, and this derives from the last point, the growing importance of corporate savings calls for a detailed empirical analysis of the determinants of retention policies in the economy's corporate sector. The corporate savings (or retention) function in the country is the

subject of Chapter IV below. The other points made above are taken up in Chapter V.

It will be seen from Table II.4 that the contribution of the third sector, i.e. the government (or public) sector, to saving in the economy has been quite variable from year to year. This has been due primarily to fluctuations in the level of saving within the sector. These fluctuations were particularly pronounced in the 1950s and again in the 1970s.

Looking at the relevant five-year averages we see that the government sector contribution to national saving was as low as about 2 per cent during the pre-Plan period, rising to a somewhat more substantial figure of 6.5 per cent during the First Plan period. It hovered around a much higher figure of about 15 per cent during the Second and Third Plan periods, but fell back to very low levels during the Fourth Plan period.

Thus, on a medium-term basis, the contribution of the government sector to national saving has been fairly small apart from the 1960s. We shall examine the time path of public saving in detail in Section II.5 below and see why it has generally been low.

II.3. Non-corporate Private Sector Saving - Trends and Structure

In this section we look at trends in the rate of saving in the non-corporate private sector and examine the asset-structure of the sector's annual savings. A detailed analysis of the sector's savings function will be attempted in the next chapter.

In Table II.5 we have shown the average and marginal rates of saving in the sector over the period 1950/51 - 1976/77. It will be seen that, like the national saving rate, the sector's saving rate also indicates a fairly high degree of fluctuation. Indeed, this is what one would expect. Given the overwhelming importance of this sector in national saving, the overall trend in the national saving rate cannot be very different from

the trend in the sector's saving rate. In Table II.6 we have shown the sector's saving rates over successive five-year Plan periods as indicators of medium-term trends in the sector's propensity to save. It will be seen that the medium-term picture is also broadly similar to that in the case of the national saving rate.[1] Like the latter, the former peaked during the Second Plan period but fell in subsequent years such that towards the end of the period under examination it had fallen to a level which was only about one percentage point higher than that during the First Plan period.

There are, however, some significant differences between the time paths of the national and non-corporate saving rates that should be noted here. First, the peak in the time path of the saving rate attained during the Second Plan period was less pronounced in the case of non-corporate saving than in the case of national saving. Although the non-corporate saving rate rose markedly during this period, the magnitude of the increase was proportionally much less than that in the national saving rate. The major reason for this was that public sector saving which had remained relatively negligible in the 1950s rose quite sharply in the 1960s, thereby making the latter rise by a much larger amount than did the former. A related factor was the growing magnitude of corporate saving in the economy, but its quantitative significance in the present context was relatively small as it had been growing fairly steadily for some time.

Second, in the case of the national saving rate, it will be recalled, the greater part of the fall from the peak attained during the Second Plan period was concentrated in the first half of the 1970s, i.e. the Fourth Plan period. In the present case, in contrast, the fall in the rate was greater during the Third Plan period than during the following years in the 1970s. This can also be seen by looking at the respective marginal rates of saving. In the case of both national and non-corporate saving, the marginal rates fell

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[1] Cf. Tables II.2 and II.6.

TABLE II.5. Average and Marginal Rates[a] of Saving in Non-corporate Private Sector in Pakistan, 1950/51 - 1976/77

(percentages)

Year	Average rate	Marginal rate	Year	Average rate	Marginal rate
1950/1	6.3	..	1964/5	10.7	-3.9
1951/2	6.8	14.1	1965/6	13.5	41.0
1952/3	4.6	51.5	1966/7	7.5	-39.3
1953/4	8.4	151.0	1967/8	7.7	9.3
1954/5	6.3	228.9	1968/9	9.7	40.4
1955/6	9.3	38.1	1969/70	9.9	11.4
1956/7	7.8	-2.8	1970/1	10.8	26.9
1957/8	7.3	0.5	1971/2	8.8	-19.8
1958/9	7.4	23.7	1972/3	13.4	31.8
1959/60	7.7	10.7	1973/4	5.8	-17.1
1960/1	8.1	12.6	1974/5	8.5	17.4
1961/2	8.7	21.1	1975/6	11.0	25.8
1962/3	12.2	73.5	1976/7	9.6	-1.4
1963/4	12.8	18.1			

Source: Table C.4 and estimates of the sector's disposable income worked out by the author from the national accounts.

[a] Expressed in terms of the sector's disposable income.

TABLE II.6. Average and Marginal Rates of Saving in Non-corporate Private Sector in Pakistan, 1950/51 - 1974/75: Five-Year (or Plan-Period) Averages

(percentages)

Period	Average rate	Marginal rate
Pre-Plan Period (1950/51-1954/55)	6.5	..
First Plan Period (1955/56-1959/60)	7.9	12.0
Second Plan Period (1960/61-1964/65)	10.6	16.8
Third Plan Period (1965/66-1969/70)	9.6	8.0
Fourth Plan Period (1970/71-1974/75)	9.1	8.5

Source: As for Table II.5.

sharply during the Third Plan period - by almost one-half of the respective values at the beginning of the period - resulting in a lowering of the respective average rates by about one percentage point each from the levels recorded during the Second Plan period. In the case of national saving, the decline in the marginal rate continued during the following Fourth Plan period, the rate falling to a low figure of around 7 per cent. As the gap between the average and marginal rates widened, the decline in the former became larger. In the case of non-corporate saving, on the other hand, the decline in the marginal rate was checked and the rate showed some improvement. This contained the decline in the corresponding average rate. Thus, while the average national saving rate fell by about two percentage points during the Fourth Plan period, the fall in the average non-corporate saving rate was about one-half of one percentage point.

The fall in the national saving rate by one percentage point over the Third Plan period largely reflected the fall to the same degree in the non-corporate saving rate. Although saving rates in the government and corporate sectors also fell somewhat over this period, as we shall see in greater detail in the following sections, their effect on the national saving rate was much less given the overwhelming importance of the non-corporate sector in national saving. Whereas the decline in the non-corporate saving rate slowed down during the following Fourth Plan period, that in the national saving rate picked up and was more than double the amount in the preceding five-year period. A glance at Table II.4 above will indicate that the latter was largely a result of the sharp fall in government sector saving over this period that we noted in the last section. The sector's contribution to national saving which had risen to about 15 per cent of the total during the Third Plan period disappeared almost entirely during this period. The sharp fall in the sector's saving from the relatively high levels reached in the late 1960s meant that the national saving rate also fell sharply with it.

A couple of points that emerge from the above description may be noted here. First, a significantly large part of the jump in saving rates observed during the Second Plan period was due to a sharp rise in public saving. Although the saving rate in the non-corporate sector also rose appreciably, the increase in it was proportionally much less than that suggested by the increase in the national saving rate. Even at its peak, the former, on a medium-term basis, did not rise much beyond a moderately high figure of 10 per cent. Second, the decline in the sector's saving rate from the levels attained during the Second Plan period set in as early as at the start of the Third Plan, i.e. the mid-1960s. The decline in the rate was proportionally greater during the Third Plan period than during the following Fourth Plan period. The comparatively greater decline during the latter period indicated by the national saving rate was due largely to a sharp fall in public saving. Thus whereas the time path of the national saving rate seems to indicate that the major downturn in the propensity to save in the economy occurred in the first half of the 1970s - a period during which the economy was passing through some stress and growth rates of income were beginning to fall - an examination of the trends in saving in the private non-corporate sector shows that a downward slide on a significant scale in the propensity to save of the most important sector in the economy (from the point of view of savings) can be traced as far back as to the mid-1960s when the general outlook of the economy was still pretty good and real incomes were rising at fairly healthy rates.

A question that arises here is whether it is possible that the absence of a significant upward trend in the national saving rate over the period of planned development noted earlier is due mainly to the relatively large fall in the rate in the 1970s brought about by the sharp fall in public saving. Or, in other words, can we detect a significant upward trend over the period in the rate of saving in the economy excluding the government sector (despite the downward slide in the non-corporate saving rate starting

in the second half of the 1960s)? To determine this, we regressed the time series of the saving rate in the economy excluding the government sector, i.e. including the non-corporate private and corporate sectors (or roughly[1] the private sector), against time. The following results were obtained:

$$\left(\frac{S}{Y}\right)_{pr} = \underset{(8.686)}{7.415} + \underset{(3.475)}{0.185t} \qquad R^2 = 0.326 \qquad \text{(II-5)}$$

$$\left(\frac{S}{Y}\right)_{pr} = \underset{(7.010)}{9.080} + \underset{(1.358)}{0.100t} \qquad R^2 = 0.085 \qquad \text{(II-6)}$$

where $\left(\frac{S}{Y}\right)_{pr}$ is the relevant saving rate.

Equation II-5 fitted to the time series of the saving rate over the entire period 1950/51 - 1976/77 indicates a significant but slow upward movement in the rate. It will be recalled that over this period the national saving rate shows a similar upward drift. Equation II-6 shows that when the exercise is restricted to the period of planned development, i.e. 1955/56 - 1976/77, the coefficient on the time variable becomes insignificantly small, as it does in the case of the national saving rate. Thus we see that even if we eliminate the influence of the sharp fall in public saving in the 1970s on the time path of the propensity to save in the economy by restricting our examination to saving in the rest of the economy, we still find no evidence of any significant upward trend in the propensity to save over the entire period of planned development.

Similar results are obtained if the above exercise is restricted to saving in the non-corporate sector only. This can be seen from the following estimates obtained for the periods 1950/51 - 1976/77 and 1955/56 - 1976/77 respectively.

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[1] 'Roughly' because semi-public sector companies are included in the corporate sector; see Part II, Section D.

$$\frac{(S)}{(Y)}_{nc} = \underset{(7.893)}{6.851} + \underset{(2.680)}{0.138t} \qquad R^2 = 0.223 \qquad \text{(II-7)}$$

$$\frac{(S)}{(Y)}_{nc} = \underset{(6.221)}{8.311} + \underset{(0.923)}{0.066t} \qquad R^2 = 0.048 \qquad \text{(II-8)}$$

where $\frac{(S)}{(Y)}_{nc}$ is the saving rate in the non-corporate private sector.

Equation II-8 shows that the sector's saving rate failed to register any significant secular increase over more than two decades of planned developmental effort in the country. The sector's per capita real disposable income rose by about one-half over this period.

Apart from providing an independent time series on total non-corporate private sector saving in the country, the estimates of saving we have prepared also furnish detailed information on the asset-structure of the sector's saving. The importance of such information for a detailed analysis of the process of saving in the sector and for the formulation of appropriate economic policies to influence this process is quite evident. An asset-wise breakdown of the sector's saving on a continuous basis provides a time profile of the sector's asset-portfolio, indicating changes over time in the relative importance of various assets in the portfolio. This permits a much more elaborate analysis of the process of saving in the sector than is possible otherwise, for it allows an analysis of the behaviour of the whole, i.e. total saving in the sector, by means of an examination of changes in its various components. Policies aimed at stimulating saving in the sector must take into account the changes in the relative weights of different assets in the sector's savings-portfolio, the nature of their respective determinants and interrelationships between them. Detailed information on the asset-structure of saving is also needed for framing policies for influencing the sector's asset preferences, as revealed in the existing structure of assets, in favour of more productive assets and for directing the flow of resources generated by the accumulation of financial assets in the sector into more profitable channels of investment.

Besides, this information constitutes the basic input for an economy-wide flow-of-funds analysis.

Since a detailed portfolio analysis of the sector is clearly out of the scope of the present study, our treatment here is restricted to an examination of some broad changes in the asset-structure of the sector's saving that are relevant for our purposes.[1] The implications of these changes are studied in greater detail in the following chapter in the context of an analysis of the sector's savings function.

Assets held in the sector's portfolio, a cumulation of the sector's past savings, can be classified into financial and real assets. The distinction between the two types of assets is important. The two represent different relationships between the processes of saving and investment. In the case of the latter type of assets, the two processes get merged into one. This is because in this case a decision to save is at the same time a decision to invest, i.e. to add to the existing stock of real capital assets, both decisions being taken by the same economic unit simultaneously. In the case of the former type of assets, in contrast, the two decisions are not simultaneous as they are taken by different economic units. The saving and investing units in this case are linked together through the agency of what are known as financial intermediaries. These institutions collect financial savings from the former and pass them on to the latter (at a price) for investment. It is because of this distinction between saving in the form of acquisition of financial assets and that in the form of acquisition of physical assets that the former is sometimes referred to as non-automatically offset saving and the latter as automatically offset saving.

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[1] The asset-wise estimates of saving developed in the present study should, however, encourage future researchers in the country in the direction of more detailed studies of savings and portfolio choice. For an example of an empirical study of personal savings with a fairly detailed treatment of the problem of the allocation of savings between alternative assets, see El Moqaddam, Econometric Models of Personal Saving: The United Kingdom, 1948-1966, London, Butterworth, 1973.

With financial development and an increasing specialisation of economic functions in an economy, the sector's saving in financial assets can be expected to grow relative to its saving in physical assets, or, put in stock terms, financial assets can be expected to grow relative to physical assets in the sector's asset-portfolio. Such a development has characterised the growth experience of many developing countries. It is also evident from the fact that financial assets account for a much larger proportion of household savings in developed countries than in developing countries generally. With financial development come an increasing monetisation of the economic activity, availability of a larger variety of safer and more attractive instruments of financial saving, and better institutional facilities for transactions in these instruments, all of which should alter the sector's asset preferences in favour of financial assets. This is particularly true in the case of economies like Pakistan where the financial infrastructure was relatively primitive at the start of the process of development. With development also comes an increasing specialisation of economic functions. The functions performed by different economic units in the system get defined more clearly. The process of investment becomes an increasingly specialised activity, requiring a substantial amount of technical information that is not available to an ordinary saver. The share of the non-personal sectors in this process expands with the increasing participation of the corporate and public sectors. The latter two being usually the deficit sectors in an economy, the financing of investment comes to involve a substantial outflow of investible resources from the personal sector. This means that a larger proportion of saving in the personal or the private non-corporate sector takes place in the form of acquisition of financial assets (which are claims on the deficit sectors). The flow of investible funds from savers to investors within the sector (through financial intermediaries) also grows, expanding further the role played by financial resources in the process of accumulation.

In Table II.7 we have presented a breakdown of the non-corporate sector saving between financial and real assets. In order to abstract from year-to-year fluctuations and focus on medium-term trends, the figures shown in the table have been estimated over successive five-year (or Plan) periods.[1] It will be seen that the ratio of the sector's net acquisition of financial assets to its total saving (ratio R_1 for short) has moved up with time, though the upward movement has not been an uninterrupted one.

TABLE II.7. Distribution of Non-corporate Private Sector Saving in Pakistan between Financial and Real Assets, 1950/51 - 1974/75: Five-Year (Plan-Period) Averages

	Pre-Plan Period (1950/51-1954/55)	First Plan Period (1955/56-1959/60)	Second Plan Period (1960/61-1964/65)	Third Plan Period (1965/66-1969/70)	Fourth Plan Period (1970/71-1974/75)
R_1	35.7	45.6	22.9	36.1	50.3
R_2	39.9	48.3	36.6	43.8	61.2

R_1 = Net acquisition of financial assets as a percentage of total net acquisition of assets (financial and real = saving)
R_2 = Gross acquisition of financial assets as a percentage of total gross acquisition of assets.

(Asset acquisition is gross or net depending upon whether it is gross or net of the accompanying change in financial liabilities. The distinction between the gross and net values in the table does not take into account the divergence between the two values on account of depreciation of real assets)

Source: Table C.4.

The ratio rose quite substantially from the pre-Plan period to the First Plan period. However, this large increase in the ratio was as much a result of growth in financial asset acquisition as of a relative stagnation in investment in real assets. The latter picked up sharply at the start of the Second Plan. The Plan gave a high priority to private sector investment

[1] See Table C.4. for a year-by-year breakdown of non-corporate saving between financial and real assets.

and several measures were taken to boost the same through greater incentives. The resulting sharp spurt[1] in real investment is reflected in a substantial drop in the above ratio during the Plan period. An additional reason for the sharp fall in the ratio during the period was that these years also saw a substantial jump in the sector's financial liabilities. Thus, although the sector's gross acquisition of financial assets kept rising steadily over this period, its net acquisition of such assets rose much more slowly as larger amounts of the former were cancelled by an increasing volume of financial liabilities in parts within the sector. In other words, there was a relative increase during this period in the proportion of the resources released by financial asset accumulation in the sector that found their way back into the sector through financial intermediaries and a relative decline in the proportion of the released resources that flowed out to other sectors in the economy. This is reflected in the fact that the ratio of the sector's gross acquisition of financial assets to its total gross acquisition of assets (ratio R_2 for short) fell much less than did the ratio of its net acquisition of financial assets to its total net acquisition of assets (i.e. R_1).

The different implications of the above two ratios for the flow-of-funds in the economy may be noted. Whereas the latter ratio (R_1) indicates the proportion of the sector's total net acquisition of assets that represents a flow of resources to other sectors in the economy, the former ratio (R_2) indicates the proportion of the sector's total gross acquisition of assets that represents a flow of resources both to the other sectors as well as to borrowing units within the sector through financial intermediaries.[2] Thus,

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[1] An idea of the sharp increase in private sector investment at the beginning of the Second Plan can be had from the fact that its share in total investment in the economy (private and public) which had fallen to about 45% towards the end of the First Plan from over 65% at the beginning of the 1950s suddenly jumped to over 60%.

[2] Or seen in terms of the sector's portfolio choice, R_1 shows the sector's net portfolio allocation to financial assets out of the net resources available to it from its own saving for the purpose of adding to its existing stock of assets, while R_2 gives the same information on a gross basis for the total resources available to the sector for this purpose, including both its own savings and borrowed funds.

while the latter indicates the role played by the accumulation of financial assets in the non-corporate sector in funding resource flows to other sectors, the former captures in addition the role played by these assets in funding resource flows within the sector.

After the downturn during the Second Plan period, the share of financial assets in the sector's saving again shows an upward movement. Though continuing to fluctuate, it was on average appreciably higher towards the end of the period under examination than at the beginning. The flow of resources in the economy generated by this component of the sector's saving has also moved up with it. The larger increase in R_2 than in R_1 indicates that the increasing importance of financial assets in the process of accumulation in the sector has not only raised the flow of resources to other sectors but has also brought about a relative increase in the intra-sectoral flow of resources channelled through financial intermediaries.

It should be of interest to look further into the asset-structure of the sector's saving. Not only is the proportion of financial assets in the sector's savings-portfolio expected to increase as an economy develops, the composition of assets within this category is also expected to undergo a systematic change. During the earlier stages of the growth process when financial structures are relatively underdeveloped, a large proportion of the sector's financial savings takes place in such simple forms as the holding of currency balances and current deposits. Saving in the form of acquisition of comparatively more sophisticated financial instruments such as time deposits, corporate shares and securities is relatively small. With financial development, both institutional facilities for transactions in the latter type of assets as well as people's attitudes towards them improve. This brings about an increase in the role played by these assets as instruments of saving. Again, this has important implications for the process of saving in the sector and for policy making for stimulating the sector's saving. The increase in the share of these assets in the sector's asset-portfolio

indicates a greater role played by considerations of monetary return in determining the sector's saving behaviour. This enlarges the scope of financial policies in stimulating saving through improvements in the structure of monetary returns on financial instruments, e.g. raising interest rates on time deposits.

To see if the change over time in the asset-structure of the non-corporate sector saving in Pakistan fits the above pattern, we have produced in Table II.8 an asset-wise distribution of the gross financial asset accumulation in the sector. The assets have been grouped together into three categories. The first category includes currency and demand deposits whose share in the total is expected to decline as development proceeds. The other assets whose share is expected to rise have been divided into two categories, viz. contractual savings comprising life insurance and provident fund schemes and the residual category 'other assets' comprising all the remaining financial assets such as time deposits, shares, etc. Contractual savings were separated from 'other assets' in order to examine exclusively the trend in the relative share of assets which are acquired by the savers voluntarily and largely out of considerations of monetary return. A large part of contractual savings represents compulsory contributions on the part of the savers, e.g. compulsory provident fund schemes. In the case of Pakistan, this is much the greater of the two components of contractual savings.[1] Further, even when contractual saving is largely voluntary, e.g. life insurance, a substantial part of it may be looked upon as being due largely to considerations other than those of monetary return, e.g. security. Like 'other assets', however, contractual savings may also be expected to grow with time in relation to the sector's

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[1] Saving through provident funds contributes almost twice as much to financial savings in the sector as does saving through life insurance, and of the former, almost the entire amount comes from compulsory provident fund schemes in government establishments and public enterprises.

total financial savings as the life insurance business in the economy expands and the provident fund schemes grow with the increasing involvement of public enterprises and the government in the economic activity.

TABLE II.8. A Broad Portfolio Classification of Gross Financial Asset Accumulation in Non-corporate Private Sector in Pakistan, 1950/51 - 1974/75: Five-Year (Plan-Period) Averages

Asset Category	Pre-Plan Period (1950/51-1954/55)	First Plan Period (1955/56-1959/60)	Second Plan Period (1960/61-1964/65)	Third Plan Period (1965/66-1969/70)	Fourth Plan Period (1970/71-1974/75)
	(percentages of gross financial asset accumulation in the sector)				
Currency and demand deposits	52.3	46.0	35.1	36.0	50.8
Contractual savings	7.8	10.9	15.0	15.2	8.9
Other financial assets	39.9	43.1	49.9	48.8	40.3

Source: Table B.11.

Note: Contractual savings include life insurance and provident fund schemes. Under the category 'other financial assets' are lumped together all instruments of financial saving not included under the first two categories, viz. time deposits, small saving schemes, trust units, prize bonds, corporate shares and government securities. Saving in the form of shares and deposits of co-operative societies was, however, left out. This component of the sector's financial savings has behaved highly erratically over time (see Table B.11). The erratic character of its time path does not disappear even when five-year averages are taken. For the above five-year periods, the average contribution of this component of saving to the sector's gross financial asset accumulation comes to -3.6%, 1.8%, 5.7%, -6.0% and 0.0% respectively. This component was left out in order to prevent these erratic jumps, for which no good reasons are apparent (limitations of the underlying data could perhaps be one), from obscuring the trends in other components of financial savings which have shown a relatively more orderly behaviour over time.

Since the shares of the above three categories of assets showed a fairly high degree of fluctuation from year to year, which is not too surprising given the short-term changes in the respective rates of return, conditions of supply and various other determinants of the relative size of the sector's acquisition of these assets, we have again taken Plan-period averages of the relevant magnitudes in order to indicate medium-term trends.[1]

[1] For a breakdown of the non-corporate financial asset accumulation between individual financial assets on a year-by-year basis, see Table B.11.

It will be seen from the table that, as predicted, the share of currency and demand deposits in the sector's gross financial asset accumulation has been declining with time while that of 'other assets' has been rising. The former fell from over 50 per cent of the total in the pre-Plan period to about 35 per cent by the end of the Third Plan, while the latter rose from less than 40 per cent to little under 50 per cent over the same period. The share of the category 'contractual savings' also rose over this period, increasing from less than 10 per cent to over 15 per cent. However, there took place a sharp reversal in these trends during the Fourth Plan period, with the result that the percentage shares at the end of the period were only marginally different from the pre-Plan figures. Two factors appear to have been mainly responsible for this rather dramatic collapse of the pre-Fourth Plan trends in the asset-composition of the sector's financial savings; first, political and economic uncertainties in the wake of the 1971 political crisis in former East Pakistan and war with India and some subsequent major changes in the country's economic structure, namely the nationalisation of several major industries and of banks and insurance companies, and, second, a sharp increase in the rate of inflation. The increasing political and economic uncertainties seem to have brought about a shift in household asset preferences during the period in favour of greater liquidity and less risk. The non-corporate sector's holdings of currency and demand deposits rose relative to its holdings of assets such as time deposits and shares as households became less inclined to part with liquidity in exchange for comparatively riskier assets for any substantial period of time. The high rate of inflation during the period meant that the return that had to be foregone by moving away from the latter type of assets in order to satisfy the increased precautionary and speculative demand for more liquid assets was in any case very low. Indeed, the real rate of interest on time deposits, which are by far the largest component of the category 'other assets', remained negative throughout this period. The ratio of commercial bank time

to demand deposits which had been rising consistently over the previous years fell appreciably in consequence. Further, because of the rapid inflation and the effect it had on the return on earning financial assets, a proportion of household saving done with the purpose of adding to one's stock of earning assets that would otherwise have flowed into earning financial assets, e.g. time deposits, was diverted to the purchase of real assets such as consumer durables, leaving household saving in non-earning financial assets (for which the motivation was a mixture of transaction, precautionary and speculative demand) to rise relative to household saving in earning financial assets.

To sum up our examination of the asset-structure of the non-corporate sector saving, we have seen that saving in financial assets has risen as a proportion of the sector's total saving. We have also seen that within the sector's financial savings there has been an increase in the share of assets in which case considerations of monetary return are an important influence on the decisions to save. In line with what was said above, these findings have important policy implications. They point to an increasing importance for saving in the economy of monetary and other policies that influence the process of accumulation of financial assets in the sector. This is particularly true of policies that have a determining influence on the rates of return on these assets, e.g. interest rate policies. In the following chapter, we shall have much more to say about these factors in the context of our examination of the non-corporate sector's savings function.

II.4. Corporate Sector Growth and Saving

We have seen in Section II.2 that the share of the corporate sector in gross national saving has increased fairly substantially over time, indicating a faster growth of business in this sector than in the rest of the economy. In this section we take a brief look at the magnitude of the corporate sector

growth in the country and examine some main features of the sector's saving such as its composition, level and trends.

We first look at the non-financial component of the corporate sector. Table II.9 gives annual compound rates of growth for three possible indicators of its size - namely paid-up capital, net worth and net assets - estimated over successive five-year periods. The figures relate to quoted companies only. These companies account for about four-fifths of the total output of the non-financial corporate sector in the country, the remainder being accounted for by non-quoted companies. Information on the latter type of companies is currently not available in comparable detail.[1] Also, the growth rate figures in the case of net worth and net assets do not cover the 1950s. This is because detailed accounts of the quoted non-financial companies are available only from 1960. The figures for growth in the paid-up capital of these companies do, however, cover the whole of the period under examination.

TABLE II.9. Annual Compound Rates of Growth of Various Indicators of the Size of Non-financial Corporate Sector in Pakistan, 1950/51 - 1974/75

(percentages)

Quantity	Pre-Plan Period (1950/51-1954/55)	First Plan Period (1955/56-1959/60)	Second Plan Period (1960/61-1964/65)	Third Plan Period (1965/66-1969/70)	Fourth Plan Period (1970/71-1974/75)
Paid-up capital	43.2	15.9	17.2 (19.3)[a]	11.3	8.0
Net worth	..	..	20.8[a]	10.6	7.7
Net assets	..	..	24.6[a]	12.4	10.2

Sources: Listed at the bottom of Table D.1.

[a] Estimated over a four-year period with 1960/61 as base. All other rates in the table are estimated over five-year periods.

[1] The corporate sector, as defined in this study, includes all public limited companies, both quoted and non-quoted. Although detailed information on the latter type of companies is not available, some rough estimates of saving in these companies have been made in this study on the basis of available indicators of the relative magnitude of the business carried out by them. See Part II, Section D.

The growth rates relating to all three indicators of the size of the non-financial corporate sector indicate that growth in the sector has been rapid. Looking at the growth rates of paid-up capital, it will be noticed that the rate was extremely high during the pre-Plan period. However, this extraordinarily high rate was due in large part to the small base that existed at the start of this period. With the base having become much larger at the end of the period, the growth rate fell sharply in the First Plan period, although in absolute terms it remained at a very high level. The rate rose again during the Second Plan period. This reflected the sharp rise in private sector investment during this period that we noted in the last section. With some slackening of the investment activity during the Third Plan period, the non-financial corporate sector growth rate also recorded a fall. In absolute terms, however, it maintained a substantially high level. The growth rate declined further during the Fourth Plan period and for the first time fell below the level of 10 per cent per annum. This decline resulted from a further slowing down of private sector investment during this period, caused, among other factors, by the unsettled political climate in the wake of the 1971 crisis, to which reference has already been made in the last section, and economic uncertainties generated by a nationalisation programme whose scope was never clearly defined. It will be seen from the table that the time pattern of growth in the other two magnitudes, viz. net worth and net assets, corroborates this picture.

Since, as we shall see below, a large part of the non-financial corporate sector is engaged in manufacturing activities, the trends in the sector's growth noted above correspond fairly closely to trends in the large-scale manufacturing sector in the economy. Value added in large-scale manufacturing rose at the rate of 21.3 per cent per annum during the pre-Plan period, the high figure again reflecting in large part a relatively small base at the beginning of the period. The growth rate fell to less

than 8 per cent per annum during the First Plan period. It rose sharply during the Second Plan period, reaching a figure in excess of 15 per cent per annum. The rate fell again during the Third Plan period but maintained a high level of around 10 per cent per annum. The Fourth Plan period saw a sharp decline in industrial growth, with the growth rate in large-scale manufacturing falling to a low figure of around 2 per cent per annum.[1]

We should point out here that although the non-financial corporate sector has grown rapidly over most of the period under examination, its role in the economy as a whole is still quite small when compared with that in the case of developed countries. Complete information on the relative size of the corporate sector in the economy is not available. The requisite breakdown of national aggregates is not provided in the country's national accounts. However, some rough estimates of the sector's relative size can be made from a few relevant indicators that are available. For some years, the country's Censuses of Manufacturing Industries (CMI's) provide a breakdown of the data relating to large-scale manufacturing between different types of industrial companies. According to this source, the share of value added by public limited companies, both quoted and non-quoted, engaged in manufacturing activities (i.e. the corporate manufacturing sector) in the total value added in large-scale manufacturing rose from about 52 per cent in 1964/65 to about 60 per cent in 1970/71. Expressed as a proportion of the country's GDP, this comes to about 5.25 per cent in the former and 7 per cent in the latter year.[2] Our own corporate data show that the value of production in the non-manufacturing component of the non-financial corporate sector varied between roughly one-fourth to one-third of the value of production

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[1] These growth rates have been estimated from national product data at constant factor cost.

[2] Total value added in large-scale manufacturing as a proportion of GDP was about 10.5% and 12.5% respectively in these years.

in the manufacturing component over these years. Using this information, the share of the non-financial corporate sector as a whole (both manufacturing and non-manufacturing) in GDP works out to between 6.5 and 7 per cent in 1964/65 and between 8.5 and 9.25 per cent in 1970/71. These figures are clearly much lower than the levels typically found in more advanced countries.

The growth in the corporate sector sketched above is reflected in an increase in the sector's contribution to gross national saving. This was noted in Section II.2. In Table II.10 we disaggregate the non-financial corporate sector saving in order to examine its distribution between some broad groups of companies into which the sector can be sub-divided.

TABLE II.10. Distribution of Gross Saving in Non-financial Corporate Sector[a] in Pakistan between Corporate Sub-sectors, 1960/61 - 1974/75

Year	Gross saving in private non-financial corporate sector	Gross saving in semi-public non-financial corporate sector	Gross saving in corporate manufacturing sector	Gross saving in corporate non-manufacturing sector
	(percentages of gross saving in non-financial corporate sector)			
1960/1	76.2	23.8	71.6	28.4
1961/2	73.2	26.8	73.5	26.5
1962/3	77.8	22.2	77.3	22.7
1963/4	69.6	30.4	74.2	25.8
1964/5	64.2	35.8	65.5	34.5
1965/6	65.3	34.7	67.5	32.5
1966/7	63.6	36.4	60.1	39.9
1967/8	66.9	33.1	66.2	33.8
1968/9	69.3	30.7	65.0	35.0
1969/70	69.1	30.9	69.4	30.6
1970/1	63.9	36.1	58.2	41.8
1971/2	73.1	26.9	73.9	26.1
1972/3	68.4	31.6	73.8	26.2
1973/4	28.7	71.3	55.8	44.2
1974/5	33.4	66.6	52.8	47.2

Sources: Tables D.1 and D.3 and the sources listed thereunder.

[a] Includes both quoted and non-quoted public limited companies.

It will be seen from the table that the distribution of the non-financial corporate sector saving between private and semi-public sector companies remained fairly stable up to the early 1970s, with the latter accounting for about 25 to 30 per cent of the total. Beginning with

1972/73, however, the share of semi-public companies rose sharply. This sudden and substantial increase was due mainly to the nationalisation of a number of industrial units during this period that were previously part of the private corporate sector. It appears to have resulted in part also from an adverse effect the government nationalisation policies had on investment plans (and through investment plans on savings) in the private sector. By the end of the Fourth Plan period, the semi-public sector companies accounted for as much as about two-thirds of the total non-financial corporate sector saving. As the management of these companies rests with state-controlled bodies, an implication of this is that the significance of investment policies followed by these bodies for the mobilisation of savings in the economy has increased considerably in recent years.

Distributing the non-financial corporate sector saving according to the type of productive activity carried out by the constituent companies, we see that companies engaged in manufacturing activities account for a major chunk of the total. Over the years their contribution has generally ranged between 65 and 75 per cent, the remainder being contributed by companies engaged in non-manufacturing activities such as transportation, construction, generation and transmission of electricity, extraction and distribution of gas, marketing of oil and other products, etc. This accords broadly with the figures given above about the relative sizes of the two groups of companies measured in terms of their levels of production. It will be seen from Table II.10 that the share of the manufacturing sub-sector in the total non-financial corporate sector saving fell fairly sharply towards the end of the Fourth Plan. Again, this appears to be largely an outcome of the state of general uncertainty existing in the industrial sector during this period in the wake of the nationalisation measures. The non-manufacturing sub-sector was comparatively less affected by these measures as most of the important corporate units in this sub-sector were already in the semi-public category.

We now turn to the financial component of the corporate sector. Like the non-financial component, this component has also grown several times over the years. Further, this growth has taken place from an almost equally small base. As is generally the case with financial growth in developing countries, the spearhead of this growth has been the commercial banking system. The number of scheduled bank branches in the country rose from less than 200 in 1949 to over 6000 at the end of 1977. Over the same period, total scheduled bank deposits and advances rose from less than Rs.1000 million to over Rs.30,000 million. Growth in other components of the financial sector such as insurance companies, investment houses, etc. has been less substantial, but has nevertheless been significant. The sector has also grown relative to the rest of the economy; its contribution to GDP rose from less than 0.5 per cent in the early 1950s to about 2.75 per cent in 1977. When the contribution to GDP of the financial component of the corporate sector is added to that of the non-financial component for the years 1964/65 and 1970/71 for which estimates were made above, the total contribution of the corporate sector to GDP in these years works out to between 7.75 and 8.25 per cent and between 10.5 and 11.25 percent respectively.

With the increase in the relative size of the financial sector, its share in national saving has also increased. Table II.11 gives the distribution of the corporate sector saving between the sector's non-financial and financial components. Saving by financial corporations rose from about 5 per cent of total corporate saving in the early 1950s to about 15 per cent towards the end of the 1960s. The ratio rose substantially in the early 1970s. However, we have noted above that the industrial component of the corporate sector was passing through some stress during this period which had a depressing influence on its profits and saving. That being so, the high values assumed by the above ratio during this period are not very representative.

TABLE II.11. Distribution of Gross Saving in Corporate Sector in Pakistan between Non-financial and Financial Sub-sectors, 1950/51 - 1974/75

Year	Non-financial sub-sector	Financial sub-sector	Year	Non-financial sub-sector	Financial sub-sector
	--(percentages of gross corporate saving)--				
1950/1	78.6	21.4	1963/4	89.0	11.0
1951/2	92.2	7.8	1964/5	85.0	15.0
1952/3	91.3	8.7	1965/6	81.9	18.1
1953/4	95.1	4.9	1966/7	80.7	19.3
1954/5	91.0	9.0	1967/8	85.2	14.8
1955/6	95.3	4.7	1968/9	85.4	14.6
1956/7	94.4	5.6	1969/70	84.7	15.3
1957/8	93.0	7.0	1970/1	79.7	20.3
1958/9	89.3	10.7	1971/2	76.7	23.3
1959/60	87.8	12.2	1972/3	68.2	31.8
1960/1	85.6	14.4	1973/4	66.7	33.3
1961/2	82.8	17.2	1974/5	69.6	30.4
1962/3	85.4	14.6			

Source: Table D.3.

As for the composition of saving within the financial corporate sector, a detailed breakdown is available in Tables D.2 and D.3 (Part II). We may note here that since the banking system forms the main part of the sector, its contribution is by far the largest. In fact, it accounts for as much as 90 per cent of the total, the remaining 10 per cent coming from insurance companies, specialised financial institutions including investment corporations, and co-operative societies. Of the 90 per cent, about 65 to 70 per cent comes from the country's central bank, i.e. State Bank of Pakistan, and 20 to 25 per cent from the rest of the banking system.

In the rest of this study, the analysis of corporate saving will focus almost entirely on the non-financial corporate sector. There are several reasons for this (in addition to lack of space); first, detailed balance-sheet and income-expenditure data required for a meaningful analysis of corporate saving behaviour are not available for a large part of the financial sector; second, most of the interesting hypotheses relating to corporate saving behaviour, e.g. the influence on corporate saving of factors such as investment demand, profitability of investment, availability

of external finance, etc., are better studied with respect to the non-financial corporate sector; and, third, the major contribution of the financial sector to saving in an economy comes about indirectly rather than directly, that is, in the form of promotion of saving and investment in other sectors through its function of financial intermediation rather than of saving out of its own profits.

Table II.12 shows the non-financial corporate sector's (quoted companies) gross profits and their appropriation over the period 1960/61-1974/75 for which detailed company accounts are available. A detailed analysis of corporate policy with respect to appropriation of profits over this period will be undertaken in Chapter IV. Here we focus only on the rates of saving that we get from the income-expenditure data presented in the table and make some broad points regarding their behaviour.

Both gross and net rates of corporate saving are shown in the table. The gross rate expresses retained earnings plus provisions for the depreciation of capital stock as a proportion of gross profits after taxes while the net rate shows retained earnings excluding the provisions for depreciation as a proportion of net profits after taxes. It should be noted that the measure of depreciation that has been used in estimating corporate saving is one that is entered in company accounts as such. Since the provisions made for depreciation by companies are also influenced by some important factors other than the actual wear and tear of capital, the most important among these being the relevant tax laws, this accounting measure of depreciation usually does not agree with 'actual' depreciation. This appears to have been particularly true in the case of Pakistan where the corporate tax system allowed generous concessions in the form of liberal depreciation allowances. These allowances induced the companies to write off their capital at rates much faster than required by the actual wear and tear of capital. Our estimates of depreciation in the corporate sector based on the definition of depreciation as used in company accounts

TABLE II.12. Gross Profits and Appropriation in Non-financial Corporate Sector in Pakistan, 1960/61-1974/75

(Million rupees/current prices)

Year	Gross profits	Appropriation of gross profits				Gross profits after taxes (2-3)	Net profits after taxes (2-3-4)	Rate of gross saving [(4+6) as % of 7]	Rate of net saving (6 as % of 8)
		Taxes	Depreciation	Dividends	Retained earnings				
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1960/1	280.6	76.5 (27.3)	76.6 (27.3)	57.2 (20.4)	70.3 (25.0)	204.1	127.5	72.0	55.1
1961/2	297.1	84.5 (28.5)	91.9 (30.9)	61.2 (20.6)	59.5 (20.0)	212.6	120.7	71.2	49.3
1962/3	388.1	106.4 (27.4)	107.5 (27.7)	73.7 (19.0)	100.5 (25.9)	281.7	174.2	73.8	57.7
1963/4	497.5	122.1 (24.5)	128.7 (25.9)	72.3 (14.5)	174.4 (35.1)	375.4	246.7	80.7	70.7
1964/5	528.8	115.3 (21.8)	145.3 (27.5)	95.4 (18.0)	172.8 (32.7)	413.5	268.2	76.9	64.4
1965/6	596.8	125.5 (21.0)	166.7 (27.9)	137.3 (23.0)	167.3 (28.1)	471.3	304.6	70.9	54.9
1966/7	618.9	97.1 (15.7)	208.8 (33.7)	152.9 (24.7)	160.1 (25.9)	521.8	313.0	70.7	51.2
1967/8	787.1	117.8 (15.0)	238.2 (30.3)	188.3 (23.9)	242.8 (30.8)	669.3	431.1	71.9	56.3
1968/9	936.3	170.5 (18.2)	306.3 (32.7)	229.1 (24.5)	230.4 (24.6)	765.8	459.5	70.1	50.1
1969/70	1011.7	210.0 (20.8)	359.4 (35.5)	236.5 (23.4)	205.8 (20.3)	801.7	442.3	70.5	46.5
1970/1	941.1	208.0 (22.1)	459.6 (48.8)	234.9 (25.0)	38.6 (4.1)	733.1	273.5	68.0	14.1
1971/2	782.1	145.9 (18.6)	578.6 (74.0)	185.1 (23.7)	-127.5 (-16.3)	636.2	57.6	70.9	-221.4
1972/3	1285.4	276.3 (21.5)	698.6 (54.4)	372.2 (29.0)	-61.7 (-4.8)	1009.1	310.5	63.1	-19.9
1973/4	1426.6	415.3 (29.1)	744.8 (52.2)	376.3 (26.4)	-109.8 (-7.7)	1011.3	266.5	62.8	-41.2
1974/5	2002.9	483.5 (24.1)	877.5 (43.8)	425.8 (21.3)	216.1 (10.8)	1519.4	641.9	72.0	33.7

Source: Table D.1. Notes: (i) Figures in parentheses are percentages of gross profits.
(ii) The table includes only quoted public limited companies.

may, therefore, appreciably overestimate actual depreciation in the sector. To the extent that they do, the sector's net saving rates shown in the table are underestimated.[1]

It will be seen from the table that the corporate sector reported quite high rates of saving during the 1960s. The rate of gross saving remained above a high figure of 70 per cent throughout this period. It also showed a fairly high degree of stability. The rate of net saving, on the other hand, varied appreciably from year to year. However, it was above 50 per cent in most years.

The high rates of corporate saving during the 1960s indicate that the rapid expansion of the corporate sector that took place during this period was accompanied by a substantial ploughing back of profits in the expanding sector. This positive relationship between corporate growth and the scale of reinvestment of corporate profits is interesting and needs to be explored further. It can result either from the latter stimulating the former by providing larger flows of internal finance for expansion or from the former stimulating the latter by promising higher profitability and growing investment opportunities or from a mixture of the two. It is, of course, also possible that this positive correlation between the two owes more to some other factors lying in the background than to the inter-relationships between them just noted. We shall examine these causal nexus carefully in Chapter IV.

Another point with regard to the behaviour of the rate of corporate saving during the 1960s should be noted. Although the rate remained quite high throughout this period, one can notice a perceptible downward movement in the rate towards the end. It can be seen from the table that both the gross and net rates were generally lower in the second half of the decade (Third Plan period) than in the first (Second Plan period). This emerges more clearly if we look at the average saving rates over these two periods.

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[1] The various accounting concepts used in estimating corporate saving are explained in Part II, Section D.

The average rates of gross and net saving during the Second Plan were 75.8 per cent and 61.6 per cent respectively. These fell during the Third Plan to 70.8 per cent and 51.6 per cent respectively. Although the fall is not very large, it appears to be significant. It will be of interest to find out as to what extent these variations can be related to changes in profits and other factors that influence corporate retention and dividend policies. Much of Chapter IV is devoted to an analysis along these lines.

Turning to the course of corporate saving during the 1970s, we see from Table II.12 that the above picture undergoes a sharp change, with the rate of net saving plummeting from values around 50 per cent in the 1960s to negative values in the early 1970s. The collapse in the rate started with a sharp fall in 1970/71. The rate, however, remained positive during the year. It recorded another sharp fall in the following year and was negative during the three-year period 1971/72 - 1973/74. The figure for 1974/75, the last year for which detailed corporate data are available, indicates that the rate started picking up again in the mid-1970s.

It has been pointed out above that the early 1970s were marked by certain developments that had a disturbing effect on the economy in general and on the corporate industrial sector in particular. These include the political crisis of 1971 and its aftermath and the nationalisation measures of 1972/73. It appears that these developments have an important place in an explanation of the sharp fall in corporate saving noted above. The impact of these developments on corporate saving can be traced through two channels; first, through a depressing effect on profits and, second, through an adverse effect on future investment plans. It can be seen from Table II.12 that during the period 1970/71 - 1973/74 when net corporate saving was either very low or negative, corporate profits either fell or rose very little. Many companies blamed a large part of the losses, or reductions in profits, incurred by them during the first couple of years of this period on factors relating directly to the political events of 1971, e.g. loss of

assets in former East Pakistan, loss of markets in the former province, lapses in the functioning of the industrial machinery during the period of political strife, etc. When profits staged some recovery in the following years, it appears that the adverse effect on corporate investment plans noted above was a significant factor in keeping corporate saving depressed.

There are, of course, quite a few other factors that have also to be properly considered. In the course of our discussion in Chapter IV, we shall have a more detailed look at the behaviour of corporate saving during these years and, in that context, examine the impact of the special factors mentioned above alongside other variables.

It will be noted that the sharp fall in net saving in the years 1971/72 - 1973/74 is not reflected in the values of the rate of gross saving. This is explained by the fact that the former was not occasioned by any sharp rise in dividend pay-out at the expense of retained earnings out of any given level of profits. As can be seen from the table, dividend pay-out remained more or less stable during this period. Net saving fell because profits either fell or stagnated while depreciation charges kept rising rapidly. With a relatively stable level of dividends, this meant that little was left for net retention after appropriation from profits under the heads 'depreciation' and 'dividends' had been made. The rate of gross saving does not reflect the fall in net saving because the reduction in retention did not mean higher dividend payments but larger allocations for meeting the increasing depreciation charges, the increase in one relative to gross profits more or less counter-balancing the fall in the other.[1] Indeed, it will be noticed, the combination of falling or stagnant

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[1] For the two years 1972/73 and 1973/74 in which dividends did rise somewhat in relation to gross profits, the resultant additional fall in net saving is reflected in lower rates of gross saving.

profits and increasing depreciation charges during these years raised the latter as a proportion of the former to such an extent that even rates of gross saving of between 60 and 70 per cent were not sufficient to make adequate provisions for the latter. The corporate sector had to resort to sizable net borrowing (dissaving) in order to meet these charges and prevent its dividend pay-out from falling. When profits picked up again in 1974/75, we see that retained earnings rose with them. As a result of larger profits, sufficient internal funds again became available which could not only provide for both the rising depreciation charges and a stable level of dividend pay-out but also make possible some net retention.[1]

II.5. Government Sector Saving - Trends and Problems

Finally, in this section we examine trends in saving in the government (or public) sector. We look at the factors that have been responsible for these trends and indicate some major problems connected therewith.

In Table II.13 we have presented a summary statistical picture (on a Plan-period basis) of revenues and saving in the sector.[2] It will be seen that public saving remained relatively negligible during the 1950s. The sector's contribution to national saving was only about 2 per cent in the pre-Plan period and about 6 per cent in the First Plan period. Compared with the share of the sector's revenues in GNP over these periods, which varied between 12 and 13 per cent, these figures imply much lower rates of resource mobilisation in the sector than in the rest of the economy. The table shows that these rates were as low as about 1 per cent and 4 per cent respectively of the total government revenue over these periods.

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[1] The above suggests support for the hypothesis that a desire for relatively stable dividends plays an important role in determining corporate retention and pay-out policies. However, we have noted above that these years were marked by certain special conditions that had a depressing effect on corporate investment plans. Thus it is possible that the maintenance of dividend levels in the face of falling profits at or around the levels achieved in the past observed during these years resulted in large part from these conditions rather than from any established behavioural desire on the part of the companies for stable dividends. It is also possible that both these influences were operative side by side, reinforcing each other to a significant degree. We shall explore this question in Chapter IV.

[2] For detailed year-by-year estimates, see Table E.1.

TABLE II.13. Government Sector[a] Saving and Related Public Finance Statistics, 1950/51 - 1974/75: Five-Year (Plan-Period) Averages

(percentages)

Period	Govt. sector saving rate	Govt. sector saving as % of national saving	Govt. sector saving as % of GNP	Total govt. revenue as % of GNP	Total tax revenue as % of GNP	Direct tax revenue as % of GNP	Direct tax revenue as % of total tax revenue
Pre-Plan Period (1950/1-1954/5)	1.2	2.2	0.1	12.4	8.5	1.7	20.4
First Plan Period (1955/6-1959/60)	4.1	6.4	0.6	13.2	8.6	2.6	30.4
Second Plan Period (1960/1-1964/5)	13.8	15.0	1.9	13.7	9.2	2.3	25.3
Third Plan Period (1965/6-1969/70)	11.5	14.4	1.7	14.5	10.6	2.3	21.9
Fourth Plan Period (1970/1-1974/5)	-0.9	-1.5	-0.2	15.9	11.5	2.0	17.2

Source: Table E.1.

[a] Includes general government (Federal & Provincial Governments) only. For estimates of saving by autonomous bodies and corporations in the government sector, see Table E.1. These institutions have not been included in this table as comparable data on their revenues and expenditures were not available. However, as can be seen from Table E.1, the combined savings of these institutions were comparatively very small up to the early 1970s.

Low public saving during the 1950s was a joint result of a relatively slow growth in public revenues and a relatively rapid increase in public non-investment expenditure. Whatever increases occurred in the former were more or less absorbed by the latter. The functions performed by the Government, which were limited before Independence, rose sharply after Independence. The costs of the Government rose inevitably with them. The largest increases took place on account of expansion in civil administration and in other services associated with the carrying out of the general, day-to-day activities of the Government and the planning and execution of development programmes in the public sector. Added to these rapidly expanding

outlays was expenditure on defence which remained at a high level throughout this period. The latter absorbed more than 40 per cent of the total non-investment expenditure of the Government during the period. While the expenditure thus grew apace, it took strenuous efforts to increase revenues. Efforts were made to streamline the country's tax collecting system and improve the coverage of various taxes. Some new taxes were also introduced. Despite these measures, however, growth in revenues was barely able to keep pace with government current expenditure. Major problems responsible for the sluggish growth in revenues were, first, a relatively narrow tax base, made even narrower by a number of concessions and exclusions introduced into the tax structure from time to time with a view to promoting saving and investment in the private sector and by an almost complete exemption of agricultural incomes from the income tax; second, a relatively low level of economic activity; and, third, persistent inefficiencies in the tax collecting machinery.

Public saving picked up quite sharply during the Second Plan period. From the extremely low levels during the 1950s, the rate of saving in the sector rose to about 14 per cent during the period, which was about three percentage points higher than that recorded by the non-corporate private sector. As a result, the sector's contribution to national saving jumped up to about 15 per cent of the total, which was about one percentage point higher than what the sector took out of GNP in the form of revenues.

This rather remarkable turnabout in public saving resulted from both a faster increase in public revenues than in the 1950s and a relatively successful attempt on the part of the Government at containing its current expenditure within reasonable limits so that it did not rise to match the relative buoyancy being shown by public revenues. Among the factors making for the relative upsurge in revenues were a sharp increase in the level of economic activity, greater receipts from custom duties (the largest single source of tax revenue) resulting from some decontrol measures that

substituted regulatory tariffs for quantitative import controls and from larger volumes of trade supported by a substantial increase in foreign capital inflow, a sizable package of new tax measures and some tightening of the tax collecting machinery. Receipts from non-tax sources rose faster than did tax revenues, reflecting the impact of growth in public sector activities. On the expenditure side, the Government was able to keep in check expenditure on defence and general administration, the two categories that had between them absorbed an overwhelmingly large proportion of the increase in public non-investment expenditure in the 1950s. Expenditure on defence was more or less kept about the absolute level existing at the start of the Plan. This was reflected in a fall in the proportion of this category of expenditure in total public non-investment expenditure from about two-fifths to about one-third. In the case of general administration, the rate of increase in outlays was limited to a relatively conservative figure of 2 to 3 per cent per annum. Much larger increases were, however, allowed in the case of departments concerned with the planning and implementation of development programmes and for covering the rapidly increasing recurring costs of development schemes. As a result of the above measures, the Government was able not only to meet the increasing demands of various current expenditure categories on public revenues but also to leave sizable surpluses for investment expenditure.

On the basis of the success achieved during the Second Plan, the Third Plan projected a sizable increase in the public sector surplus. The Plan target met an early setback in 1965/66 as a result of war with India. There took place a substantial increase in defence expenditure and the year ended with a large government account deficit. Although the Government was able to significantly curtail the defence expenditure in subsequent years, the Plan ended with a total figure that was more than twice the size of that recorded over the Second Plan period, an inordinately large increase as compared with the projected annual increase of about 2 to 3 per cent

only. Another category of expenditure that increased much faster than projected was debt servicing. The actual increase was again more than twice that projected, raising the proportion of this category of expenditure in total current government expenditure to nearly one-fifth (reflecting the large accumulation of public debt that took place in the 1960s). The Government was, however, able to hold the increase in expenditure on general administration, the most important category of current expenditure after defence, down to near the projected 2 to 3 per cent per annum (a higher figure for development departments) during the first four years of the Plan. But this too rose sharply in the final year of the Plan as a result of an increase in employees' salaries that took place under a new wage policy put into effect in that year following a period of widespread industrial disturbances. Whereas current public expenditure thus increased at rates much higher than projected, despite the Government's partial success in containing the same, public revenues showed a tendency to lag behind the targets. There was only a modest growth in revenues from custom duties. This was due largely to a slower growth in the volume of trade caused by a sizable shortfall in foreign assistance and diversion of a large chunk of the country's own foreign exchange to finance a much larger than expected defence and food import bill and the rapidly increasing foreign debt servicing burden. Receipts from other indirect taxes were also generally below the targets, partly because the actual rate of growth in economic activity fell below that projected and partly because of low tax elasticities. Receipts from direct taxes showed a particularly inelastic response to increases in income, not a surprising result in view of the large number of concessions allowed in the individual and corporate income taxes, widespread tax evasion and the almost complete exclusion of agricultural incomes from the tax net. The Government was, however, able to reach its overall target in respect of tax revenue by means of levying

additional taxes much beyond the Plan target.[1] As receipts from non-tax sources rose faster than was forecast, total public revenues exceeded the Plan target. However, since the excess of current public expenditure over the Plan target was even greater, the public sector surplus fell substantially short of the target.

It will be seen from Table II.13 that despite the above mentioned difficulties, the public sector was able to show a relatively healthy rate of saving of about 11.5 per cent over the Plan period, thanks mainly to the sizable additional taxation and some containment of expenditure on general administration. The sector's saving rate again exceeded that in the economy's private non-corporate sector. The public sector's contribution to national saving over the period was just about the same as its share in GNP (both close to 14.5 per cent).

The Fourth Plan period saw a steep fall in public saving from the relatively respectable levels recorded during the 1960s. While public revenues more or less kept their faltering upward trend, the major cause behind the steep fall was a sharp acceleration in current public expenditure. There was another big jump in defence expenditure triggered off by the military action in former East Pakistan and the subsequent war with India. Expenditure under this category almost tripled over the five-year period. The separation of former East Pakistan resulted in a loss of revenues from that wing that previously supported part of the Federal Government's administrative, military and other functions. These functions continued at almost their pre-separation levels. The increase in current public expenditure accelerated during the last couple of years of the period as a result of a sharp rise in the rate of inflation. The relatively inelastic

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[1] More than one-third of the receipts from additional taxation came from a defence surcharge levied during the year of the war with India.

nature of the tax system prevented public revenues from keeping step with the expenditures. There occurred a phenomenal jump in expenditure on subsidies as the Government attempted to cushion the economy from world-wide inflation by preventing or slowing down increases in the prices of certain basic foodstuffs and essential agricultural and industrial raw materials. The expenditure on subsidies rose to as high as about one-fourth of the total tax revenue of the Government. Some revenue losses also occurred as a result of some of the measures taken by the Government in its efforts to cushion price increases, e.g. lowering of certain excise and custom duties, prevention or moderation of increases in the prices of public utilities, etc. Another item of current public expenditure that almost tripled over this five-year period was debt servicing. As a result of the country's continued heavy reliance on foreign resources, foreign debt service payments had reached a level where they were absorbing almost a quarter of the country's export earnings. The rupee cost of foreign debt servicing, and hence the burden on government budgetary resources, rose much faster than did the foreign exchange cost because of a large devaluation of the rupee in 1971/72. The devaluation also raised substantially expenditure on imports on government account and contributed to the increase in the cost of subsidies on imported foodstuffs and inputs. In addition to the rapid increases in these categories of expenditure, expenditure on general administration which had been kept under some control in the 1960s rose rapidly. Administrative policies introduced by the new government which took over in 1971/72 were mainly responsible for the loss of control over this major category of current expenditure. These policies involved large-scale administrative reorganisations and expanded the size of the administrative machinery a great deal.

As a result of these developments, public saving fell during the first two years of the Fourth Plan period to about one-third of the levels attained in the late-1960s. As inflation picked up and the rise in current public

expenditure quickened in the following years, public saving fell to almost insignificantly small levels and was a large negative sum in the last year. The fall in these years was so large that public saving over the five-year period as a whole was negative. Thus, whereas the share of the government sector revenues in GNP rose from about 14.5 per cent in the Third Plan period to about 16 per cent in the Fourth Plan period, the sector's contribution to national saving fell from just about the same proportion to a negative figure.

There was an improvement in the government sector saving during the last couple of years of the period under study, i.e. 1975/76 - 1976/77. The large deficit on the sector's revenue account was substantially reduced in 1975/76 and the following year showed a positive surplus, though not a very large one in relation to the sector's revenues. This improvement was largely a result of some measures taken by the Government in 1975/76 to check its current expenditure and increase revenues. These included a substantial cut in expenditure on subsidies which had risen out of all proportions during the preceding five years and a sizable package of new tax measures.

The above then is a summary of the trends in public saving in the country. We have seen that apart from a few spurts here and there, government revenues have tended to increase at a slow, faltering pace. The generation of savings in the government sector under this constraint of slow growth in revenues has depended to a large extent on the ability of the Government to contain its non-development expenditure well within the limits allowed by the constraint. The 1960s represented a plateau in the time path of public saving in the country. Although the government revenues did show a relative buoyancy over the earlier part of this period, the major reason behind the generation of moderately large public sector surpluses was that the Government was able to maintain a measure of control over its non-development expenditure. Outside this period, the growth in

the public non-development expenditure either absorbed almost completely the increase in revenues or outstripped it.

The picture with respect to public saving, in short, has been largely unsatisfactory. Problems specific to the trends in public saving over different sub-periods have been noted above. Below we point out in more general terms some of the major problems attendant upon public saving in the country and underlying its largely unsatisfactory behaviour in the past.

First, there are the problems with the country's tax system. It will be seen from Table II.13 that the total tax revenue of the Government had risen to only about 11 per cent of GNP by the end of the period examined. This figure is appreciably lower than thoseattained in a large number of other developing countries, signifying a comparatively much weaker tax effort in the country. The reasons behind the failure of the country's tax system in mobilising resources to the same extent as has been achieved in other developing countries are various, and have been fairly well documented in more than one study on the subject.[1] Hence we need not go into them in detail here. Some major shortcomings and problems of the system may, however, be briefly noted.

One major reason for the relatively low tax-GNP ratio in the country is that only very limited use has been made of direct taxes for generating revenues. As can be seen from Table II.13, their contribution has remained around 2 per cent of GNP, which must rank among the lowest in developing countries. Although a large part of this problem stems from the basic poverty of the country and the presence of a large unorganised business sector, which restrict the tax base to a relatively small size and make

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[1] See, for example, M.Yaqub, 'The Tax Structure of a Developing Country: A Case Study of Pakistan', unpub. Ph.D. thesis, Princeton University, 1966; A. Rab, 'Personal and Business Income Taxation in Pakistan', unpub. Ph.D. thesis, Harvard University, 1967; and Final Report of the Taxation Commission, Islamabad, Ministry of Finance, Govt. of Pakistan, March 1974.

collection more difficult, the matters have been made much worse by the failure of the tax system to tap fully incomes that fall within a taxable range and are backed up by fairly adequate accounting procedures. Major factors responsible for this failure have been a high minimum exemption limit for the individual income tax, a host of exemptions and allowances in the case of both the individual and corporate income taxes, and an almost complete exemption of agricultural incomes from income taxation. The Government has also lost large amounts of tax revenue from widespread tax evasion which has persisted despite several attempts at tightening the tax collecting machinery.

With direct taxes thus yielding only limited revenues, the Government relied mainly on indirect taxes to meet its expenses. Taxes on international trade remain the single most important source of revenue. The elasticity of receipts from this source has, however, been falling with time. This has resulted mainly from an increasing substitution of domestically produced goods for imports and the accompanying shift in the structure of imports from consumer goods which carried higher rates of duty to capital goods and raw materials on which the rates were much lower. Another factor working in the same direction has been the increasing domestic use of exportable raw materials. Receipts from indirect taxes on domestically produced and traded goods - namely excise duties and the sales tax - have, on the other hand, been increasing relatively rapidly with the increase in the size of the domestic production and trade activities. However, as the rates of tax on competing domestic goods have generally been a good deal lower than the rates on imported goods (and the scope for evasion a good deal greater), the above change in the structure of revenue from indirect taxes has contributed to the generally low, and in some cases declining,elasticities of tax revenues in the country. The increasing domestic use of exportable raw materials also involved a net loss of revenue. The tax structure involved a subsidy to the domestic users as there was no tax on the domestic use of exportables that was comparable to the export tax.

Estimates of tax elasticities in the country indicate that in most cases the elasticities are very low when compared with similar estimates for other developing countries with relatively more successful fiscal records.[1] As a result of the low tax elasticities, the Government had periodically to introduce additional taxes and adjust tax rates in order to ensure that the tax receipts at least rose in step with the tax base. While these measures did bring in some additional revenue in absolute terms, they failed to improve the overall elasticity of the tax system. Indeed, it has been shown that the new taxes levied turned out to be even less elastic than the old ones.[2] An indication of the sluggish response of tax yields to increasesin income in the country is that over the period under study which stretches over nearly three decades and saw the country's GNP grow several times, the tax-GNP ratio rose by barely about three percentage points.

Tax elasticities have been the lowest in the case of direct taxes. They have also shown a tendency to decline with time. Table II.13 shows that the whole of the increase in the tax-GNP ratio has been on account of indirect taxes. Despite fairly progressive rates, receipts from direct taxes failed to register any significant increase in relation to the tax base. With a number of tax concessions and exemptions, corporate tax holidays and widespread evasion, this was perhaps not unexpected.

In the case of non-tax sources of public revenue, the major issues relate to the generation of investible surpluses by autonomous bodies and other public sector corporations. Over the years, the Government has invested huge sums of capital in economic infrastructure and public utilities

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[1] See, for example, Yaqub, op. cit.; Rab, op. cit.; A.H.M.N. Chowdhury, 'Predictability and the Flexibility of Tax Revenues in Pakistan', Pakistan Development Review, 2(1962), 189-214; and M.Z. Khan, 'Responsiveness of Tax Yield to Increases in National Income', Pakistan Development Review, 12(1973), 416-32.

[2] See M.Z. Khan, op. cit.

such as transport, irrigation, generation and distribution of power, etc. Surpluses for investment generated by these bodies and corporations have, by comparison, been fairly small.[1] This situation has resulted largely from systems of management in these institutions that are far removed from the norms of commercial efficiency, and from inflexible price policies. Clearly, an appropriate return on such large public sector investments is an important prerequisite of a sound financial base for an active and growing public sector.

Finally, we have seen that the slow growth in public revenues supplies only part of the explanation of the generally low public saving in the past. No less significant has been the tendency of public non-development expenditure to rise at rates that in most years mopped up whatever increases did take place in the revenues. Clearly, unless a government has the will to contain its current expenditure, where it can, within appropriate limits in relation to its revenues, merely increasing the latter will not lead to any substantial mobilisation of savings in the public sector. It might conceivably even lower the level of total saving in the economy by diverting resources away from relatively high saving sectors. Thus, it is possible that increased taxation may lead to a fall in national saving if the marginal propensity to save in the public sector is lower than that in the private sector. There has been a good deal of discussion on this point in the relevant literature (the so-called Please Effect) and we shall take it up in Chapter V.

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[1] See Table E.1.

CHAPTER III

NON-CORPORATE PRIVATE SECTOR SAVING BEHAVIOUR: MAJOR EXPLANATORY VARIABLES AND RELATIONSHIPS

We saw in Chapter II that the non-corporate private sector was by far the most important source of savings in the economy, accounting for, on average, as much as about three-fourths of the total over the period under consideration. This chapter is concerned with a detailed analysis of the saving behaviour of the sector over this period. For the most part, the analysis employs a quantitative examination of the sector's savings function based on the estimates of the sector's saving developed in Part II of the thesis. We look at the mechanisms underlying major arguments in the function and subject these to empirical tests. It was noted in Chapter I that the lack of proper sector-wise data on savings in the past discouraged research in this field. This has meant that not a single systematic quantitative study of the savings function has previously been carried out in the country.

Before we get on with the exercise, some of its limitations may be noted. First, a note of caution. The estimates of saving in the sector have been built up from a large body of basic data on various types of asset formation. Inevitably, complete information was not available in some cases, and the relevant gaps had to be filled by approximation. The necessary details of the estimation procedure employed in each case are given in the relevant sections in Part II. To the extent that this process of approximation made the savings estimates diverge from the true magnitudes, our regression estimates of the savings function based thereon are only imperfect estimates of the relevant functional relationships. Only a substantial improvement in the quality of the basic data can indicate as to how serious this limitation is.

Secondly, the analysis of the savings function presented in this chapter has been carried out mainly in terms of relatively simple functional forms and econometric techniques as have generally been used in the empirical literature on developing countries. This is partly a reflection of the inadequacies of the relevant data that either simply do not allow the use of more sophisticated techniques or seriously limit their usefulness and partly a reflection of the lack of quantitative research into related structural and functional relationships in the economic system as a result of which the use of more complicated multi-equation models is generally ruled out. This is particularly true in the case of Pakistan where not only the work on more elaborate macroeconomic modelling has been minimal, but where even the simple quantitative estimation like that reported here has been seriously lacking, and in the case of savings, as noted above, almost completely non-existent. Under these conditions, it may be useful, as a first exercise, to explore the household (or the non-corporate)[1] savings function with a view to identifying major factors that influence household saving and provide a broad explanation of its behaviour over time in the country with the help of relatively simple quantitative methods. This work can then provide a bridge, it should be hoped, to more elaborate modelling of the household saving behaviour in the country, using the earlier findings as its starting point.

Finally, as the quantitative analysis in this chapter is based on time-series data at the sectoral level, factors whose influence on saving behaviour is estimated properly only with cross-section data have not been considered here. These include, for example, demographic and cultural factors such as the dependency burden, the extended family system, etc. We shall, however, have a brief discussion on the role of these factors in Chapter V.

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[1] As the non-corporate private sector mainly comprises households, the terms 'household sector' and 'non-corporate private sector' have at times been used interchangeably in what follows.

III.1. Income and Saving

The obvious starting point for an analysis of the savings function is to examine the functional dependence of saving on income. Since the days of the Keynesian revolution, income has been regarded as the chief determinant of saving, though the exact nature of the saving-income relationship has remained a controversial subject. Our analysis of the non-corporate private sector savings function in Pakistan begins with an examination of this relationship. Equation III-1a (Table III.1) gives the regression result for a simple linear function embodying the Keynesian or the absolute income hypothesis relating current saving to current income. The coefficient on income in the equation provides an estimate of the marginal propensity to save (MPS) over the period 1950/51 - 1976/77. The constant term (or the intercept) is negative, which indicates that the MPS exceeds the average propensity to save (APS). This, in turn, implies that the latter rises with income. However, the intercept is not significant at conventional levels of significance. The result thus accords broadly with our finding in Chapter II of an upward but very weak trend in the sector's APS over the period.[1]

The same picture emerges when the saving ratio is regressed on real per capita income (equations III-1b and III-1c in the table). Over the period 1950/51 - 1976/77, the saving ratio shows a statistically significant positive relationship with per capita income. However, in terms of its quantitative significance as reflected in the value of the coefficient on per capita income, the relationship is weak. Substituting the values of per capita income in the estimated equations, we find that whereas per capita income rose by about one-half over this period, the saving ratio increased by less than two percentage points from about 8.6 per cent to 10.4 per cent. The weak relationship between the increase in per capita income and the

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[1] Some non-linear variants of equation III-1a were also tried, but the results showed little improvement over the simple linear specification.

TABLE III.1 Regression Results for some Basic Models of the Saving-Income Relationship in the Non-corporate Sector

1950/51-1976/77

$S_{nc} = \underset{(-1.481)}{-423.075} + \underset{(9.176)}{0.112Y_{nc}}$ $\quad \bar{R}^2 = 0.762$, DW = 2.197 (III-1a)

$\frac{(S)}{(Y)_{nc}} = \underset{(1.104)}{2.888} + \underset{(2.331)}{0.0147Y^*_{nc}}$ $\quad \bar{R}^2 = 0.146$, DW = 1.600 (III-1b)

$\frac{(S)}{(Y)_{nc}} = \underset{(-1.852)}{-28.464} + \underset{(2.433)}{6.225LnY^*_{nc}}$ $\quad \bar{R}^2 = 0.159$, DW = 1.625 (III-1c)

1955/56-1976/77

$\frac{(S)}{(Y)_{nc}} = \underset{(1.873)}{6.140} + \underset{(1.026)}{0.0078Y^*_{nc}}$ $\quad \bar{R}^2 = 0.003$, DW = 1.781 (III-1d)

$\frac{(S)}{(Y)_{nc}} = \underset{(-0.591)}{-11.503} + \underset{(1.078)}{3.469LnY^*_{nc}}$ $\quad \bar{R}^2 = 0.008$, DW = 1.794 (III-1e)

where S_{nc} = Aggregate real saving in the non-corporate private sector

Y_{nc} = Aggregate real disposable income of the sector

Y^*_{nc} = Per capita real disposable income of the sector

Notes: 1. Real values have been obtained by deflating the current price values by the consumer price index with 1959/60 = 100.

2. All regression results in this and the following tables in this chapter are based on annual fiscal-year values of the relevant variables.

saving ratio is also reflected in the low values of $\bar{R}^2$ for these equations. Estimating the same equations for the period 1955/56 -1976/77, the period of planned development, the relationship between the two magnitudes breaks down completely, which again accords with our findings in Chapter II. This is shown by equations III-1d and III-1e.

Thus we see that although the results in Table III.1 provide substantial support to the Keynesian or the absolute income hypothesis insofar as it relates absolute current saving to absolute current income (the latter alone accounts for more than three-fourths of the total variation in the former in equation III-1a), the other Keynesian hypothesis that MPS > APS so that the saving ratio tends to rise with income does not do so well.

Most of the post-Keynesian developments in the theory of the savings/consumption function have revolved around three main theories, namely Duesenberry's relative income hypothesis, Ando-Modigliani-Brumberg's life cycle hypothesis and Friedman's permanent income hypothesis. In referring to these theories here our purpose is not to go into the minutiae of their theoretical constructs[1] or survey the empirical literature that they have spawned. Our purpose is much more limited than that. It is to pick out some of the important implications of these theories that are relevant in the present context and examine how far they can improve our understanding of the saving-income relationship in the sector over the period under consideration.

Although there are a number of differences between these theories, both of substance and of detail, the following points may be deemed common to all three: first, the saving behaviour does not depend on current income alone but is also influenced by past income levels and by expectations about incomes in the future. Second, in conditions of long-run steady state growth, a rise in income will not in itself bring about a rise in the rate of saving. Third, short-term variations in income exercise an important influence on the short-term saving behaviour. As a corollary, the rate of growth of income is an important determinant of the rate of saving.

Most of the empirical work on these theories that has been carried out with data from developing countries is related to the permanent income model. Very few studies have been concerned directly with empirical tests of the relative income hypothesis while most of the work done on the life cycle theory has employed cross-section data based on relatively small samples of

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[1] For a detailed exposition of these theories, see J. Duesenberry, Income, Saving and the Theory of Consumer Behavior, Cambridge, Mass., Harvard University Press, 1949; F. Modigliani and R. Brumberg, 'Utility Analysis and the Consumption Function: An Interpretation of Cross-Section Data', in K. Kurihara (ed.), Post-Keynesian Economics, New Brunswick, Rutgers University Press, 1954; F. Modigliani and A. Ando, 'The Life-Cycle Hypothesis of Saving: Aggregate Implications and Tests', American Economic Review, 53(1963), 55-84; and M. Friedman, A Theory of the Consumption Function, Princeton, Princeton University Press, 1957.

households. Our examination of some of the main points of these theories noted above has also been carried out within the framework of the permanent income model. The reason for this is that the hypotheses that we are mainly interested in examining here with time-series data on the country's non-corporate private sector - namely the influence of past income levels, expectations and short-term income variations on the saving behaviour - have been developed more elaborately in this model, as they are central to its theoretical structure, than in the others.

As for the long-term proportionality in the relationship between saving and income hypothesised by these theories, we have observed above that if we leave out a few early years from the period under consideration, there remains no significant upward trend in the propensity to save in the country over more than two decades of planned development. However, as the argument will be developed later in this and the following chapters, our analysis of this long-term result employs a course of reasoning that is completely different from that related to the processes hypothesised by these theories - processes that bring about the long-term proportionality between saving and income as conceived by these theories. It was indicated above that the proportionality hypothesis has been developed in the context of steady state growth, that is, in the context of growth along a long-term equilibrium locus where the long term may be conceived as one over which successive short-term disequilibria even out. A moment of reflection will show that the developing countries as a norm clearly do not fit into this kind of an equilibrium model, much less in the early stages of the growth process. In their case, the short-term disequilibria may instead be thought of as being superimposed on an underlying long-term structural disequilibrium. In fact, it is this disequilibrium that more than anything else differentiates these countries from the developed ones. A developing country may be regarded as having come of age, economically speaking, once it has been able substantially to overcome this disequilibrium - a growing-up process

that is both arduous and long. This long-term disequilibrium is a composite phenomenon in the sense that it is constituted by persistent disequilibria in various parts of the economy, e.g. the disequilibrium between the requirements and availability of socio-economic infrastructure, the disequilibrium between the existing socio-cultural milieu and the demands of the growth process - requiring substantial institutional reform and development over an extended period of time, the disequilibrium between the traditional modes of production and technological advancement in an increasingly competitive market, the disequilibrium characterised by changes in the distribution of income brought about by the growth process, the disequilibrium between savings and investment, between aspirations and resources, etc., etc. As a poor country embarks on the road to development, experiencing increases in income and narrowing down some of these gaps, one would expect a priori that a concomitant of this process is a sustained increase in the proportion of domestic resources that are set aside for investment. For example, this process can be seen working in the Lewis model with unlimited supplies of labour where growth in the economy and an expanding modern sector are accompanied by a sustained increase in the rate of saving.[1] Of course, this notion is not limited to this model alone. It runs through the whole of development economics. Another factor that reinforces the expectation of a rise in the rate of saving with development is that the development process is either led or influenced to a substantial degree by governments and planning authorities that regard raising the domestic saving rate as one of the major policy objectives. One may even go a step further and assert that in the case of poor economies where the initial conditions are characterised by a large gap between capital resource availability and requirements, an increase in the rate of saving as income

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[1] W.A. Lewis, op. cit.

levels start to move up is not only a concomitant of but, *a fortiori*, a necessary precondition of sustained economic development. A large body of evidence supports this. Countries that have experienced sustained economic development have also recorded significant increases in the rates of mobilisation of domestic resources for investment. This gains further support from the observation that saving rates are generally higher in rich countries than in the poor ones.

The upshot of this discussion is that the long-term constancy (or near-constancy) of saving rates at relatively low levels in developing countries cannot be explained away in terms of the long-term proportionality between saving and income as hypothesised by the permanent income and other post-Keynesian models noted above. On the contrary, this phenomenon represents a result that contradicts our *a priori* expectations. Thus the observed proportionality (or near-proportionality) between saving and income in the case of Pakistan over a long period is a case of stagnation in the rate of saving (rather than a steady-state equilibrium), a manifestation of the failure of a strategy of development that has to be explored and analysed by relating it to the relevant economic and institutional factors.

However, as we shall show presently in the case of Pakistan, the role assigned by the permanent income model (as well as by the other post-Keynesian models) to income expectations and short-run changes in income that cause actual incomes to diverge from expected incomes has a definite place in the savings function in the developing countries. In order to examine the influence of these factors on saving in the non-corporate sector, we used the following simple model:

$$S = a + bY_p + cY_T$$

where Y_p is permanent income, or the expected part, and Y_T is transitory income, or the unexpected part. Most tests of the permanent income model in developing countries have used this simple functional form. Y_p is defined in terms of income expectations over a planning period and Y_T is

then estimated residually by deducting Y_p from actual Y. Several definitions of Y_p have been used in the literature, with varying degrees of success. In most cases, however, the choice of a definition is to a large extent constrained by the availability of the relevant data. In order to economise on degrees of freedom, most of the studies, especially time-series studies, have approximated Y_p either by taking two- to three-year moving averages of actual income or by fitting simple time trends to the time-series data on income.[1] Since the method of estimating Y_p in this way is by nature somewhat arbitrary, many studies have employed more than one definition of Y_p.

In order to estimate the above formulation of the permanent income model, we tried two measures of permanent income, namely (i) a simple average of the current and past two years' measured income, and (ii) income levels estimated from the relation $\text{Ln}Y = a + bt$. In both cases, transitory income was defined as the difference between actual income and the corresponding estimate of permanent income.

In addition, estimates were derived for the formulation of the permanent income model wherein permanent income is approximated by taking a weighted average of the current and a series of past incomes, with the weights declining geometrically. For this purpose, the relationship that was estimated was $C_{nc} = a + bY_{nc} + cC_{nc(-1)}$ (where C_{nc} is the non-corporate private sector real consumption expenditure) which is derived from the geometric-lag model by means of the Koyck transformation. Estimates of the corresponding savings function were then obtained from the estimated consumption function by making use of the identity $C + S \equiv Y$.

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[1] See, for example, I. Friend and P. Taubman, 'The Aggregate Propensity to Save: Some Concepts and their Application to International Data', Review of Economics and Statistics, 48(1966), 113-23; J.G. Williamson, 'Personal Saving in Developing Nations: An Inter-temporal Cross-section from Asia', Economic Record, 44(1968), 194-210; U.M.R. Choudhury, 'Income, Consumption and Saving in Urban and Rural India', Review of Income and Wealth, 14(1968), 37-56; and K.L. Gupta, 'On Some Determinants of Rural and Urban Household Saving Behaviour', Economic Record, 46(1970), 578-83.

Regression results for the above three formulations of the permanent income model are given in Table III.2.

The important thing to note in equations III-2a and III-2b is the relative size of the marginal propensities to save out of permanent and transitory income. According to Friedman's permanent income hypothesis, the whole of transitory income or the departure of actual income from expected income is saved, i.e. $MPS_T = 1$. This is an extreme case which implies an extraordinarily heavy dependence of consumer spending on past experience. Although a majority of empirical studies of the permanent income model have shown that $MPS_T > MPS_P$, the hypothesis of unitary MPS_T has found little support. However, the question whether MPS_T equals unity or not is not central to the argument here. We are interested primarily in testing the postulated excess of MPS_T over MPS_P, and in approximating its magnitude for our set of data. Since the former is, ex hypothesi, much higher than the latter, the permanent income model implies that large and rapid increases in income along a growth path would result in a higher level of saving by causing larger divergences between the expected and actual values of income.

Our results show that when permanent income is defined as an average of the current and last two years' measured income, the estimated MPS out of transitory income is much higher than that out of permanent income, though much short of unity. Both the estimates are highly significant and there is a significant improvement in $\bar{R}^2$ over that for the absolute income model. The results demonstrate that the distinction between permanent and transitory components of income exercises a significant influence on the consumption/saving decisions of households and that a high proportion of the latter is saved.

TABLE III.2. Permanent Income Model and Non-corporate Saving: Regression Results

1950/51 - 1976/77

S_{nc} =	-184.170 (-0.693)	+ 0.084Y_P (6.047)	+ 0.511Y_T (3.900)	$\bar{R}^2$ = 0.816 DW = 2.095	(III-2a)
S_{nc} =	-417.463 (-1.358)	+ 0.111 Y_P^+ (8.378)	+ 0.117Y_T^+ (1.190)	$\bar{R}^2$ = 0.752 DW = 2.182	(III-2b)
S_{nc} =	-124.509 (-0.461)	+ 0.355Y_{nc} (4.480)	- 0.295$C_{nc(-1)}$ (-3.116)	$\bar{R}^2$ = 0.818 DW = 2.556	(III-2c)
S_{nc} =	5.271 (0.222)	+ 0.477Y_{nc} (5.839)	- 0.441$C_{nc(-1)}$ (-4.516)	$\bar{R}^2$ = 0.863 DW = 1.876	(III-2d)
S_{nc} =	-113.659 (-0.382)	+ 0.359Y_{nc} (3.886)	- 0.298$C_{nc(-1)}$ (-2.725)	$\bar{R}^2$ = 0.720 DW = 2.830	(III-2e)
S_{nc} =	-123.435 (-0.572)	+ 0.355Y_{nc} (4.628)	- 0.294$C_{nc(-1)}$ (-3.226)	$\bar{R}^2$ = 0.823 DW = 2.037	(III-2f)

1955/56 - 1976/77

S_{nc} =	-295.474 (-0.868)	+ 0.083Y_P (5.461)	+ 0.616Y_T (3.494)	$\bar{R}^2$ = 0.760 DW = 2.034	(III-2g)

where Y_P, Y_T, Y_P^+ and Y_T^+ are estimates of permanent and transitory income in the non-corporate sector (both in real terms) according to definitions (i) and (ii) in the text respectively.

However, when permanent income is estimated from the relation LnY = a + bt, the difference between the two marginal propensities disappears almost completely; the coefficient on Y_T becomesinsignificant and there is a significant fall in $\bar{R}^2$. The trend values yielded by the said relation appear to provide a much poorer approximation of expected incomes than do the simple three-year averages.

Four separate estimates were obtained for the Koyck distributed-lag formulation of the permanent income model. Because of the presence of a lagged dependent variable among the explanatory variables and a compound error term subject to autocorrelation, estimation of this formulation by ordinary least squares (OLS) yields biased and inconsistent results.[1]

[1] On this point see, for example, J. Johnston, Econometric Methods, 2nd edition, McGraw-Hill, 1972, Chap. 10.

It was, therefore, necessary to cross-check the OLS results by comparing them with the results of the estimation of the same relation by some consistent estimation methods. Three such methods used were Liviatan's lagged-value instrumental variable (IV) method, Wallis' extension of the IV method using a Cochrane-Orcutt transformation which approximates to generalised least squares (GLS), and another variant of the GLS method involving a transformation derived by Cooper of the Cochrane-Orcutt technique to correct for the asymptotic bias introduced into the estimates by the presence of a lagged dependent variable.[1] Estimates yielded by these methods are given by equations III-2(d to f) respectively; the corresponding OLS estimate is given by equation III-2c.

Both variants of the GLS technique yield estimates of the coefficients that are very similar to the OLS estimates. The coefficients yielded by the IV technique are, however, somewhat different. The distributed-lag model does well in all the computations, and corroborates the results yielded by the formulation of the permanent income model given by equation III-2a. The lag in the adjustment of household expenditure to changes in income in reflected in a substantial difference between the short- and long-run marginal propensities to save. The short-run MPS, given by the coefficient on Y_{nc} in equations III-2(c to f), is shown to be about 0.35 by the OLS and GLS estimates and about 0.48 by the IV estimates. The corresponding estimates of the long-run MPS are about 0.085 and 0.065 respectively. The long-run MPS is given by the expression $1 - (\frac{b}{1-c})$ in the original consumption function $C_{nc} = a + bY_{nc} + cC_{nc(-1)}$ from which the estimates of the savings function given in equations III-2(c to f) have been derived.

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[1] See N. Liviatan, 'Consistent Estimation of Distributed Lags', International Economic Review, 4(1963), 44-52; K.F. Wallis, 'Lagged Dependent Variables and Serially Correlated Errors: A Reappraisal of Three-Pass-Least-Squares', Review of Economics and Statistics, 49(1967), 555-67; and, J.P. Cooper, 'Asymptotic Covariance Matrix of Procedures for Linear Regression in the Presence of First Order Autoregressive Disturbances', Econometrica, 40(1972), 305-10.

The estimated coefficients of the distributed-lag model also provide some information about the average length of the planning horizon of the expenditure units. If this horizon were infinite, each term in the expression measuring permanent income would receive equal weight. The particular weighting scheme employed by the model posits that expenditure decisions are influenced more by present than past income. The estimated coefficients of the consumption function showed that the influence of past income levels on current expenditure became very small after two to three years. Put differently, an overwhelmingly large part (over 95 per cent) of the full, long-run adjustment of consumption expenditure to a sustained increase in current income was indicated to take place within the following two to three years. This suggests that a definition of permanent income in terms of income expectations generated by levels of income experienced during the past few years, such as a three-year period used by us, provides a fairly reasonable approximation of the true magnitudes in the present case.[1]

The explanatory power (as indicated by $\bar{R}^2$) of the distributed-lag model appears to be roughly similar to that of the model using a three-year average of the most recent levels of income as a measure of permanent income.

The large gap between MPS_T and MPS_P indicated by our results points to a quantitatively strong influence of rapid short-term increases in income on saving in the country. It is interesting to note that the difference between MPS_T and MPS_P becomes even larger when equation III-2a is estimated for the period 1955/56 - 1976/77.[2] This is shown by equation III-2g.

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[1] Several empirical studies of the savings function in developing countries have yielded similar results; see, for example, the studies listed in fn. 1, p.73.

[2] As we shall see below, the rate of growth of income also turns out to be a quantitatively stronger determinant of saving if the early part of the 1950s is excluded from the estimation.

III.2. Rate of Growth of Income and Saving

As was indicated earlier, an implication common to the post-Keynesian theories of the savings function is that rapid increases in income exercise an important influence on saving behaviour. In other words, it can be inferred from these theories that the rate of growth of income is a major determinant of saving.[1] Within the framework of these theories, this influence derives largely from lags in the adjustment of consumption to rapid increases in income which by raising transitory income relative to permanent income, or current income relative to previous peak income, bring about a rise in the rate of saving. In the context of development in low income countries, however, the positive impact of a rise in the rate of growth may not be limited to these short-term factors only. In the case of these countries, higher growth rates can be instrumental in raising the rate of saving in several other ways. One way in which this can happen derives from the so-called critical minimum effort thesis.[2] According to this line of argument, a high rate of growth above a critical minimum level may be absolutely essential for a sustained increase in the rate of saving, and hence for sustained economic development, because at lower rates of growth the potentially positive impact of an increase in income

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[1] For a discussion of the similarity of these theories on this point, see S. Swamy, 'A Dynamic Personal Savings Function and its Long-Run Implications', Review of Economics and Statistics, 50(1968), 111-22; H.S. Houthakker and L.D. Taylor, Consumer Demand in the United States: Analyses and Projections, Cambridge, Mass., Harvard University Press, 1970, Chap. 7; and S.K. Singh, 'The Determinants of Aggregate Savings', IBRD, Economic Staff Working Paper No. 127, March 1972, pp. 1-4 (reprinted in S.K. Singh, Development Economics - Some Findings, Lexington Books, 1975.

[2] Or from other variations on the same theme, e.g. the big-push theory, the vicious circle of poverty argument, etc. [see for example, H. Leibenstein, Economic Backwardness and Economic Growth, New York, 2nd Printing, 1960; Rosenstein-Rodan, 'Notes on The Theory of the "Big Push"' in Howard S. Ellis (ed.), Economic Development for Latin America, New York, St. Martin Press, 1961, and R. Nurkse, Problems of Capital Formation in Underdeveloped Countries, Oxford, OUP, 1953]. It may be added that these theories have come under strong criticism for their (apparently) somewhat pessimistic conclusion that sustained growth in poor countries is possible only if they start in a big way with large investment programmes that can bring about high rates of income growth. However, such a picture emerges only on an extremely narrow interpretation of these 'theories'; when conceived broadly, the relationships emphasised by them have a substantial element of truth.

may be thwarted by other forces generated by growth in the early stages of development that tend to depress saving, e.g. a rise in the rate of population growth and the burden of dependency in the population as a result of an increase in fertility and a reduction in mortality brought about by higher incomes, dissipation of the whole or a large part of the increase in incomes in higher consumption induced by such factors as the so-called demonstration effect (international as well as domestic), availability of a larger variety of better quality consumer goods matched by an increased purchasing power, etc. Further, a minimum dosage of growth impulse may be necessary for releasing the economy from the grip of institutions and behaviour patterns that have a depressing influence on resource mobilisation and growth. Thus a slow or gradual increase in income would have only a limited effect on the rate of saving while a higher rate of growth would have a much more substantial effect.

There are further ways in which a rapid increase in income can contribute to raising the rate of saving. In a rapidly growing economy, the tasks of structural transformation and reallocation of resources along more efficient lines that are so essential to the process of capital formation and development are facilitated. High rates of growth are normally accompanied by growth in most parts of the economy as rapid growth in the leading sectors transmits a part of the growth stimulus to the relatively backward and lagging sectors. The process of accumulation and growth, as a result, takes place along a wider front. Further, a high growth momentum helps create an environment of increasing prosperity and a general forward movement in the economy that may be highly conducive to entrepreneurial saving, with its favourable spin-off effects for other forms of saving. Finally, a higher rate of growth can stimulate saving through what McKinnon has termed the 'portfolio-effect' of growth. This effect comes about as the public tries to maintain its desired ratio of money balances and other financial assets to income by saving more which,

according to this line of argument, provides a further stimulus to saving on account of complementarity between this form of saving and the accumulation of physical capital goods.[1]

The results presented in the previous section for the post-Keynesian models of the saving-income relationship indicated support for the hypothesis that rapid increases in income tend to raise the rate of saving. A number of studies of the savings function in developing countries have incorporated the rate of growth of income explicitly into the function as an independent variable. Most of the empirical tests have shown that this variable exercises a significant positive influence on saving behaviour.[2] To test the relationship for our set of data, we added the rate of growth of the non-corporate private sector's real income as a regressor to the simple saving-income models considered in the previous section. Table III.3 gives the results.[3]

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1 See R.I. McKinnon, Money and Capital in Economic Development, Washington D.C., The Brookings Institution, 1973, pp. 123-9.

2 See, for example, H.S. Houthakker, 'On Some Determinants of Savings in Developed and Underdeveloped Countries', in E.A.G. Robinson (ed.), Problems in Economic Development, New York, Macmillan, 1965; Swamy, op. cit.; J.G. Williamson, 'Income Growth and Savings', The Philippine Economic Journal, 8(1969), 54-74; Singh, op. cit.; and N.H. Leff and K. Sato, 'A Simultaneous-Equation Model of Savings in Developing Countries', Journal of Political Economy, 83(1975), 1217-28.

3 A valid question about these single-equation results is the simultaneity problem, i.e. the problem of the feed-back effect of the dependent variable on the rate of growth. Strictly speaking, the savings function cannot be estimated without setting up a whole system of simultaneous equations that take into account all such feed-back effects. Unfortunately, as was noted at the beginning of the chapter, we are prevented from undertaking any such exercise because econometric research into other structural relationships in the economy, e.g. the aggregate production function, that are required for this purpose has been seriously lacking. Under the present conditions, therefore, the single-equation models being used here are perhaps the best that may be attempted.

TABLE III.3. Rate of Growth of Income and Non-corporate Saving: Regression Results

1950/51 - 1976/77

$$S_{nc} = \underset{(-2.008)}{-508.703} + \underset{(9.744)}{0.106Y_{nc}} + \underset{(2.870)}{48.375}\frac{(\Delta Y)}{(Y)_{nc}} \qquad \bar{R}^2 = 0.815,\ DW = 2.054 \qquad \text{(III-3a)}$$

$$\frac{(S)}{(Y)_{nc}} = \underset{(1.720)}{3.881} + \underset{(1.781)}{0.0099Y^*_{nc}} + \underset{(3.202)}{0.222}\frac{(\Delta Y)}{(Y)_{nc}} \qquad \bar{R}^2 = 0.377,\ DW = 1.450 \qquad \text{(III-3b)}$$

$$\frac{(S)}{(Y)_{nc}} = \underset{(-1.243)}{-17.024} + \underset{(1.815)}{4.163LnY^*_{nc}} + \underset{(3.142)}{0.219}\frac{(\Delta Y)}{(Y)_{nc}} \qquad \bar{R}^2 = 0.379,\ DW = 1.467 \qquad \text{(III-3c)}$$

1959/60 - 1976/77

$$S_{nc} = \underset{(-1.174)}{-498.217} + \underset{(6.370)}{0.094Y_{nc}} + \underset{(4.088)}{118.626}\frac{(\Delta Y)}{(Y)_{nc}} \qquad \bar{R}^2 = 0.766,\ DW = 2.181 \qquad \text{(III-3d)}$$

$$\frac{(S)}{(Y)_{nc}} = \underset{(2.579)}{8.348} - \underset{(-0.214)}{0.0016Y^*_{nc}} + \underset{(3.867)}{0.430}\frac{(\Delta Y)}{(Y)_{nc}} \qquad \bar{R}^2 = 0.433,\ DW = 2.004 \qquad \text{(III-3e)}$$

$$\frac{(S)}{(Y)_{nc}} = \underset{(0.591)}{11.295} - \underset{(-0.190)}{0.598LnY^*_{nc}} + \underset{(3.862)}{0.430}\frac{(\Delta Y)}{(Y)_{nc}} \qquad \bar{R}^2 = 0.433,\ DW = 2.004 \qquad \text{(III-3f)}$$

where $\frac{(\Delta Y)}{(Y)_{nc}} = 100.0\,(Y_{nc} - Y_{nc(-1)})/Y_{nc(-1)}$

The results show that the addition of this variable to the simple saving-income model brings about an appreciable improvement in the estimated relationship. This is particularly true when the saving ratio is used as the dependent variable. Comparing equations III-3b and III-3c with equations III-1b and III-1c, we see that the inclusion of the rate of growth of income in the model more than doubles its explanatory power. Equation III-3a shows that an increase in the growth rate by one percentage point raises savings by about 2.5 per cent (measured at the mean). Equations III-3b and III-3c indicate that the same increase in the growth rate raises the saving ratio by about one-quarter of a percentage point.

The above results relate to the overall period 1950/51 - 1976/77. The growth rate variable turned out to be quantitatively much more strongly related to saving when the same functions were estimated for the period 1959/60 - 1976/77, thereby leaving out the 1950s which was a period of a

relatively slow growth in the economy (real income fell in some years during this period). This is shown by equations III-3(d to f). Equation III-3d shows that an increase in the growth rate by one percentage point is now associated with an increase in savings of more than 4.5 per cent (measured at the mean). Equations III-3e and III-3f show that the associated increase in the saving ratio is a little less than one-half of a percentage point.

The results thus indicate that the rate of income growth has been an important determinant of the propensity to save in the country, and that its influence was comparatively much stronger for the period after the 1950s (especially over the 1960s when the growth rates were at their peak).

III.3. Distribution of Income and Saving

Our discussion of the relationship between income and saving has thus far been restricted to an examination of the influence of changes in the household (or non-corporate) sector's income at the aggregate level only. There are also some important issues connected with the way changes in the distribution of aggregate income can influence saving. If saving propensities differ between different income groups and between different components of income, aggregate saving will vary depending upon how aggregate income is distributed among these groups and components. Two distributional questions that have received considerable attention in discussions of saving behaviour relate to the functional and sectoral (rural-urban) distribution of income. The functional distribution of income, i.e. distribution of income between factor shares (chiefly profits and wages), has been regarded by many as an important determinant of the overall level of saving in an economy. The hypothesis underlying this relationship is that the propensity to save out of profit income (or more generally entrepreneurial income) tends to be much higher than that out of wage income (or more generally employment income). The overall level of saving will also be influenced by the rural-urban distribution of income if, as has quite frequently been assumed, the propensity to save out of urban incomes was

higher than that out of rural incomes.[1]

Unfortunately, the influence of these distributional factors could not be determined within the framework of the time-series analysis of the household savings function being attempted here. This was because the relevant income distributions were not available in the country's national accounts, nor did our savings data admit of the requisite disaggregation. We should, however, note that time-series data are only of limited usefulness in evaluating the influence of these factors. The proper method for this is an analysis based on cross-section data. But since this was outside the scope of the present study, no such attempt was made. Our treatment below of distributional factors is, therefore, confined to a brief statement of the hypotheses relating these factors to saving behaviour and an examination of the existing empirical evidence. Some important policy implications of the role of these factors are examined in Chapter V. As we shall see then, these factors had a central place in the savings strategy pursued in the country in the past.

The hypothesis that the propensity to save is higher out of profit than wage income has a long history. It has been used extensively in growth theory. In fact, many growth models have employed an extreme version of this hypothesis, the so-called classical or Kaleckian savings function,

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[1] Another distributional question that has received substantial attention in the literature is the relationship between the size distribution of personal income and saving. Questions relating to the functional and rural-urban distribution of income are, however, stressed here in view of their important place in the rationale underlying the public policy with respect to savings that has been pursued in the country. Of course, the size distribution of income is not independent of the functional and rural-urban distribution of income. For example, insofar as incomes are on average higher in the urban sector than in the rural sector (and also more unequally distributed), a policy of transferring income from the latter to the former on the assumption that it will lead to higher saving will tend to make the overall size distribution of income more unequal. But, from the standpoint of the savings policy, this change in the size distribution of income will be a side-effect (though perhaps potentially important in its own right as a determinant of saving) of a policy that sought in the first place to influence the rural-urban distribution of income. In Chapter V we shall have occasion to observe that the public savings policy in Pakistan did entail adverse consequences for the size distribution of income.

which posits that all saving is done by recipients of profit income.

There can be several reasons why the propensity to save may be higher out of profits or entrepreneurial incomes. First, there may be large differences in the profitability of investment opportunities available to the concerned income groups. Whereas entrepreneurs can invest directly in own enterprises, wage- and salary-earners can normally invest only indirectly through intermediaries such as banks. The former type of investment typically carries higher rates of return. The prospect of high returns on investment in own enterprises induces a strong entrepreneurial demand for investment funds, which may in turn lead to high rates of saving out of entrepreneurial incomes. The differences in the availability of profitable investment opportunities between the two groups will be the more pronounced, and so will be their impact on the respective saving behaviour, the more underdeveloped and imperfect are the capital markets. Second, entrepreneurs may have a preference for internal finance in order to maintain control over their enterprises. This will serve to strengthen the positive effect of their direct access to profitable investment opportunities on their propensity to save. Third, entrepreneurs tend to be high gross savers as they manage a depreciating stock of capital assets. Fourth, following the permanent income model, entrepreneurs will be relatively high savers as entrepreneurial incomes tend to be more unstable than income from employment.

The influence of the functional origin of income on saving behaviour has been tested in a number of studies, both in developed and developing countries. Most of these studies have used cross-section data, involving either inter-country regressions or regressions based on group-wise data within individual countries. The results reported by a large majority of these studies support the hypothesis of a higher propensity to save out of entrepreneurial income. We should note here that some studies have been criticised on the ground that the functional forms employed by them are not

properly specified to disentangle the effect on saving behaviour of different income levels from that of different income sources. It has been pointed out that, because of this flaw, the reported higher saving propensities in the case of entrepreneurs may be attributable to the fact that entrepreneurs generally earn higher incomes than do wage-and salary-earners rather than to any other systematic difference in saving behaviour between the two groups. The supporting evidence is, however, not limited to such studies. The weight of the evidence shows that entrepreneurs tend to save a higher proportion of their incomes than do wage-and salary-earners even at the same income levels. An important aspect of the evidence is that even fairly small entrepreneurs have been shown in some studies to save at remarkably high rates.[1]

The only relevant piece of econometric evidence relating to Pakistan is the study by Ranis mentioned in Chapter I.[2] He estimated separate savings functions for workers and small-scale entrepreneurs from data collected through a survey of the urban areas of Karachi. The marginal saving propensities of the two groups were found to be around 0.10 and 0.33 respectively. The result is thus in line with the general empirical finding of higher rates of saving out of entrepreneurial incomes. Of additional interest is the absolute magnitude of the entrepreneurial saving propensity. Even small entrepreneurs were found to save as much as one-third of the increments in their income.

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1 For a representative sample of various types of studies testing the hypothesised differential propensity to save out of entrepreneurial and employment incomes, see, I. Friend and I.B. Kravis 'Entrepreneurial Income, Saving and Investment', American Economic Review, 47(1957), 269-301; Houthakker (1965), op. cit.; A.C. Kelly and J.G. Williamson, 'Household Saving Behaviour in the Developing Economies: The Indonesian Case', Economic Development and Cultural Change, 16(1967-68), 385-403; Williamson (1968), op. cit.; S.S. Bhalla, 'The Role of Sources of Income and Investment Opportunities in Rural Savings', Journal of Development Economics, 5(1978), 259-81; and D.L. Huddle, 'An Analysis of the Saving Behaviour of a Group of Colombian Artisan Entrepreneurs', World Development, 7(1979), 847-64.

2 Ranis, op. cit.

As regards the question of possible differences in saving behaviour between rural and urban areas, a traditionally held view is that urban people save more than do their rural counterparts and that a redistribution of income in favour of the former will consequently raise the overall propensity to save in the economy. This view derives largely from the belief that farmers, who constitute by far the most important occupational group in rural areas, are generally not in the habit of saving any large proportion of their incomes and that much of what they do save tends to go into relatively unproductive asset formation.

This view is, however, misconceived. It is not supported by any firm statistical evidence, nor is it based on any sound a priori reasoning. It owes much of its wide currency to conventional wisdom favouring urban industrial growth in economic policy-making. Michael Lipton has called the 'farmers don't save' argument the most important misconception underlying the presence of a strong 'urban bias' in development strategy in the case of many developing countries.[1] As we shall see in Chapter V, the strategy generally followed in Pakistan in the past constitutes one such case.

Much evidence has been accumulated in recent years which shows that given opportunities for profitable investment, farmers can and do save at rates that compare very favourably with those in urban areas. A number of studies have found remarkably high saving propensities among farmers who own land and have opportunities for capital investment in new farming techniques promising attractive returns. In some cases, even relatively small farmers, land-owning peasants and tenants with security of tenure, have been found to respond with surprisingly high saving rates to profitable opportunities for farm investment. The evidence indicates that just as the ownership of a profitable industrial enterprise in urban areas can induce high saving

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[1] M. Lipton, Why Poor People Stay Poor: A Study of Urban Bias in World Development, London, Temple Smith, 1977, p. 238.

for industrial investment, the availability of a profitable investment outlet in rural areas in the form of ownership of land and access to new and more profitable farming techniques can induce high saving for farm investment. The link between the availability of profitable investment opportunities and high entrepreneurial saving noted above applies as much to rural 'farm entrepreneurs' as it does to urban industrial entrepreneurs. Further, there is growing evidence of substantial saving in the form of investment in financial assets, especially bank deposits, by well-off farm households with funds in excess of their needs for on-farm investment.[1]

Whatever relevant evidence is available in Pakistan also contradicts the 'farmers don't save' view. Bergan estimated from the national Household Income and Expenditure Survey for 1963/64 that the personal saving rate in that year was higher in rural than urban areas.[2] Sample data on farm budgets collected regularly in the Punjab provide impressive evidence of the high saving propensities of land-owning farmers facing profitable opportunities for farm investment.[3] In a study of rural capital formation in former East

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1 For a sample of the evidence of high saving rates in rural areas, especially by farmers, see P.G.K. Panikar, 'Rural Savings in India', Economic Development and Cultural Change, 10(1961-62), 64-85; Kelly and Williamson (1968), op. cit.; A.A. Rozental, 'A Note on the Sources and Uses of Funds in Thai Agriculture', Economic Development and Cultural Change, 18(1969-70), 383-90; T.H. Lee, Intersectoral Capital Flows in the Economic Development of Taiwan, 1895-1960, Cornell University Press, 1971; U. Patnaik, 'Capitalism in Indian Agriculture', unpub. D.Phil. thesis, University of Oxford, 1972; and K.B. Griffin, The Political Economy of Agrarian Change: An Essay on the Green Revolution, London, Macmillan, 1974.

An aspect of the evidence supplied by these studies is that cross-section data collected through rural surveys generally yield much higher estimates of the rural propensity to save than do official national income statistics. The reason for this is that the latter tend seriously to underestimate saving embodied in activities such as land improvement, non-mechanised irrigation, etc. This is especially true when these activities are of a non-monetised variety.

2 Bergan, op. cit.

3 Farm Accounts and Family Budgets of Cultivators in the Punjab, Lahore, The Punjab Board of Economic Enquiry (subsequently renamed Economic Research Institute), various annual issues.

Pakistan, Habibullah found evidence of substantial saving for farm investment even by small farm households.[1]

It has been observed by several writers that a major factor behind the peak saving rates achieved in Pakistan during the Second Plan period was a rapid growth of agricultural incomes and savings.[2] After a period of near-stagnation in the 1950s, the agricultural sector picked up sharply during this period. This transformation in the growth performance of the sector reflected substantial investment by farmers in new farm inputs and techniques, indicating their potential for a vigorous response to profitable opportunities for farm investment. This was most forcefully illustrated by investment in tubewells. The farmers' response to the attractive investment outlet opened up by rural electrification and confirmation of the availability of sweet subsoil water was a quick and phenomenal surge in tubewell installation. Falcon and Gotsch have called this 'one of Pakistan's most amazing developments during the Second Plan period'.[3] The acceleration in the growth of agricultural incomes in turn led to even greater saving by farmers as their traditionally determined consumption levels responded relatively slowly. Tims found that the marginal rate of saving in agriculture during the period was 'impressive'.[4] The excess of farmers' savings over their own investment requirements accounted for a substantial proportion of the total increase in savings in the form of bank deposits during the period.

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1 M. Habibullah, Some Aspects of Rural Capital Formation in East Pakistan, Dacca, Bureau of Economic Research, Dacca University, 1963.

2 See, Nulty, op. cit., pp. 163-5 and M. Baqai, 'Self-Help and Social Justice: The Mobilisation of Domestic Capital in Pakistan', pp. 66-9, in M. Baqai and I. Brecher (eds.), Development Planning and Policy in Pakistan, 1950-70, Karachi, National Institute of Social and Economic Research, 1972.

3 W.P. Falcon and C.H. Gotsch, 'Lessons in Agricultural Development - Pakistan', p. 274, in G.F. Papanek (ed.), Development Policy - Theory and Practice, Cambridge, Mass., Harvard University Press, 1968.

4 W. Tims, Analytical Techniques for Development Planning: A Case Study of Pakistan's Third Five-Year Plan (1960-75), Karachi, Pakistan Institute of Development Economics, 1968, p. 34.

The evidence, both from Pakistan and other countries, thus does not support the view that the propensity to save is inherently lower out of rural incomes. Where profitable investment outlets are available, farmers have shown as much responsiveness to economic incentives as is normally associated with urban industrial entrepreneurs. The main reason why they do not save still more is that a heavy bias in development strategies in favour of urban industrial growth militates against the growth and spread of profitable opportunities for farm investment and keeps rural people relatively poor. Depressed investment opportunities keep farm savings much below what farmers are potentially capable of saving. They also have the undesirable effect of diverting a part thereof into unproductive asset formation. If under such conditions rural saving and investment are low in comparison with that in urban areas, this differential represents a result of distortions created by urban bias itself rather than provides a defence of it. Another point to be noted with respect to the effect of urban bias on rural saving is that a substantial part of the 'true' saving by the rural sector never appears in the estimated figures for the sector's saving as it is drained off to the urban sector through price twists that turn the intersectoral terms of trade against the former. That the rural sector is kept poor by income losses produced by such policy biases means that the overall propensity to save in the sector may remain lower than that in the urban sector even though the propensity to save at a given level of income was higher in the former.[1]

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[1] For some evidence on rural-urban differentials in saving propensities at given levels of income, see Lipton, op. cit., pp. 247, 277 and 403. Lipton's discussion of the view that rural people save little and its role in biasing development policy excessively in favour of the urban industrial sector in many developing countries leads him to the following forceful conclusion: 'The "farmers don't save" argument owes such force as it retains to distortions produced by urban bias itself. Even in an economy thus distorted, the argument is questionable. In one freer from urban bias, it would be negligible' (p. 248).

As mentioned earlier, the distributional questions examined above feature very prominently in the rationale underlying the public savings policy pursued in Pakistan. The character of this policy and its effects will be examined in Chapter V in the light of the above discussion.

III.4. Rate of Interest and Saving

Economic theory does not provide an unequivocal a priori expectation regarding the direction of the relationship between interest rate and saving. The indeterminacy in the theory stems largely from the notion that a change in interest rates produces two main effects that influence the propensity to save in opposite directions, with the net result depending on their relative strength which can be determined only empirically. These are, namely, the income effect and the substitution effect. The former tends to raise consumption out of present income as it enables the consumers to maintain the same amount of consumption in the future as before but with less saving today. The argument that an increase in the rate of interest may reduce current saving by households who aim at reaching a target or desired level of saving in the future reflects the operation of this effect. The substitution effect, on the other hand, tends to reduce present consumption by making it more expensive in terms of the future consumption that is foregone as a result.

Then, it has been argued by some that whereas an increase in interest rates may lead to an increase in saving in interest bearing financial assets (as it is a reward for saving in this particular form), it may not bring about an increase in total saving (and may even reduce it) by depressing saving in the form of direct investment in physical capital assets whose relative profitability is consequently lowered. Thus, according to this line of argument, interest rates may be more significant in determining investment portfolios or the channels into which savings flow than

in altering saving propensities.[1] A similar line of reasoning was employed by Williamson to account for the negative coefficient on the interest rate term that he found in a study of the savings function in a cross-section of Asian countries, saying that independent entrepreneurs dominate in these countries to the extent that for a majority of households the saving decisions are motivated by investment plans so that higher interest rates may discourage both investment and saving.[2]

In more recent work in this area in the developing countries, an alternative view has been proposed that stresses a relationship of complementarity between private saving in financial assets and investment in physical capital goods and singles out the real rate of interest as an important variable in promoting both. For a large majority of investors in these countries, according to this view which is frequently referred to as the McKinnon complementarity hypothesis,[3] saving in the form of accumulation of financial assets (chiefly currency balances and deposits) acts as a 'conduit' through which the accumulation of physical capital assets takes place. This is because given the relatively underdeveloped financial structures in these countries and the consequent limited flow of external finance, investment plans of household entrepreneurs and small unincorporated business units (which dominate the productive activity in these countries but get a disproportionately small share in the total availability of external finance) are to a large extent subject to the constraint of self-finance. In order to be able to invest in relatively lumpy capital goods, investors in these categories must save and accumulate sufficiently large financial

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[1] See, for example, I. Friend, 'Determinants of the Volume and Composition of Saving with Special Reference to the Influence of Monetary Policy', in Impacts of Monetary Policy, Commission on Money and Credit, Englewood Cliffs, Prentice Hall, 1963, p. 673.

[2] Williamson (1968), op. cit.

[3] See McKinnon, op. cit., especially Chap. 6.

balances over a period of time. An increase in the rate of interest under these conditions, according to this view, will stimulate both financial savings and real investment; financial savings will be stimulated because the rate of return thereon increases; the incentive to invest will be stimulated because the opportunity cost of accumulating financial balances with a view to eventually investing them in physical capital falls, thereby enlarging the financial conduit. Further, an increase in the rate of interest may also induce larger savings by increasing the need for internal financing in the case of entrepreneurs that previously had access to cheap external finance.

Given the diversity of the possible effects on saving of a change in interest rates, it is not surprising to find that empirical studies of the saving-interest rate relationship have produced a variety of results. The findings have ranged from significantly positive coefficients on the rate of interest to significantly negative ones.[1] However, the empirical work relating to developing countries in recent years has produced more consistent results, with a majority of the studies reporting a positive (in some cases quantitatively strong) correlation between saving and changes in interest rates.[2]

But studies employing aggregate saving, national or household, as the dependent variable have been relatively few. Most of the studies in this area have concentrated on the relationship between interest rates and saving in the form of financial assets, chiefly through financial intermediaries

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[1] For examples of the former type of results, see C. Wright, 'Some Evidence on the Interest Elasticity of Consumption', American Economic Review, 57(1967), 850-55; 'Savings and the Rate of Interest' by the same author in A.C. Harberger and M.J. Bailey (eds.), The Taxation of Income From Capital, Washington D.C., The Brookings Institution, 1969; and Gupta, op. cit. For examples of the latter type of results, see Williamson (1968), op. cit., and W.E. Weber, 'The Effect of Interest Rates on Aggregate Consumption', American Economic Review, 60(1970), 591-600.

[2] See, for example, G.T. Brown, Korean Pricing Policies and Economic Development in the 1960s, Baltimore, Johns Hopkins University Press, 1973; S. Abe, M.J. Fry et al., 'Financial Liberalisation and Saving in Economic Development: An Empirical Test for Six Countries', Pakistan Development Review, 16(1977), 298-308; and M.J. Fry, 'Money and Capital or Financial Deepening in Economic Development', Journal of Money, Credit and Banking, 10(1978), 464-75.

such as commercial banks.[1] The results reported by this group of studies have been much more consistent and point to a sizable positive impact of interest rate changes on these forms of saving.

To determine the role of interest rate changes on saving in the non-corporate sector, we added an interest rate variable to the saving-income models considered in Sections III.1 and III.2 above. Table III.4 gives the results.

The rate of interest used in the regressions for the overall period 1950/51 - 1976/77 was the average annual (quarterly average) rate of interest on scheduled banks' six months to one year time deposits, converted into real terms by subtracting from it the corresponding annual rate of change in the consumer price index. This interest rate series was preferred on a priori grounds to other series available for the whole of this period, namely the call money rate, the yield on long-term government bonds and the average interest rate on scheduled banks' savings deposits. Time deposits constitute a substantial proportion of the total non-corporate saving in financial assets in the country and the rate of return thereon can, therefore, approximate the average return on various types of financial assets to savers in the sector better than the other rates mentioned above possibly can. A weighted average rate of interest on all types of interest bearing deposits could have provided a still better proxy but such a series was available only for the period 1959/60 onwards. However the estimation of the same equations with this interest rate made very little difference to the results, as can be seen from equations III-4(e to j) in the table.

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[1] See, for example, R.F. Emery, The Financial Institutions of South-East Asia: A Country-by-Country Study, New York, Praeger, 1970; and A.J. Chandavarkar, 'Some Aspects of Interest Rate Policies in Less Developed Economies: The Experience of Selected Asian Countries', IMF Staff Papers, 18(1971), 48-112.

TABLE III.4. Rate of Interest and Non-corporate Saving: Regression Results

1950/51 - 1976/77

$S_{nc} = -602.170 + 0.124Y_{nc} + 41.543r$ ($\bar{R}^2 = 0.825$) (III-4a)
(-2.394) (11.130) (3.161) DW = 2.124

$S_{nc} = -349.843 + 0.0996Y_P + 0.432Y_T + 37.504r$ ($\bar{R}^2 = 0.866$) (III-4b)
(-1.501) (7.733) (3.772) (3.097) DW = 2.126

$S_{nc} = -603.154 + 0.117Y_{nc} + 29.806\frac{(\Delta Y)}{(Y)_{nc}} + 29.533r$ ($\bar{R}^2 = 0.836$) (III-4c)
(-2.480) (10.080) (1.621) (2.007) DW = 2.116

$FS_{nc} = -742.460 + 0.075Y_{nc} + 28.785r$ ($\bar{R}^2 = 0.636$) (III-4d)
(-3.021) (6.884) (2.241) DW = 2.308

1959/60 - 1976/77

$S_{nc} = -289.363 + 0.116Y_{nc} + 54.118r$ ($\bar{R}^2 = 0.697$) (III-4e)
(-0.614) (6.364) (3.072) DW = 2.128

$S_{nc} = -305.192 + 0.092Y_P + 0.592Y_T + 47.773r$ ($\bar{R}^2 = 0.805$) (III-4f)
(-0.808) (5.619) (3.784) (3.348) DW = 2.050

$S_{nc} = -630.673 + 0.108Y_{nc} + 94.683\frac{(\Delta Y)}{(Y)_{nc}} + 36.462r$ ($\bar{R}^2 = 0.831$) (III-4g)
(-1.730) (7.907) (3.595) (2.598) DW = 2.268

$S_{nc} = -333.284 + 0.118Y_{nc} + 53.146r^*$ ($\bar{R}^2 = 0.695$) (III-4h)
(-0.698) (6.360) (3.043) DW = 2.121

$S_{nc} = -336.872 + 0.095Y_P + 0.585Y_T + 46.142r^*$ ($\bar{R}^2 = 0.797$) (III-4i)
(-0.867) (5.523) (3.661) (3.200) DW = 2.027

$S_{nc} = -654.593 + 0.110Y_{nc} + 94.496\frac{(\Delta Y)}{(Y)_{nc}} + 35.196r^*$ ($\bar{R}^2 = 0.827$) (III-4j)
(-1.765) (7.742) (3.527) (2.495) DW = 2.234

where r = Average annual (quarterly average) real rate of interest on scheduled banks' six months to one year time deposits (%)

r^* = Weighted-average annual (quarterly average) real rate of interest on all types of interest bearing deposits with scheduled banks (%)

FS_{nc} = Non-corporate private sector's net saving in financial assets (in real terms)

It will be seen that the coefficient on the real[1] rate of interest is positive and statistically significant in all the regressions reported in Table III.4. The size of the coefficient shows that in quantitative terms as well the relationship between this variable and saving is fairly strong.

[1] The nominal interest rate was also tried but the results were found to be unsatisfactory. The coefficient on the interest rate term was insignificant in all cases. Apart from the theoretical reason that it is the real rate of interest that is the more relevant magnitude in the present context, a statistical reason that seemed to be partly responsible for these results was a high correlation between income and the nominal rate of interest.

Thus equations III-4(a to c) show that an increase (decrease) in the real rate of interest by one percentage point will raise (reduce) total non-corporate saving by 1.5 per cent to over 2 per cent (measured at the mean). This indicates a strong response on the part of savers to changes in the real rate of return on commonly held financial assets such as bank deposits.

It will be noticed that the rate of growth of income becomes insignificant at conventional levels of significance with the inclusion of the interest rate variable in the savings function for the overall period 1950/51 - 1976/77 (equation III-4c). But as we saw earlier, the relationship between saving and income growth appears much stronger if the early 1950s are left out of the estimation. Thus we see that in equations III-4g and III-4j, both the rate of growth of income and the rate of interest are significant at the 5 per cent level and strongly positive.

To carry the above findings a little further by attempting an identification of the transmission mechanism through which changes in interest rates influence saving, we estimated equation III-4a above with the non-corporate private sector's saving in financial assets substituted for the sector's total saving as the dependent variable. The result is shown by equation III-4d. According to this result, an increase (decrease) in the real rate of interest by one percentage point raises (reduces) net non-corporate saving in financial assets by about 3.5 per cent. In proportional terms, the effect is much larger than that seen above in the case of total non-corporate saving. This is what one would normally expect as the real rate of interest is primarily a measure of the real rate of return on financial assets. But the more interesting point to note is that the change in non-corporate saving in financial assets accounts for, in absolute terms, only a part (though a predominant one) of the total change in the sector's saving that takes place as a result of a change in the real rate of interest. A significantly large part of the total is accounted for by a change in the

same direction in the sector's saving in the form of direct investment in real assets. Comparing equations III-4a and III-4d, our estimates show that the latter type of saving accounts for, on average, about 20 per cent of the total change.

In the light of our earlier discussion of the possible effects of interest rate changes on saving behaviour, the following inference about the transmission mechanism may be drawn from the above findings. The positive effect of an increase in the real rate of interest in the economy works primarily on saving in financial assets by raising the real rate of return on such assets. This in turn induces a further increase in saving by increasing the incentives to invest in physical capital assets. Our findings thus lend support to what was referred to above as the McKinnon complementarity hypothesis.[1]

The policy followed in Pakistan has been one of low interest rates. This is shown in Table III.5 which gives the trend in the nominal and real rates of interest on scheduled bank deposits. The table also gives the trend in the rate of inflation which differentiates the nominal and real values.

The nominal rates of interest on bank deposits in the country have in the past been determined by a combination of mutual agreements between the leading scheduled banks and directives from the State Bank of Pakistan. The line of policy pursued has been to keep the rates at low levels, adjusting them upward with time in small discrete steps.[2] The rate of inflation, on

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[1] Supporting evidence for the McKinnon complementarity hypothesis has also been reported by another study relating to Pakistan. Estimating some demand for money functions with data relating to pre-1971 Pakistan (i.e. incl. former East Pakistan), Abe, Fry et al. found that the accumulation of money balances was positively and significantly correlated with the overall level of saving in the economy; see S. Abe, M.J. Fry et al., 'The Demand for Money in Pakistan: Some Alternative Estimates', Pakistan Development Review, 14(1975), 249-57.

[2] The reason why the nominal interest rate series in the table shows an almost continuous rise is that the interest rates used are weighted averages of interest rates on deposits of different maturities within the relevant class of deposits, the weights used being the proportions of total deposits in the respective maturity subclasses. The proportional share of deposits with longer maturities, carrying comparatively higher interest rates, has been rising with time.

TABLE III.5. Interest Rates on Bank Deposits and the Rate of Inflation in Pakistan, 1950/51 - 1976/77

(per cent per annum)

Year	Weighted average nominal rate of interest on scheduled banks' six months to one year time deposits	Rate of inflation = Annual percentage change in the consumer price index	Weighted average real rate of interest on scheduled banks' six months to one year time deposits (2-3)
1	2	3	4
1950/1	1.46	-6.01	7.47
1951/2	1.41	7.84	-6.43
1952/3	1.50	8.45	-6.95
1953/4	1.66	1.71	-0.05
1954/5	1.62	-2.25	3.87
1955/6	1.70	-4.18	5.88
1956/7	1.73	8.57	-6.84
1957/8	2.03	8.57	-6.54
1958/9	2.12	-4.37	6.49
1959/60	2.37	7.04	-4.67
1960/1	2.68	5.74	-3.06
1961/2	2.73	1.81	0.92
1962/3	2.81	-1.51	4.32
1963/4	2.89	5.13	-2.24
1964/5	2.87	4.58	-1.71
1965/6	3.41	2.26	1.15
1966/7	3.65	10.89	-7.24
1967/8	3.84	3.11	0.73
1968/9	4.75	1.08	3.67
1969/70	5.02	5.45	-0.43
1970/1	5.07	4.83	0.24
1971/2	5.06	5.38	-0.32
1972/3	5.65	9.01	-3.36
1973/4	6.72	31.34	-24.62
1974/5	8.24	26.75	-18.51
1975/6	8.84	11.31	-2.47
1976/7	9.14	9.16	-0.02

Sources: Col. 2: Banking Statistics of Pakistan, Karachi, State Bank of Pakistan, various annual issues.
Col. 3: Monthly Statistical Bulletin, Karachi, Statistics Division, Govt. of Pakistan, various issues.

Notes: (a) Annual values shown in Col. 2 are simple averages of the corresponding quarterly figures.
(b) A similar series on scheduled banks' interest bearing deposits of all maturities is also available, but it does not cover the 1950s. However, for the period covered, it shows little change from the general trend indicated by the series shown in the table.

the other hand, has undergone a good deal of fluctuation. Although these fluctuations took place within a low to moderate range of values up to the early 1970s, the low level of nominal interest rates meant that the real return on bank deposits became negative whenever the rate of inflation registered even a moderate increase. Thus out of the twenty-one annual observations for the real rate of interest up to the year 1970/71 shown in the table, as many as eleven are negative. As the rate of inflation jumped to much higher levels in subsequent years, all of the remaining six observations are also negative.

Seen in the light of the fact that the real rate of interest in the country generally remained at low - often negative - levels, the strong correlation between changes in the rate and the level of non-corporate saving indicated by our regression results appears all the more remarkable. It points to a potentially even stronger response on the part of savers in the sector to sizable increases in the real rate of return on commonly held financial assets such as bank deposits. It also shows that by keeping the real return on such assets depressed, the low interest rate policy followed in the country had the effect of keeping non-corporate financial savings much below the level that would have been forthcoming under a more favourable interest rate regime.

III.5. Inflation and Saving.

As in the case of the rate of interest, a priori reasoning does not provide a unique answer to the question whether inflation promotes or discourages saving. A number of channels of influence between the two have been pointed out and elaborated in the literature and a summary of the argument would perhaps be in order here before we present the results of the inclusion of this variable in our analysis.

The case for inflationary finance is built largely on the premise that inflation tends to redistribute income in favour of groups and institutions in the economy with higher propensities to save. Within the

private sector, income is redistributed from wage- and salary-earners to entrepreneurs (because of a lag in the adjustment of wages and salaries to a rising price level) and from creditors/rentiers to debtors (as contracts are generally fixed in nominal terms), thereby placing more resources directly in the hands of investors who are supposed to have higher saving propensities. Thus higher investment financed through monetary expansion at full capacity will generate its own savings as the ensuing inflation directs resources from relatively low savers in the economy to relatively high savers. This is the so-called Keynesian approach to inflationary finance. Further, inflation, being a tax on holding money, also transfers resources from the public to the government (monetary authorities or issuers of money). A larger proportion of the resources thus made available to the government, it is assumed, is channelled into investment projects than would have been saved/invested if these resources had been left with the private sector, thus raising the overall rate of saving in the economy. This is the so-called quantity theory approach to inflationary finance. It is sometimes asserted that even if the propensity to save in the public sector is lower than that in the private sector, the net effect on saving may still be positive because of the generally higher social productivity of public investment which, through a higher rate of growth of income and the latter's beneficial effect on saving, may more than offset the initial disadvantage.[1]

The two types of income-redistribution effects are not mutually exclusive, of course, and an excess-demand inflation is likely to involve both. The effects of inflation on saving, however, are not limited to those emanating

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[1] Under a progressive income-tax structure, inflation may also transfer some resources to the government through higher tax yields at an unchanged level of real income.

from the redistribution of income alone. Inflation may increase saving through the so-called real-balance effect as reflected in the attempts of the holders of money balances and other financial assets to restore the real value of their holdings after an increase in prices. Further, the case for a positive influence of inflation on the propensity to save has frequently been made on the premise that inflation stimulates growth which in turn stimulates saving. Now one way in which inflation can possibly raise the rate of growth is, of course, by first raising the rate of saving by means of, say, redistribution of income. However, the stimulative effect of inflation on growth has been conceived in several other ways as well, and the arguments range from those regarding some inflation as a necessary concomitant of growth (to facilitate the needed structural changes in the economy in the face of existing rigidities) to those attributing to it a more active growth promoting role by pointing to its role in stimulating investment and maintaining the economy at a high level of activity and utilisation of resources.[1] Thus inflation, according to this line of reasoning, can initiate a dynamic process (or a 'virtuous circle') wherein growth and saving reinforce the upward movement in each other.

This is, however, only one side of the picture. On the other we can see several possible effects of inflation that can be detrimental to a country's savings effort. First, the processes outlined above whereby inflation might exert a favourable influence on the propensity to save have some important qualifications. For example, the redistributive effects of inflation noted above are normally associated only with a particular type of inflation, namely excess-demand inflation. Further, even when inflation is of a pure excess-demand variety, there is still no guarantee that the

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[1] For a detailed account of the relationship between inflation and growth in the context of various growth models, see A.P. Thirlwall, Inflation, Saving and Growth in Developing Economies, London, Macmillan, 1974, Chaps. 4 and 6.

redistribution of income from wage-earners to entrepreneurs will take place as this process may be thwarted by a wage-price spiral where wages quickly catch up with price increases. This would happen when inflation ultimately becomes anticipated by the workers in the long run, who would then (especially where there is a strong tradition of trade unionism) bargain for higher money wages in advance of the price increases in order to ensure that inflation does not erode their real value.[1]

Second, it is not clear whether the net effect on saving of income redistribution through inflation will be positive or negative. Whereas the redistribution of income from wages in favour of entrepreneurial incomes may be expected to raise the propensity to save, no such generalisation can be made in the case of the redistribution of income from the private to public sector and the question has to be decided largely on empirical grounds.

Third, insofar as a disproportionately large chunk of loanable funds in the economy is monopolised by a relatively small minority of establishments in big business, inflation may have a detrimental effect on the overall propensity to save by penalising a large proportion of savers in the population, who are the source of these funds, for the benefit of a handful of vested interests.

Fourth, the revenue accruing to monetary authorities from the inflation tax will tend to decline as the tax becomes increasingly burdensome with a rising rate of inflation and the public responds by cutting down its holdings of money balances, thus narrowing the base on which the tax operates. This results in reducing the amounts that the public would otherwise have saved voluntarily in the form of real cash balances.

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[1] However, the bulk of empirical evidence shows that the wage-price coefficient has typically been less than unity, even in the long run. This is particularly true in the case of developing countries where trade union activity is generally weak in strength and limited in scope. For a sample of the evidence, see ibid., p. 25.

Fifth, a rising price level discourages voluntary saving not only in the form of cash balances but also in the form of various other types of financial assets by reducing the expected real rate of return thereon. This has further serious implications for savings if financial savings are considered to be complementary with physical investments, as they are in the McKinnon model.

Sixth, saving and investment may also be affected adversely by a rapid inflation as resources are diverted from productive investment channels into such activities as speculation, hoarding of stocks, purchase of real estate, overseas assets, etc. This process is provided with further fuel by an environment of economic uncertainty created by a rapidly changing price level.

Finally, instead of promoting saving through stimulating growth, inflation may have the effect of retarding growth and thus depressing saving in a dynamic sequence. In the face of resource shortages and supply inelasticities that are so characteristic of developing countries, Keynesian-type inflationary policies may have the effect of raising real output a little but raising prices a lot. The ensuing inflation may more than offset these marginal increments in real output through its adverse effect on voluntary saving and by diverting resources away from productive channels of investment, thus retarding growth in the economy.

It is clear from the above that the net effect of inflation on saving can be either positive or negative depending on the particulars of the case in question. This is one major reason why empirical work on the subject has in several cases yielded inconclusive results, though in a majority of the studies the relationship between saving and inflation has been found to be negative. The inconclusive nature of the results is particularly characteristic of studies that have used cross-country data. Given the variety of conditions in different countries associated with any given rate of inflation, conditions that have an important bearing on the relationship

being tested, it is not surprising that most of these studies have yielded rather poor results. This becomes evident when we consider that the same rate of inflation can be associated with different types of inflation in different countries, with different supply responses, with different speeds of adjustment to inflation, etc., etc. This is also reflected in the fact that studies that have used time-series data on individual countries have generally reported comparatively much better results.[1]

Against this background we now examine the results yielded by our set of data. The coefficient on the rate of inflation turns out to be negative and highly significant when the variable is introduced into the non-corporate sector's savings function, as the regression estimates given in Table III.6 indicate. It will be seen that this is true in the case of all the three different functional formulations shown by equations III-6(a to c).[2] The estimates indicate that the impact of inflation on non-corporate saving has been negative on balance. The values of the coefficients show that changes in the rate of inflation have a fairly strong quantitative effect on saving. A rise in the rate of inflation by one percentage point

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1 For examples of studies using cross-country data, see Williamson (1968), op. cit.; Thirlwall, op. cit., and Abe, Fry et al., op. cit. For examples of studies using time-series data on individual countries, see R.K. Diwan, 'The Effect of Prices on Savings', Economic Development and Cultural Change, 16(1967-68), 430-35; K.L. Gupta, 'Personal Saving in Developing Nations: Further Evidence', Economic Record, 46(1970), 243-9; K.L. Gupta, 'The Effect of Prices on Savings: Comment', Economic Development and Cultural Change, 20(1971-72), 330-37; and Brown, op. cit.

2 The growth rate variable appears insignificant (at conventional levels) in equation III-6c. However, we have seen that this variable gives much better results if we leave out the 1950s over which the rate of income growth was generally low. Thus both this variable and the new variable are highly significant and quantitatively strong in the following equation estimated for the period 1959/60 - 1976/77.

$$S_{nc} = \underset{(-1.907)}{-717.224} + \underset{(7.390)}{0.119Y_{nc}} + \underset{(3.408)}{92.443(\Delta Y)_{nc}} - \underset{(-2.491)}{35.445\Delta P} \qquad \bar{R}^2 = 0.827, \; DW = 2.253$$

TABLE III.6. Inflation and Non-corporate Saving: Regression Results

1950/51 - 1976/77

$$S_{nc} = \underset{(-2.724)}{-697.143} + \underset{(10.750)}{0.136Y_{nc}} - \underset{(-2.292)}{42.078\,\frac{\Delta P}{P}} \qquad \bar{R}^2 = 0.829 \text{ (III-6a)}, \quad DW = 2.148$$

$$S_{nc} = \underset{(-1.812)}{-438.796} + \underset{(7,512)}{0.111Y_P} + \underset{(3.680)}{0,425Y_T} - \underset{(-3.069)}{37,185\,\frac{\Delta P}{P}} \qquad \bar{R}^2 = 0.866 \text{ (III-6b)}, \quad DW = 2.146$$

$$S_{nc} = \underset{(-2.682)}{-670.728} + \underset{(9.031)}{0.126Y_{nc}} + \underset{(1,502)}{27.969\,\frac{(\Delta Y)}{(Y)_{nc}}} - \underset{(-2.072)}{30,422\,\frac{\Delta P}{P}} \qquad \bar{R}^2 = 0.838 \text{ (III-6c)}, \quad DW = 2.133$$

$$FS_{nc} = \underset{(-3.154)}{-800.804} + \underset{(6.584)}{0.082Y_{nc}} - \underset{(-2.209)}{28.010\,\frac{\Delta P}{P}} \qquad \bar{R}^2 = 0.634 \text{ (III-6d)}, \quad DW = 2.293$$

where $\frac{\Delta P}{P}$ = Annual percentage increase in the consumer price index

is indicated to reduce savings by about 1.5 per cent to over 2 per cent (measured at the mean). This points to a remarkable similarity between the estimated coefficients on the real rate of interest and the rate of inflation. Comparing equations III-4(a to c) with equations III-6(a to c), we see that the two sets of coefficients are very similar. This is not a surprising result considering that changes in the real rate of interest in the country have to a large extent been determined by changes in the rate of inflation (see Table III.5). This has been so because, as we saw in the last section, the policy-determined nominal interest rates were allowed to increase only gradually in small discrete steps while the rate of inflation fluctuated a good deal. Another inference that can be drawn from this result is that a large part of the adverse effect of inflation on saving has been transmitted through its effect of lowering the real rate of return on financial assets. As we saw in Chapter II, these assets account for a substantial proportion of the total annual saving in the sector and their importance has been increasing with time, not only in terms of their relative position in the sector's savings-portfolio but also in terms of the proportion of the population holding or willing to hold such assets. Further, insofar as the accumulation of financial assets serves as a conduit for real capital accumulation, the adverse effect may not remain confined

to the former alone. Thus it seems that by depressing the real return available to investors on various types of financial assets, and by increasing the opportunity cost of accumulating cash balances for future real investment, inflation had a strong unfavourable effect on saving in the sector which substantially outweighed any possible favourable effects that it may also have generated.

The same point emerges more forcefully when, as in the previous section, the savings function is estimated with non-corporate saving in financial assets as the dependent variable in place of total non-corporate saving. The regression estimate is given by equation III-6d. The absolute values of the coefficients on the rate of inflation and the real rate of interest remain remarkably similar (cf. equations III-4d and III-6d). As in the case of the latter, the effect of the former appears to work primarily through saving in financial assets, though the direction of the effect is now, of course, reversed. The depressing effect on saving in financial assets is accompanied by a similar, though quantitatively smaller, effect on saving in the form of direct investment in real assets. This corroborates the inference drawn above regarding the transmission mechanism accounting for a large part of the adverse effect that inflation had on saving in the country.

A point that may be raised here is that at the rates of inflation that prevailed in the country for most of the time during the period under consideration, inflation was never really employed as a strategy for promoting saving and growth. Now it is true that excluding the 1970s, the rate of inflation in the country only once exceeded 10 per cent per annum. In most other years it hovered around 5-6 per cent per annum (see Table III.5). But the important consideration to note is that it is not only the absolute level of the rate of inflation that is relevant from the point of view of the strategy in question; this rate has to be seen in relation to the other relevant variables and conditions in the economy which were examined earlier

and which have a determining influence on the mechanics of this strategy. As we saw then, the strategy of inflationary financing of development sets much store by the redistributive effects of inflation in favour of the entrepreneurial classes to realise its growth and savings objectives. Whether inflation succeeds in redistributing resources to the favoured groups or not depends not only on the absolute rate of inflation but also on, inter alia, such factors as what happens to money wages (for redistribution from workers) and the level of interest rates (for redistribution from creditors). There is a good deal of evidence which shows that during the period of low to moderate rates of inflation (absolute), real wages either stagnated or rose very little as compared with the general growth in profitability and incomes in the economy. Some studies have reported that they fell absolutely.[1] Further, as we have noted already, nominal interest rates in the economy were kept at such low levels that even at these relatively low rates of inflation, the real return available to the suppliers of loanable funds was generally either negative or extremely low as compared with the rates of profit on physical investments financed by these funds. Thus we see that although the rate of inflation remained relatively low over most of the period under consideration, the rise in prices was accompanied by a transfer of resources in favour of the capitalists as real wages and real interest rates stagnated. We may also add that redistribution of income in favour of this class, especially the richer ones in this class, through this process was but one among several ways of doing so. This end was also pursued, directly or indirectly, through a host of other processes and government policies. We shall comment on these processes and policies in greater detail in Chapter V and also examine the question as to why the rate of saving failed to rise significantly,

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[1] See, for example, A.R. Khan, 'What has been Happening to Real Wages in Pakistan', Pakistan Development Review, 7(1967), 317-47.

as predicted by the theory, despite this transfer of resources in favour of groups that are supposed to have higher saving propensities.

Another point that may be raised here is that to assess fully the effect of the income redistributive consequences of inflation, we should look at the whole of the private sector (including the corporate sector), nay, at the whole of the economy so as to incorporate the composite effect on saving of redistribution of income both within the private sector as well as from the private to the public sector. To see if the substitution of total private sector saving or total national saving in place of total non-corporate saving as the dependent variable made any significant difference to the relationships estimated above, we re-estimated equation III-6a over the same period after making the necessary substitutions. There was little change in the results as the coefficients on the rate of inflation remained negative and strongly significant.[1] Indeed, this is what should be intuitively obvious in the case of Pakistan. If an economic variable exerts a strong and highly significant negative effect on saving in the non-corporate private sector which accounts for nearly four-fifths of the total annual saving in the economy, it is difficult to imagine that its effect on saving in the economy as a whole can be positive.

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[1] The results obtained were as follows:

(i) $S_{pr} = \underset{(-3.174)}{-848.118} + \underset{(11.840)}{0.154Y_{pr}} - \underset{(-3.150)}{42.356}\ \frac{\Delta P}{P}$ $\quad \bar{R}^2 = 0.859$, $DW = 2.114$

(ii) $S_{n} = \underset{(-2.802)}{-741.269} + \underset{(12.770)}{0.146Y_{n}} - \underset{(-4.407)}{59.390}\ \frac{\Delta P}{P}$ $\quad \bar{R}^2 = 0.868$, $DW = 1.483$

where S_{pr} and Y_{pr} are saving and disposable income respectively in the overall private sector (i.e. non-corporate private sector plus corporate sector), and S_n and Y_n are national saving and national income respectively (all in real terms).

In fact, the negative effect of inflation on saving increases in quantitative terms when national saving is used as the dependent variable. Thus (ii) shows that now an increase in $\frac{\Delta P}{P}$ by one percentage point reduces saving by about 2.5 per cent as compared with about 2 per cent in the case of the comparable equation for the non-corporate sector (measured at the mean), suggesting that the transfer of resources from the private to public sector through the inflation tax tended to accentuate the adverse effect of inflation on saving.

We also ran some regressions using a quadratic relationship between the rate of saving and the rate of inflation, both at the sectoral and national levels. The rationale underlying this formulation is that whereas a relatively mild rate of inflation may promote saving, at higher rates the negative effects outweigh the positive effects so that saving is adversely affected.[1] However, no useful results were obtained. Although the coefficients on the two price terms, i.e. $\frac{\Delta P}{P}$ and $\frac{(\Delta P)^2}{(P)}$, had the predicted signs, the positive coefficient (on $\frac{\Delta P}{P}$) was always statistically insignificant. As the results did not represent a significant improvement over the simple linear models considered above (as indicated by the F-test), they are not reported here.

III.6. Financial Growth and Saving

The significance of the real rate of return on financial assets in the non-corporate savings function noted above points to the importance of these assets in the process of saving and accumulation in the sector. In this section, we focus on this relationship and examine some more direct evidence on the matter.

We have already commented on the role played by financial asset accumulation in the process of real capital accumulation in the context of the McKinnon model. We have seen that our results for the non-corporate sector appear to support the hypothesis of complementarity between the two types of asset accumulation (see Section III.4). However, the transmission mechanism envisaged by the said hypothesis is not the only one through which financial growth can contribute to raising the level of saving in an economy, nor is the McKinnon model the only piece of work in economics that highlights the role of financial growth in the process of saving and development. There is a large body of economic literature that lays a good

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[1] See Thirlwall, op. cit., for a test of this formulation using cross-country data.

deal of emphasis on this process.[1] Financial growth in developing countries is seen to contribute to raising the level of saving in several ways. The main points in the argument may be set out briefly as follows.

First, financial development, as reflected in the growth of financial assets in an economy, extends the boundaries of the monetised sector in the economy. This has the effect not only of exploiting further the economies associated with the use of financial instruments as mediums of exchange and stores of value but also of enlarging the area over which various types of fiscal and monetary stimuli can play their role more effectively.

Second, saving in economies characterised by underdeveloped financial systems is constrained by a dearth of attractive instruments of saving. This is particularly true of (though in no case limited to) those sections of an economy, generally referred to as small savers, which either by vocation or tradition, e.g. the salaried middle class, or by special economic circumstances or resource constraints, e.g. wage-earners, do not normally invest directly in physical capital assets. The growth of financial assets can promote saving in these circumstances by making available a larger variety of safer and more profitable outlets to potential savers. This effect is stronger in the case of relatively backward areas of the economy, e.g. rural areas, where facilities for saving in financial assets were

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[1] See, for example, H.P. Patrick, 'Financial Development and Economic Growth in Underdeveloped Countries', Economic Development and Cultural Change, 14(1965-66), 174-89; J.G. Gurley and E.S. Shaw, 'Financial Structures and Economic Development', Economic Development and Cultural Change, 15(1966-67), 257-68; R.W. Goldsmith, Financial Structure and Development, New Haven, Yale University Press, 1969; E.S. Shaw, Financial Deepening in Economic Development, New York, Oxford University Press, 1973; and, W.T. Newlyn, The Financing of Economic Development, Oxford, Oxford University Press, 1977.

previously either very limited or completely non-existent. In these areas, the availability of attractive alternative assets can raise not only the level of savings but perhaps also the productivity of savings through inducing the households to shift a part of their savings from such assets as gold and jewellery to the new assets. In this way, the growth and dispersion of financial assets and the institutional framework that goes with them can promote saving in the economy both by broadening the base of the process of saving and accumulation and by diversifying this process.

Third, the growth of saving in the form of financial asset accumulation has the effect of increasing the volume of the pool of surplus investible funds in the economy. Combined with an efficient allocation of these funds, through a well developed system of financial intermediation, this can impart a stimulus to saving by making resources available to those parts of the economy where the savings effort was being thwarted by a lack of complementary external funds needed for investment. This role of financial growth becomes increasingly important with time in developing economies. The need for external finance grows rapidly as the productive process expands and becomes more specialised, requiring an ever increasing flow of funds to realise the growth possibilities made available by the introduction of new techniques of production. The availability of external finance through financial intermediation helps remove the constraints imposed on this process of accumulation by the limitations of self-finance. Thus financial growth promotes saving not only through making available more attractive savings instruments to the purchasers of such instruments but also through releasing resources that otherwise would probably have been locked in relatively unproductive self-use to flow to other parts of the system where these were needed to relieve the constraint of self-finance on saving and investment.

Fourth, the growing flow of investible funds in an economy brought about by financial asset accumulation in the household sector contributes to raising the productivity of investment by breaking sectoral bottlenecks and making resources flow into more profitable channels of investment over a large area and range of activities. The increase in the productivity of investment should in turn encourage saving. The effect would be greater with a wider dispersion of the investible funds to benefit previously neglected areas such as rural agriculture and small businesses where some highly profitable investment opportunities remain unexploited because of lack of funds. This has the additional effect of helping to keep the process of accumulation away from the narrow confines of an enclave-type development and make it proceed along a much wider front. To the extent the greater productivity of investment and a more broad-based developmental advance help raise the rate of growth of income in the economy, there is an additional stimulus to saving.

There is a growing body of econometric evidence that supports the views expressed above. For example, Hooley[1] has shown that personal savings in the Philippines have been positively and strongly influenced by the increasing share of financial assets in household asset-portfolios. Similarly, in a study of a large number of developing countries, using both time-series as well as cross-country data in pooled regressions, Tun Wai[2] has reported a strong positive correlation between the extent of saving in financial assets and the level of total saving. He concludes that financial growth imparts a strong stimulus to the savings effort in these countries. This is supported by the results reported by Christian and Pagoulatos[3] in another

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[1] R.W. Hooley, Saving in the Philippines, 1951-60, Quezon City, Institute of Economic Development and Research, University of the Philippines, 1963.

[2] U. Tun Wai, Financial Intermediaries and National Savings in Developing Countries, New York, Praeger, 1973.

[3] J.W. Christian and E. Pagoulatos, 'Domestic Financial Markets in Developing Economies: An Econometric Analysis', Kyklos, 26(1973), 75-90.

study based on data relating to a large number of developing countries. Their results show a highly significant positive relationship between the level of financial development and the rate of saving/capital formation.[1]

These studies thus supply evidence which indicates that the asset-structure of household saving plays a significant role in determining the sector's propensity to save. A higher proportion of financial assets in the structure has a positive influence on saving as it implies a proportionally greater play in the economy of the savings-promoting mechanisms noted above.

In order to see how financial accumulation has been related to saving in Pakistan, we tried the ratios $\frac{(FS)}{(S)_{nc}}$ and $\frac{M_2}{Y_n}$ as two quantitative measures of the former. The ratio $\frac{(FS)}{(S)_{nc}}$ stands for non-corporate saving in financial assets expressed as a percentage of the sector's total saving. Since the ratio tends to rise with growth in the financial structure, it provides a simple measure to capture the latter and its effect on non-corporate saving. The ratio $\frac{M_2}{Y_n}$ stands for total monetary assets, i.e. currency plus bank deposits (including time deposits), expressed as a percentage of gross national income. According to McKinnon, this provides a good measure of the importance or 'real size' of the financial system in an economy.[2] Both these measureswere inserted into the non-corporate savings function in place of the real rate of return on financial assets, i.e. the real rate of interest on bank deposits. Earlier we found a strong positive correlation between the latter and non-corporate saving. We reasoned that this pointed to the importance of financial asset accumulation in the process of saving.

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[1] See also R.C. Vogel and S.A. Buser, 'Inflation, Financial Repression and Capital Formation in Latin America', in R.I. McKinnon (ed.), Money and Finance in Economic Growth and Development: Essays in Honor of Edward S. Shaw, New York, Dekker, 1976.

[2] McKinnon (1973), op. cit., p. 91.

The use of quantitative measures representing financial growth in the economy in the regression models in place of the rate of return variable is meant to put this proposition to a direct test. It it is correct, one would predict a strong positive correlation between these measures and saving. The regression results are reported in Table III.7.

It will be seen that both measures are significantly related to saving. The magnitude of the relevant coefficients indicates that the relationship is not only statistically significant but is also quantitatively strong. This remains true when the saving ratio is substituted for the absolute level of saving as the dependent variable. The ratio $\frac{M_2}{Y_n}$ gave somewhat better results than did the ratio $\frac{(FS)}{(S)_{nc}}$ and, for this reason, most of the results reported in the table include the former.

These results provide strong support to the argument set out in this section. An increase in the twin measures used signifies an increase in the role of financial asset accumulation in the overall process of accumulation, that is an increase in the importance of financial assets in the asset-structure of saving. This is what Shaw terms 'financial deepening'.[1] The results show that at any given level of income, this has an appreciable positive effect on total saving in the non-corporate sector. Thus financial growth has been positively and significantly related to saving in Pakistan. Years which saw a relative acceleration in financial growth also saw relatively larger increases in total non-corporate saving. By the same token, policies that had the effect of arresting financial growth exercised an adverse influence on saving.

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[1] Shaw, op. cit., p. 7.

TABLE III.7. Financial Growth and Non-corporate Saving: Regression Results

1950/51 - 1976/77

$S_{nc} = -700.716 + 0.103Y_{nc} + 12.572 \frac{(FS)}{(S)_{nc}}$ $(-2.304)\ (8.331)\ (1.988)$	$\bar{R}^2 = 0.787$ $DW = 1.555$	(III-7a)
$S_{nc} = -3298.26 + 0.064Y_{nc} + 131.477 \frac{M_2}{Y_n}$ $(-2.908)\ (2.993)\ (2.603)$	$\bar{R}^2 = 0.807$ $DW = 2.216$	(III-7b)
$S_{nc} = -2438.9 + 0.075Y_{nc} + 36.237 \frac{(\Delta Y)}{(Y)_{nc}} + 89.247 \frac{M_2}{Y_n}$ $(-2.131)\ (3.613)\ (2.051)\ (1.726)$	$\bar{R}^2 = 0.829$ $DW = 2.057$	(III-7c)
$\frac{(S)}{(Y)_{nc}} = -3.052 - 0.006Y^*_{nc} + 0.487 \frac{M_2}{Y_n}$ $(-0.929)\ (-0.639)\ (2.601)$	$\bar{R}^2 = 0.306$ $DW = 1.704$	(III-7d)
$\frac{(S)}{(Y)_{nc}} = -0.787 - 0.005Y^*_{nc} + 0.187 \frac{(\Delta Y)}{(Y)_{nc}} + 0.370 \frac{M_2}{Y_n}$ $(-0.262)\ (-0.601)\ (2.802)\ (2.170)$	$\bar{R}^2 = 0.460$ $DW = 1.483$	(III-7e)

We have already seen that the accumulation of financial assets by the non-corporate sector showed a strong and positive response to changes in the real rate of return on these assets. The policy actually followed in Pakistan was, however, one that kept the real rate of return on the most important financial asset in savers' asset-portfolios, namely bank deposits, low. The unmistakable conclusion to be drawn from the above results is that this policy had a serious adverse effect on saving in the sector. By checking saving in the form of financial asset accumulation and, hence, by arresting financial growth, it obstructed the working of the various savings-promoting mechanisms associated with financial growth that we noted above. That these mechanisms were working in the hypothesised direction is borne out by the strong positive correlation between financial growth and saving that we have found. The policy followed in the country was, however, such that the contribution these mechanisms could make to raising saving was not fully realised.

We shall return to the above and other results presented and analysed in this chapter in our concluding discussion in Chapter V and examine carefully their implications for public policy for the promotion of savings in the economy.

CHAPTER IV

CORPORATE SECTOR SAVING BEHAVIOUR: PRINCIPAL DETERMINANTS

Corporate saving behaviour has received considerably less attention from economists than has personal saving behaviour. The reasons for this appear to be both theoretical and statistical. On the theoretical side, the relative neglect of corporate saving behaviour appears to reflect the somewhat uncertain status of the corporation as a separate behavioural entity in much of early economic theory. Keynes' General Theory, which may be regarded as constituting the take-off point for serious theoretical and empirical research into the savings function, mainly emphasised personal saving behaviour, although it did note some possible differences in the motives for saving between individuals and business entities.[1] It was not until the mid-1950s that savings or dividend functions relating to the corporate sector came to be formulated and tested on a large scale. On the statistical side, the vagaries of accountants' definitions and variability in accounting procedures made economists remain for long rather suspicious of the relevance, reliability and comparability of company accounts. As a result, although corporate accounts have been available for a fairly long time, their use in empirical economic research is of a relatively recent origin.

However, with the gradual development of the relevant theoretical apparatus and the availability of improved and standardised corporate data, a sizable literature has emerged on the subject over the last couple of decades. The findings of this literature regarding the factors that exercise a determining influence on the corporate dividend and saving behaviour, and the existence of important differences between these factors

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[1] J.M. Keynes, The General Theory of Employment, Interest and Money, New York, Harcourt, Brace and Company, 1936, Chap. 9.

and those relevant in the case of personal saving behaviour, have been duly recognised and incorporated into theoretical and empirical work. The literature on economic growth theory is a case in point, where the distinction between personal and business saving behaviour has been recognised in several models and separate functional equations provided for each. A number of macro-econometric models have included separate equations for personal and corporate saving.

Research on corporate saving behaviour is important for several reasons. First, the nature of the corporate savings function has important implications for business cycle theory and policy. This information is needed to determine what impact corporate policy with respect to appropriation of profit has on the stability of the economic system and which public policy instruments have greater effectiveness in influencing the same. Findings such as the ones that show that the relationship between changes in corporate saving and corporate income is high as compared with that between changes in personal saving and personal income, and that the corporate saving to income ratio tends to rise in booms and fall in recessions (or that it is higher in the short run than in the long run), have been included in several business cycle models. Second, in connection with longer-term problems, corporate saving behaviour has an important bearing on both the pattern and pace of economic growth. It is intimately connected with growth related questions such as the mobilisation of savings in an economy, the trade-offs involved between corporate and personal saving and the relationship between saving flows and the pattern of investment. Finally, corporate saving and dividend policies raise questions regarding their impact on the efficiency of resource allocation. A study of this aspect of corporate behaviour constitutes an important element in the information needed to appraise the question of how the financing of investment through high corporate retention compares, in terms of the efficiency with which resources are employed, with financing by means of funds channelled through the capital market.

Clearly, the above applies with much greater force to advanced industrialised economies where the corporate sector plays a far greater role in the functioning of the economic system than it does in developing economies. However, as we saw in Chapter II in the case of Pakistan, this sector has tended to grow quite rapidly. It is, therefore, important for purposes of policy formulation in developing countries that adequate information became available so that future corporate growth could be regulated along lines which enable it to make a bigger contribution to the process of development.

As was noted in Chapter III in the case of household saving behaviour, research in Pakistan into matters connected with corporate saving behaviour (or, more generally, corporate policy with respect to the appropriation of profit) has also been minimal, nay, almost non-existent. Only a couple of studies in the country can be pointed out as belonging to this area of research and even these have been concerned mainly with the construction and presentation of relevant corporate statistics rather than with any systematic behavioural analysis. These include studies by Haq and Baqai, and Amjad.[1] A few other studies also exist that deal with the country's corporate sector but their focus is on issues such as industrial concentration and profitability, and the behavioural relationships that we are primarily interested in here are only of subsidiary concern to them. In this category may be placed studies by Amjad and White.[2]

In view, then, of the lack of relevant previous research, an attempt at a systematic analysis of corporate saving behaviour in the country has been made in this chapter. The material in the chapter is organised as follows. Section IV.1 presents a summary exposition of the theoretical and empirical literature in the field of corporate profit appropriation

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[1] Haq and Baqai, op. cit., and Amjad (1973), op. cit.

[2] R. Amjad, Industrial Concentration and Economic Power in Pakistan, Lahore, South Asian Institute, Punjab University, 1974; L.J. White, Industrial Concentration and Economic Power in Pakistan, Princeton, Princeton University Press, 1974; and R. Amjad, 'Profitability and Industrial Concentration in Pakistan', Journal of Development Studies, 13(1976-77), 181-98.

policy and highlights some of the major behavioural hypotheses and findings. Section IV.2 deals with the data base that we have used in testing some of these hypotheses. Finally, the empirical results obtained are presented and analysed in Section IV.3.

Before we get to the next section, however, it may not be out of place to say a few words about the gulf that appears to exist between economic theory based on traditional neo-classical assumptions on the one hand and the findings of many empirical studies of corporate dividend and saving behaviour on the other, and about the factors that serve to bridge this gulf. According to the former, the distribution of corporate or, in general, business profits between dividends and retained earnings is indeterminate. This is based on the notion that the cost of capital to a firm is independent of the source of finance. It then follows that firms' investment decisions are independent of whether they finance investment from internal or external funds and, in turn, that there is no theoretically determinate way in which they may be thought of distributing their profits between dividends and retained earnings. Thus, for example, Modigliani and Miller have observed that in the corporate investment policy 'the division of the stream [of profits] between cash dividends and retained earnings in any period is a mere detail'.[1] In a similar context, F. and V. Lutz have observed that 'dividend policy ... is not a question about which economic logic has much to tell us. We may best consider it as a datum',[2]

A number of empirical studies relating to different countries have, in contrast, found some systematic relationships between corporate dividend and saving behaviour and other variables such as profits, investment demand, taxation, etc. This evidence, which is examined in the following section,

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[1] F. Modigliani and M.H. Miller, 'The Cost of Capital, Corporation Finance and the Theory of Investment', American Economic Review, 48(1958), 261-97, p. 266.

[2] F. and V. Lutz, The Theory of Investment of the Firm, Princeton, Princeton University Press, 1951, p. 165.

suggests that firms do not in practice have an indifferent attitude towards the question of the distribution of profits between dividends and retained earnings,[1] and are subject to some identifiable systematic influences in the formulation of their policies.

This conflict between traditional theory and empirical findings has been noted in several studies of corporate behaviour[2] and all of these have argued that it can easily be reconciled if some restrictive assumptions underlying the traditional theory are relaxed so as to make them correspond more accurately to the conditions that actually obtain in financial markets. We have noted above that the indeterminacy of corporate dividend and saving behaviour in the traditional theoretical model is premised on the notion that the cost of finance is independent of the source of finance. This notion is underlain by several standard neo-classical assumptions such as zero cost of financial transactions, no differences in the tax treatment of different sources of finance, etc. which deviate substantially from actual conditions in financial markets. It has been argued that factors such as these which are assumed away in the theory are important in real life and make for significant differences between the actual costs to firms of internal and external finance. Factors such as managements' risk preferences with respect to financing methods work in the same direction by creating differences in costs imputed by firms to internal and external finance. The combined effect of these factors and other possible imperfections and institutional constraints in the financial markets is to make internal finance a cheaper source of funds to firms than external finance such that the marginal cost of funds (actual plus imputed costs)

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[1] For otherwise this distribution would behave randomly over time and across firms, and would not exhibit any systematic relation with factors such as the ones mentioned above, except fortuitously.

[2] See, for example, D.C. Smith, 'Corporate Saving Behaviour', The Canadian Journal of Economics and Political Science, 29(1963), 297-310; J.A. Brittain, Corporate Dividend Policy, Washington D.C., The Brookings Institution, 1966; and N.D. Baxter and J.G. Cragg, 'Corporate Choice Among Long-Term Financing Instruments', Review of Economics and Statistics, 52(1970), 225-35.

rises significantly as they move from the former to the latter.[1] It follows, the argument continues, that an optimal way of financing a firm's operations may exist or, in other words, that the question of the distribution of profits between dividends and retained earnings is not indeterminate. What this optimum is or how profits are distributed in any given situation will depend on several factors which influence both the supply of funds to the firm and its demand for them. The former set of factors will comprise factors such as internal cash flow or profits and the cost and availability of external finance while the latter will comprise factors such as the firm's requirements for funds for investment, accumulation of reserves and dividend disbursal. To these factors we now turn.

IV.1. A Brief Review of the Literature

The basic variable determining corporate saving is corporate profit. Net corporate profit is disposed of either as dividends or as retention in business, i.e. savings. Thus the profit variable in the corporate retention (savings)/dividend function is the analogue of the personal disposable income variable in the personal savings/consumption function.

The simplest corporate savings function tried in the empirical literature posits a linear functional dependence of corporate saving on current corporate profit. Profit being the basic determinant of corporate saving, this simple function has yielded fairly good results in several studies by explaining a sizable proportion of the total variation in the dependent variable. However, more complex models have also been developed and tested in the literature, incorporating several additional explanatory

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[1] For a detailed discussion of how these factors result in a preference on the part of managements for internal over external finance, see J.S. Duesenberry, Business Cycles and Economic Growth, New York, McGraw-Hill, 1958, Chap. V; R. Eisner and R.H. Strotz, 'Determinants of Business Investment', in Impacts of Monetary Policy, op. cit.; Smith, op. cit.; and M.K. Evans, Macroeconomic Activity: Theory, Forecasting and Control; An Econometric Approach, New York, Harper and Row, 1969, Chap. 4. It may be noted that Modigliani and Miller themselves hinted in their original paper that factors such as those mentioned above 'would do much to reconcile' the apparent conflict between their theoretical propositions and the empirical findings on corporate dividend and saving behaviour (op. cit., p.293).

variables. These have in general added substantially to the explanatory power of the simple model based solely on current profit.

Among these relatively more sophisticated models, one that has attracted a good deal of attention and has been relied upon repeatedly in the empirical literature is the partial adjustment model proposed by Lintner.[1] Based on the results of his interviews with the managements of a sample of companies in the United States, Lintner put forward the following model of corporate dividend behaviour:

$$D - D_{-1} = a + c\,(D^* - D_{-1}) + u \qquad \text{(IV-1)}$$

where $D^* = rP$; D and P stand for dividends and post-tax net profit respectively and u is a stochastic error term.

The model pictures companies as having a 'target' (dividend) pay-out ratio, r, which applied to current profit determines the amount of dividend that they would ideally like to pay out of the current profit. Thus, if dividends were always fully adjusted to changes in profits, they would change by $(D^* - D_{-1})$ between periods t - 1 and t. However, companies generally have a bias against making large and rapid revisions in dividend payments, which means that dividends are adjusted only partially to the desired level during any single period. The magnitude of the partial adjustment is given by the 'speed-of-adjustment' coefficient 'c'. The constant 'a' in the relation is hypothesised to have a positive sign, reflecting a greater reluctance on the part of companies to reduce dividends than to raise them.

The bias against making large and rapid changes in dividend disbursals, according to Lintner, stems from the generally cautious policies followed by company boards. Dividends are only partially adjusted to the level warranted by the current financial position of the company because managements believe that shareholders desire dividend stability and hence avoid making

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[1] J. Lintner, 'The Determinants of Corporate Saving', in W.W. Heller et al. (eds.), Savings in the Modern Economy, Minneapolis, University of Minnesota Press, 1953; and J. Lintner, 'Distribution of Incomes of Corporations Among Dividends, Retained Earnings and Taxes', American Economic Review, 46(1956), 97-113.

any changes that may have to be reversed in a year or so. Further partial adjustments can take place in subsequent years if still warranted. This partial adjustment process has the advantage that a cushion of reserves is left with the company should profits later begin to decline. Elements of psychological and institutional inertia and general conservatism in management policies contribute to this behavioural pattern. Lintner was vague, however, on the role of various factors which influence the target pay-out ratio.

For estimation purposes, Lintner reduced relation IV-1 to the following form:

$$D = a + b_1 P + b_2 D_{-1} + u \qquad \text{(IV-2)}$$

where $b_1 = cr$ and $b_2 = 1 - c$.

It should be noted that the coefficients in the above relation can also be interpreted in terms of short- and long-run responses. The coefficient b_1 (=cr) may be regarded as indicating the 'short-run propensity to distribute' since it measures the change in current dividends in response to a unit change in current profits. If the unit change in profits is maintained, the total or long-run response of dividends is given by the expression

$$b_1(1 + b_2 + b_2^2 + b_2^3 \ldots\ldots) = b_1/(1-b_2) = r \qquad \text{(IV-3)}$$

which may be regarded as the 'long-run propensity to distribute'.

A similar estimating relationship was employed by Dobrovolsky, though with a somewhat different behavioural rationale. He added lagged dividends to the current profit variable to allow for relatively stable 'dividend requirements'.[1] Among the factors promoting dividend stability, Dobrovolsky emphasised the notion that capital markets place a premium on

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[1] S.P. Dobrovolsky, Corporate Income Retention, New York, National Bureau of Economic Research, 1951.

corporate stocks with a relatively stable dividend record. Since only a part of the growth in corporate assets is financed from income retention and the remainder financed from funds raised externally through borrowing and sale of corporate stock, managements are careful not to affect unfavourably the confidence of potential new creditors and investors by large variations in declared dividends. Another factor mentioned in this regard was the desire on the part of managements to retain present control over their enterprises and their fear that large fluctuations in dividend yields might produce a strong opposition from shareholders and a closer scrutiny of their decision making. Dobrovolsky posited that since companies were, as a result of such considerations generally reluctant to change their dividend policy abruptly, the dividend paid during the preceding period could be taken as an approximation of the 'dividend requirements' for the current period. Using retained earnings, R, rather than dividends as the dependent variable, his estimating equation was of the following type:

$$R = a + b_1 P + b_2 D_{-1} + u \qquad \text{(IV-4)}$$

which is similar to Lintner's estimating equation, save for the substitution of R for D.

There are other behavioural rationales that also lead to an estimating relation involving lagged dividends similar to that employed by Lintner (equation IV-2). These focus on uncertainties about profits in the future and the discounting of currently available information in companies' interpretation of current changes in profit levels, and posit that companies tend to base their dividend policy on expected rather than current profits. In some studies, expected profits have been approximated by taking an average of past profits in a geometric lag scheme. This formulation reduces to equation IV-2 when simplified via the Koyck transformation

It has, for example, been employed by Prais.[1] The formulation amounts to a transposition of Friedman's permanent income model of personal consumption/saving behaviour into a permanent income model of corporate dividend/saving behaviour.[2] In some other studies, changes in expected profits have been approximated by an adaptive expectations model. On some algebraic manipulation, this approach also leads to equation IV-2. Examples of this approach are due to Lancaster, Stone and Hart.[3]

Corporate dividend and retention functions involving lagged dividends have generally yielded good empirical results. Most of the studies referred to above in connection with the theoretical development of these functions have also carried out empirical tests that show that the lagged dividend term in these functions contributes substantially to their explanatory power. No serious attempt has, however, been made to test the relative merit of the different behavioural rationales put forward for the inclusion of such a term in these functions. Most of the empirical studies have nevertheless relied on the Lintner-Dobrovolsky type reasoning.

Another model that stresses a lagged response of dividends to changes in profits was used by Tinbergen. He regressed dividends on the current and last years' profits and obtained good results.[4] The lagged profits model was also used with success by Modigliani, Darling and Smith.[5] However, the model did not yield significant results in retention functions estimated

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1 S.J. Prais, 'Dividend Policy and Income Appropriation', in B. Tew and R.F. Henderson (eds.), Studies in Company Finance, Cambridge, Cambridge University Press, 1959.

2 The first explicit attempt to apply this model to business saving appeared in M.R. Fisher, 'Business Savings and Profits in the Light of the Permanent Income Hypothesis', Economie Appliquée , 10(1957), 1-24.

3 T. Lancaster, 'Business Savings and Normal Income', Review of Economic Studies, 30(1963), 203-16; R. Stone, 'Private Saving in Britain; Past, Present and Future', Manchester School, 32(1964), 79-112; and P.E. Hart, 'Business Saving and Errors in Variables', Review of Economic Studies, 32(1965), 225-32.

4 J. Tinbergen, Business Cycles in the United States of America, 1919-32, Geneva, League of Nations Economic Intelligence Service, 1939.

5 F. Modigliani, 'Fluctuations in the Saving-Income Ratio: A Problem in Economic Forecasting', in Studies in Income and Wealth, Vol. XI, Part V, New York, National Bureau of Economic Research, 1949; P.G. Darling, 'The Influence of Expectations and Liquidity on Dividend Policy', Journal of Political Economy, 65(1957), 209-24; and Smith, op. cit.

by Dobrovolsky. He attributed the outcome mainly to the tendency for the current and lagged profits to be highly collinear.[1]

In addition to the ones considered above, several other factors have been identified in the literature as potentially significant influences on corporate retention and dividend behaviour. Among these, the role of investment demand has been frequently stressed. It may be recalled that in the traditional neo-classical framework, a company's saving and investment decisions are theoretically independent. We have seen, however, that capital markets are less than perfect in practice and that several factors make for significantly large cost differences between different sources of corporate finance. The hypothesised relationship between investment demand and the appropriation of corporate profit is based on the premise that companies regard internal funds as being cheaper than external funds. It then follows that they will tend to retain more and distribute less of their profits when their demand for funds for investment is high, say, as a result of a good investment climate and expectations of high profitability. Investment and dividend outlays are thus seen as representing competing demands on profits.

One major problem in the way of empirically evaluating the role of investment demand is that normally no data are available on corporate investment plans or demand for long-term investment funds. The only relevant data that are generally available relate to investment outlays actually incurred by the enterprises. In most studies, therefore, the latter have been used as a proxy for the former. In some studies, the investment measure used has taken the form of an average of investment outlays in the current and next years or has related exclusively to the latter. This is done to allow for lags in the realisation of investment plans and the fact that the impact of a sizable prospective investment outlay makes itself felt over more than one planning period.

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[1] Dobrovolsky, op. cit.

Despite these estimation difficulties, however, the investment variable has turned out to be significant in a large number of studies, showing a positive correlation with saving and a negative correlation with dividend distribution.[1] While in most studies the measure of investment used is defined in terms of expenditure on plant and equipment (i.e. fixed assets), some studies have employed more inclusive measures that include some other types of asset growth as well. For example, Dobrovolsky used the rate of growth of all corporate assets and the rate of growth of 'operating assets' (total assets less liquid assets such as cash and marketable securities) in his retention functions and both worked very well, throwing up positive and significant coefficients.[2]

Along with capacity expansion requirements, an increase in a company's working capital needs also makes claims on its profits in competition with dividend distribution and, therefore, can make for higher retention. A sales change variable, measuring the change in corporate sales over the preceding one or two years, was used by Darling and Brittain as a proxy for change in companies' anticipated working capital needs. The variable did well in both studies; it had the hypothesised negative sign in the estimated dividend functions andwas statistically significant.[3]

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[1] See, Smith, op. cit.; P.T. Dhrymes and M. Kurz, 'On the Dividend Policy of Electric Utilities', Review of Economics and Statistics, 46(1964), 76-81; Brittain, op. cit.; P.T. Dhrymes and M. Kurz, 'Investment, Dividend and External Finance Behaviour of Firms' in R. Ferber (ed.), Determinants of Investment Behaviour, New York, National Bureau of Economic Research, 1967; and K. Krishnamurty and D.U. Sastry, 'Some Aspects of Corporate Behaviour in India', Indian Economic Review, N.S. 6(1961), 152-84. Additional supporting evidence is supplied by some more general studies of corporate behaviour; a positive correlation between the corporate growth/investment rate and the retention ratio is reported by M. Gordon, The Investment, Financing and Valuation of the Corporation, Homewood, Illinois, R.D. Irwin, 1962, pp. 234-5, and A. Singh and G. Whittington, Growth, Profitability and Valuation, A Study of United Kingdom Quoted Companies, Cambridge, Cambridge University Press, 1968, p. 182.

[2] Dobrovolsky, op. cit.

[3] Darling, op. cit., and Brittain, op. cit.

Companies' reserve requirements may also influence their appropriation policy, especially in the case of companies experiencing substantial fluctuations in business. The maintenance or strengthening of a company's reserve position may lead the management to retain a greater proportion of the company's profits than it otherwise would have. It is customary for managements to regard corporate surplus, i.e. reserve funds of various kinds, as a general financial cover against contingencies such as dividend distribution in lean years. While a strong reserve position is desirable, the motivation to continue strengthening it would be expected to diminish as the surplus or reserve funds increased. Tinbergen, and later Modigliani and Dobrovolsky, included the value of the corporate surplus at the beginning of the current period in their dividend and retention functions with the expectation that it would be associated positively with dividends and negatively with retained earnings. Their results confirmed the a priori expectation and were statistically significant.[1] The same variable turned out to be insignificant, however, when used by Lintner in his partial adjustment model.[2]

A closely related hypothesis is that a firm's liquidity position will tend to be negatively associated with retained earnings, as a higher degree of liquidity will tend to encourage dividends by enabling higher dividends to be paid without the firm running the risk of having to resort to external finance in case of an emergency. Various measures of a firm's liquidity position have been used in different studies, e.g. liquid assets, total net current assets, etc. The results have been similar to those for the reserve requirements variable, significant in some studies and insignificant in others.[3]

Several studies have examined the role of taxation in the profit appropriation policy. Brittain has found that variations in the differential between tax rates on ordinary personal income (which includes dividend

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[1] Tinbergen, op. cit.; Modigliani, op. cit.; and Dobrovolsky, op. cit.

[2] Lintner (1953), op. cit.

[3] For example, measures of a firm's liquidity or current position turned out to be significant in studies by Darling, op. cit., and Brittain, op. cit., but yielded unsatisfactory results in Dhrymes and Kurz (1964 & 1967), op. cit.

income) and capital gains exercise a significant influence on this policy.[1] Ordinary personal incomes are normally taxed at much higher rates than those applicable to accruals from capital valuation changes. This differential provides shareholders with a way of tax saving (or what Brittain terms 'tax shelter') such that they are likely to let companies retain larger proportions of the profits when this differential increases. This tax advantage can take different forms. If higher retention brings capital gains that are realised by the stockholder, there is a net saving in taxes paid as tax rates are lower on capital gains than on dividend income. If capital gains remain unrealised at the time of the stockholder's death, they escape the income tax completely even if they are later realised by his heirs. There will be tax saving also if higher retention leads eventually to an issue of bonus shares which carry lower tax rates than do dividends. Finally, the stockholder has the advantage of tax deferral even if the extra funds retained today are ultimately paid out in the form of dividends.

The tax-shelter hypothesis assumes that company managements are aware of the personal tax saving possibilities, via high retention, afforded to the stockholders by the tax differential and that there is a fair degree of agreement between the interests of the latter and those pursued by the former. It also assumes that managements are confident that a lag in the payment of dividends will not be interpreted by the stockholders as signifying a bad future for the company that calls for selling the stock. Thus, the tax-shelter effect is expected to be stronger in companies where there is a closer identity between management and ownership, i.e. in closely-held companies. The effect will be stronger also with greater concentration of the stock in the hands of high-income groups as large stock-ownership and high marginal income tax rates make for potentially sizable tax saving from the tax differential via high retention.

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[1] Brittain, op. cit.

As for the role of corporate taxation, as distinguished from the taxation of personal income, the general finding has been that the corporate income tax reduces the level of both dividends and retained earnings by reducing the volume of post-tax corporate profit but has little effect on the proportion in which the post-tax profit is distributed between the two categories. This suggests that the effect of the tax bite is adequately taken into account simply by using post-tax profit as the key explanatory variable in the estimating equations.[1]

Corporate tax considerations need, however, be taken into account explicitly where the tax policy seeks deliberately to influence the disposal of profits. In this regard, special attention has been paid in the literature to differential taxation of dividends and retained earnings, such as was in force in the U.K. between 1947 and 1958. Early studies of the U.K. tax differential scheme, whereby undistributed profits were taxed at lower rates than those applicable to distributed profits, tended to conclude that the scheme had little effect on the appropriation policy. Later studies indicated, however, that if the influence of differential taxation was properly evaluated by plugging an appropriate quantitative measure of the differential into the corporate dividend or savings function, the results revealed that the lower taxation of undistributed profits did exercise a significant positive effect on corporate saving.[2]

Another hypothesis that has found some support in empirical studies is that corporate retained earnings tend to be positively related to the cost of external debt financing. Interest rates on borrowed corporate funds have been tried in some models and found to be positively and

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[1] See, for example, Lintner (1956), op. cit. and Brittain, op. cit. on this point.

[2] See A. Rubner, 'The Irrelevancy of the British Differential Profits Tax', Economic Journal, 74(1964), 347-59, and M.S. Feldstein, 'Corporate Taxation and Dividend Behaviour', Review of Economic Studies, 37(1970), 57-72, as examples of the former and latter types of studies respectively.

significantly associated with the level of corporate retention.[1] The rationale behind this relationship is that an increase in the cost of external funds discourages dividend distribution by increasing the relative attractiveness of internally generated funds as a source of finance for the company's operations.

In some studies, the extent of companies' reliance on external finance has been included among the set of explanatory variables. The availability of external finance enables companies to carry out their planned dividend disbursals when their combined requirements for funds, that is for dividend disbursal as well as for other purposes such as investment, are large relative to their budget constraints. Freer and easier availability of external finance may, therefore, act to reduce pressures on companies to distribute less and retain more for financing their investment and other needs. If there is such a tendency, the external finance variable will be associated positively with dividends and negatively with retained earnings. Most of the studies that have included this variable in their estimating functions have yielded results that are largely in agreement with this prediction.[2]

There is also some evidence that a firm's capital structure may influence its appropriation policy. For example, Dhrymes and Kurz have found a significant negative association between the level of a firm's indebtedness and its dividend disbursals.[3] The explanation of this is that firms tend to regard increasing indebtedness - as measured by, say, the debt/equity ratio (leverage) - as increasing the risks associated with their business.[4] In less than perfect capital markets, firms that find

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[1] See Brittain, op. cit., and R.S. Johri, 'Corporate Retentions in India, 1950-1965: Some Theoretical and Institutional Considerations', Indian Journal of Economics, 50(1969), 43-54.

[2] See Dhrymes and Kurz (1967), op. cit.; Krishnamurty and Sastry, op. cit.; and N. Snowden, 'Company Savings in Kenya's Manufacturing Sector', in Newlyn (ed.), op. cit.

[3] Dhrymes and Kurz (1964), op. cit. See also Modigliani and Miller, op. cit., p. 288.

[4] For more on this point, see, for example, M. Kalecki, 'The Principle of Increasing Risk', Economica, N.S. 4(1937), 440-47.

themselves 'too much' in debt will attempt to reduce their indebtedness (relatively) by retaining more of their current profits in order to pay off some of the existing debt and increase the internal financing of their operations, and by expanding their equity base.

Finally, a few studies have also examined the influence on profit appropriation of company characteristics such as size and the nature of the relationship between management and ownership. Florence provided some evidence from his study of the U.K. corporate sector to the effect that the corporate retention ratio tended to increase with company size.[1] He rationalised his finding as follows. There may exist some conflict between the interests of an independent management and those of the owners, the former tending to plough back a greater proportion of the company profits in order to improve the record of its performance (as, for example, reflected in the company's growth, a rising volume of profits and the strength of the company's reserve position) and the latter tending to favour larger dividends to boost their current incomes. If there is some generality to this tendency, then, cet. par., a greater owner-control of enterprises will tend to be associated with a lower and a greater management-control with a higher retention ratio.[2] As Florence found control to be divorced from ownership in proportionally a greater number of larger than smaller companies, the above hypothesis provided an explanation for the finding that the former showed on average higher retention ratios than did the latter. Florence also found that greater owner-control of management, and hence, cet. par., lower retention ratios, tended to be associated with greater concentration of stock ownership.

In a majority of other studies that have considered the relationship between company size and profit appropriation, the general finding has,

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[1] P.S. Florence, Ownership, Control and Success of Large Companies, London, Sweet and Maxwell, 1961. See also his 'Size of Company and Other Factors in Dividend Policy', Journal of the Royal Statistical Society, A, 122(1959), 77-98.

[2] It will be recalled that insofar as the tax-shelter effect is concerned, a closer identity between the management and owners will work in the direction of raising rather than lowering the retention ratio.

however, been that the retention ratio tends to be much the same regardless of company size.[1] A few studies that have found some evidence of a systematic variation in the ratio between different company sizes have indicated that the ratio tends to fall, rather than rise, as the company size increases.[2] This correlation has been explained in these studies by reference to the relatively much greater difficulty that smaller companies generally encounter in raising outside capital.[3] Because of this relative disadvantage in financial markets, smaller companies may find themselves 'forced' to finance a relatively greater proportion of their investment through retained profits. Small closely-held enterprises may also show a greater reluctance to resort to sizable external financing for fear of dilution of control over the enterprise that this might entail. Insofar as these considerations and those pointed out by Florence are operative, the general finding of the neutrality of the retention ratio with respect to company size may be regarded as indicating that they tend to cancel out one another on balance.

IV.2. Data and Their Problems

The analysis of corporate saving behaviour in Pakistan attempted in the following section is based on the aggregate time-series estimates of the sector's income and saving drawn up in Part II of the thesis. Since these estimates were developed from individual company accounts, a possible

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1 See Dobrovolsky, op. cit.; P.E. Hart, 'The Business Propensity to Save and Size of Firm', Review of Economic Studies, 29(1962), 147-50; P.E. Hart, 'A Micro-Econometric Cross-Section Analysis of Business Saving', in P.E. Hart (ed.), Studies in Profit, Business Saving and Investment in the United Kingdom, 1920-62, Vol. II, London, Geo. Allen and Unwin, 1968, and G. Meeks and G. Whittington, The Financing of Quoted Companies in the United Kingdom, London, HMSO, Royal Commission on the Distribution of Income and Wealth, Background Paper No. 1, 1976, Section 3.

2 See Dhrymes and Kurz (1964), op. cit., and J. Bates, 'The Profits of Small Manufacturing Firms', in P.E. Hart and J. Bates, Studies in Profit, Business Saving and Investment in the United Kingdom, 1920-62, Vol. I, London, Geo. Allen and Unwin, 1965.

3 For a fuller treatment of the question of the relative positions of small and large companies in the market for outside capital, see, for example, E. Davis and K. Yeomans, Company Finance and the Capital Market, A Study of the Effects of Firm Size, Cambridge, Cambridge University Press, 1975.

alternative was to use cross-section data and obtain estimates of the relevant behavioural relationships separately for individual years or groups of years. There were, however, several reasons for preferring a time-series analysis. First, the use of time-series data appeared more relevant in the case of the present study concerned with a macroeconomic analysis of sectoral saving flows in the country over time. Second, the influence on corporate saving of some potentially important variables such as tax rates and the cost of external finance could be determined only through a time-series analysis. Finally, a cross-section analysis based on individual company data would have involved estimation on a scale which appeared well beyond the scope of the present study. For all these reasons, a time-series analysis appeared both convenient and appropriate.

Some adjustments in the aggregate time-series corporate data were, however, necessary in order to get at a proper statistical base for testing the relevant behavioural relationships. Thus, to avoid the possibility that the erratic effects of the starting-up problems, or teething troubles, of young companies might have a significant distortive influence on the estimated relationships, the regression analysis was confined to only those companies that were in existence at the start of the period considered and had reached the stage of commercial production. A related consideration behind this adjustment was that since for some time at least the age of a company would have a substantial influence on its financing pattern, inclusion of the newly floated companies in our data might have blurred the underlying behavioural relationships of a more basic and maturer character. Another adjustment made was that from the group of 'seasoned' companies in existence at the start of the period, a few companies for which data were not available for some years during the period or which were much too large in relation to the rest were excluded. Included among the latter were some large concerns under predominantly governmental or foreign control.

Adjustments of the above kind are proportionally more important where the overall corporate base is relatively small, such as in Pakistan. This is because the magnitudes in question are then larger in relation to the whole. Admittedly, the exclusions that were made left us with a much smaller number of companies than would otherwise have been the case, but this was done in the hope that what the analysis lost in terms of coverage it would more than gain in terms of the strength of its results.

The period covered by the regression analysis was 1961-75. The relevant data were available in a systematic form for only this period. This gave a maximum of fifteen (annual) observations. The figure no doubt appears quite small, especially when seen in the light of the fact that several factors have been indicated in the literature as potentially important influences on corporate saving behaviour, whose significance in the case in hand one would like to determine. The problems posed by a relatively small number of observations are increased further if the relevant set of explanatory variables are subject to a significantly high degree of multicollinearity. However, it will be seen in the following section that despite the limitation of a relatively short time series, several variables tried in the regression analysis turned out to be significant and in line with a priori predictions. We should nevertheless add that the results may be treated as preliminary, subject to verification and improvement later when the relevant data become available for longer periods.

The nature and quality of the corporate data on which our estimates are based are examined at length in Part II. A couple of points with respect to the data that are especially relevant to the estimation exercise may, however, be noted here. First, the figures for profits are subject to understatement. This understatement is due mainly to the practice of concealment of profits for tax evasion which was, by all accounts, fairly widespread. We have proceeded on the assumption that rather than being a

largely random factor, the magnitude of the profit understatement bore some systematic relationship to the true profitability of the company since it may not be unreasonable to imagine that the former would be related more to the actual profits themselves than to any predetermined level.[1] The reported profit figures could then be taken as reasonably representative indicators of the trend in actual profits though they might diverge substantially from the absolute level of the actual profits. If the assumption holds, the effect of the profit understatement on our regression estimates of the corporate savings function would be largely restricted to an overstatement of the coefficient relating saving to profits, with the strength of the correlation between the two left relatively unaffected.

Second, the figures for depreciation shown in the accounts overstate actual depreciation on account of the wear and tear of capital. The reason for this is that part of the provision made under this head out of company profits reflects the effect of corporate tax laws permitting accelerated depreciation. This means that the figures for net saving (i.e. retained earnings) which constitute the dependent variable in our regression analysis are underestimated to the extent the accounting depreciation exceeded the actual depreciation. Also, the figures for net profit (after depreciation), the profit measure most commonly used in the analysis, are further underestimated by this amount. The effect of this weakness in the data is that parts of the true net saving and true net profit are left out of the regression estimates, which makes the estimated relationship between the two magnitudes diverge from its true value. To avoid this bias, one obviously requires information on the divergence between the accounting and actual depreciation, which is the cause of the bias. The required data are, however, rarely available and are extremely difficult

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[1] See White, op. cit., p. 144, on the reasonableness of such an assumption.

to approximate with any accuracy by working on the basis of certain assumed rates of actual depreciation. No such attempt has been made here.

Some studies have attempted to avoid the above problem by working in terms of estimates of corporate saving and profits that are gross of depreciation.[1] This, however, appears inadvisable. Although a part of the provision made for depreciation may constitute net retained profit, the major part represents the actual wear and tear of capital. Since the latter is determined mainly by certain technical conditions with respect to firms' capital stock, inclusion of the entire provision for depreciation in the figures for saving and profits used in the regressions can seriously becloud the task of the identification of factors that influence firms' decisions regarding the allocation of their net disposable profits (i.e. profits net of taxes and depreciation) between dividends and retained earnings. Like most studies, therefore, we have worked with saving and profit estimates that are net of depreciation. The limitations pointed out above should,however, be kept in mind while interpreting the reported results.

IV.3. Empirical Results and Discussion

A convenient starting point for an analysis of the corporate savings function is to examine the simple bivariate relationship between saving and profits. The function can then be elaborated by incorporating other possible determinants.

Equation IV-1a (Table IV.1) gives the result of the regression of net corporate saving on post-tax net profits, employing a linear function of the type $Y = a + bX$ that has been widely used for this purpose. It will be noticed that the Durbin-Watson statistic indicates the presence of serial correlation in the bivariate relationship. Some linear logarithmic formulations of the relationship were also tried but they indicated little

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[1] See, for example, P.E. Hart, 'A Macro-Econometric Analysis of the Appropriation of Profit in Manufacturing', in Hart (ed.), op. cit., and Johri, op. cit.

TABLE IV.1. Regression Results for some Basic Models of the Corporate Savings Function, 1961-75

$R = \underset{(-0.400)}{-5.083} + \underset{(2.968)}{0.462P}$	$\bar{R}^2 = 0.358$, DW = 0.536	(IV-1a)
$R = \underset{(-0.306)}{-5.214} + \underset{(2.858)}{0.529P} - \underset{(-0.418)}{0.078P_{-1}}$	$\bar{R}^2 = 0.335$, DW = 0.493	(IV-1b)
$R = \underset{(0.021)}{0.211} + \underset{(5.425)}{0.738P} - \underset{(-3.574)}{0.612D_{-1}}$	$\bar{R}^2 = 0.687$, DW = 1.734	(IV-1c)

where R = Net retained earnings (i.e. net saving)

P = Post-tax net profits

D = Total dividend disbursal

Note: All the variables are valued at current prices, i.e. undeflated for price changes. This is in keeping with the practice followed in virtually all the studies of the corporate dividend and savings functions, which is unlike the common practice of working with data deflated for price changes in the case of the estimation of non-corporate consumption and savings functions. The practice of using undeflated data in the former case does not, of course, imply that business firms are in general unconcerned about price fluctuations in matters of dividend distribution and retention. Rather it is based on recognition of the fact that firms' reactions to price changes are relatively complex and on the finding that no simple deflating factor shows any clearly defined effect on the dividend and retention policies [cf. Lintner (1953), op. cit., pp. 249-50 and 254, and S.P. Dobrovolsky's 'Comment' on Lintner (1953) in Heller et al. (eds.), op. cit., pp. 256-7].

improvement over the reported result. The problem of serial correlation persisted. As our elaboration of the corporate savings function below will show, the Durbin-Watson statistic undergoes considerable improvement when some variables other than profit are also included in the estimated function. This indicates that the presence of serial correlation in the bivariate relationship is due primarily to the absence of other explanatory variables rather than any misspecification of the mathematical form of the model.

The coefficient on profits in equation IV-1a indicates the marginal propensity to save of the corporations over the period 1961-75. The quantity is shown to have averaged around 46 per cent of post-tax net profits. The constant term in the equation indicates the absence of any statistically significant trend in the corporate saving ratio. These results are, however,

rendered somewhat weak by the statistical problem just noted.

Addition of lagged profits to the simple bivariate model in order to take into account possible lags in the adjustment of appropriation policy to short-term changes in profits did not bring about any improvement in the results (equation IV-1b). Although the estimated coefficient on the lagged profit term had the right sign, it was insignificant and the problem of serial correlation persisted. One important reason for the unsatisfactory performance of the lagged profits model appears to be the presence of a relatively high collinearity between the current and lagged profit variables.

Inclusion of lagged dividends in the model did, however, produce a substantial improvement in the results (equation IV-1c). There was a sizable increase in $\bar{R}^2$ and the serial correlation problem was also eliminated. The result shows that dividend levels achieved in the recent past exercised a significant influence on corporate policy with respect to the appropriation of current profit. It lends support to the Lintner-Dobrovolsky type models noted above which stress the importance attached by companies to the objective of dividend stability. The reasoning underlying these models appears, therefore, to apply to the determination of savings (or dividends) in industrial companies in Pakistan, and in this respect they appear to have behaved in very much the same way as companies in advanced countries for which these models have generally yielded good empirical results.

The estimated coefficients of equation IV-1c may be interpreted in terms of the Lintner model as follows. The difference between unity and the absolute value of the coefficient on lagged dividends provides an estimate of the 'speed-of-adjustment' coefficient. It shows that the companies have tended on average to adjust their dividend disbursals during any single period by less than 40 per cent of the difference between the desired level of dividends in the current period and the actual level of dividends in the

preceding period. The coefficients on the profit and lagged dividend terms together yield an estimate of the 'target' pay-out ratio. This ratio works out to 67.5 per cent of post-tax net profit.[1] Or, in other words, the desired retention ratio works out to 32.5 per cent of post-tax net profit.

Alternatively, the coefficients in equation IV-1c can be interpreted in terms of short- and long-run responses. The coefficient on current profit can be interpreted as indicating the short-run marginal propensity to save since it gives the proportion of a unit increase in current net profit that is not distributed as dividends in the current period. Thus, the short-run marginal propensity to save of the companies is indicated to have been little under 75 per cent of post-tax net profit. This gives a short-run marginal propensity to distribute of little over 25 per cent of post-tax net profit. In Lintner's terminology, the latter is the speed-of-adjustment coefficient times the target pay-out ratio. However, if the new level of profit is maintained, the long-run effect of a unit increase in profit is much greater on dividends and much less on saving than indicated by these figures. For then the former is provided enough time to adjust fully to the new level of profit, overcoming the short-run adjustment lag. The long-run propensities to save and distribute work out to 32.5 per cent and 67.5 per cent respectively of post-tax net profit. These are the same as the desired retention and pay-out ratios in Lintner's terminology since the full long-run adjustment in dividends in response to a change in profit brings the former in line with the desired change.[2]

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[1] The dividend function corresponding to the savings function $R = a + b_1P - b_2D_{-1}$ can be derived by deducting each side from P. This gives $D = -a + (1-b_1)P + b_2D_{-1}$. The target pay-out ratio then is $(1-b_1)/(1-b_2)$, where $(1-b_2)$ is the speed-of-adjustment coefficient.

[2] In the symbols of the previous footnote, the long-run increase in dividends as a result of a sustained unit change in profit is given by $(1 - b_1)(1 + b2 + b_2^2 + b_2^3 + ...) = (1 - b_1)/(1 - b2)$ which is the same as the expression for the target pay-out ratio.

Interpreted either way, the estimated parameters have an important implication for the relationship between changes in profits and saving. Large and rapid increases in profits lead to substantial increases in savings as dividends respond relatively slowly because of short-run adjustment lags. An acceleration in the rate of growth of corporate income will, therefore, tend to raise the proportion of the corporate income that is saved. By the same token, sizable falls in corporate income from the levels recorded in the recent past will lead to a proportionally much greater reduction in saving than in dividends, thereby tending to depress the corporate saving-income ratio. It is interesting to note that in this respect, the saving behaviour of companies is quite similar to household saving behaviour as described by the permanent income model.[1]

This behavioural pattern provides part of the explanation of the trends in the corporate saving ratio noted in Chapter II. The net rate of saving in the non-financial corporate sector varied within a high range of 50 to 70 per cent during the Second and Third Plan periods. There was a rapid increase in corporate profits over these periods, which appears to have contributed significantly to the high rate of saving. Post-tax net profits rose at an annual compound rate of nearly 15 per cent. Except for a year or two, the post-tax net rate of return on paid-up capital exceeded a high figure of 20 per cent. Though the saving rate remained high throughout the period, years with particularly large spurts in profits saw the ratio rise substantially above the period average. These include the years 1962/63, 1963/64 and 1967/68.

The average rate of saving was somewhat lower in the Third Plan period than in the Second Plan period - about 50 per cent as compared with about 60 per cent - though still quite high in absolute terms. There was also

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[1] Though the rationales underlying the respective short-run adjustment lags that produce this similarity are quite different.

some decline in the level of profitability during the former period, but the magnitude of the decline was small. It appears that the downward drift in the saving ratio between the two Plan periods may in part be attributable to a lagged upward adjustment in the pay-out ratio in response to the more or less continued high profitability.

The influence of the dividend adjustment lag on corporate saving policy comes out more clearly during the Fourth Plan period. There was a sharp fall in net corporate profits at the beginning of this period. During the first four years, the level of profits remained below, in absolute terms, the figures recorded towards the end of the preceding Plan period, leading to a sharp fall in the rates of return. The last year of the Fourth Plan period saw profits rise quite sharply, exceeding the levels of the previous years by a sizable margin. Most of the fall in profits during the first four years of the period was reflected in reductions in retained earnings as dividends were more or less maintained at the levels allowed in earlier years. The rate of saving fell sharply at first, and was negative during 1971/72 - 1973/74. The negative saving rates imply that the sector was dissaving - borrowing or running down reserves - in order to maintain past dividend levels in the face of the slump in profits. When profits rose sharply in 1974/75, the saving rate rose with them, jumping from a negative figure in the preceding years to a high positive figure of about 35 per cent (see Table II.12).

It was noted in Chapter II that the early 1970s were marked by certain events that had a fairly strong distressing effect on corporate profits and expectations, and that the sharp fall in the corporate saving ratio and the maintenance of dividends at relatively high levels observed during this period might be explained in terms of the resultant lower profitability and investment demand rather than in terms of any established behavioural desire on the part of the comapnies for stable dividends.[1] We have seen above,

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[1] See p. 53, fn. 1.

however, that the hypothesis that companies tend to favour a relatively stable dividend policy finds support in the trends in corporate saving and dividend behaviour in the country not only during this period but also when examined over the entire period for which detailed corporate data are available. Thus it appears that both the above-mentioned factors have a place in an explanation of the sharp fall in corporate saving that took place during the Fourth Plan period. We examine the role of factors such as investment demand and profitability in the corporate savings function later in this section.

Although the Lintner-type model of corporate dividend and retention behaviour examined above has generally yielded fairly good empirical results, one important weakness of this model is that it is too aggregative in character. The model makes current dividend disbursals depend on parameters such as the desired pay-out ratio and the speed-of-adjustment coefficient but provides little information as to the factors which determine them. Further, the model makes no allowance for changes in these parameters over time in response to changes in the determining factors. Put slightly differently, the model restricts itself to a demonstration of how the current level of dividends emerged from the dividend level of the preceding period, using the latter as a bench-mark for each period. The lagged dividend variable thus stands for a composite of factors left unspecified by the model that would, if they could be determined explicitly, explain why dividends were at a particular level in any previous period. If these factors were incorporated directly into the estimating equation in place of the 'bench-mark variable',[1] the resulting model will provide a much fuller explanation of the dividend and retention behaviour than does the Lintner-type formulation of it. The latter may then be considered as a 'reduced form'

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[1] Darling, op. cit., p. 218.

of an appropriate dividend or retention function that sets out explicitly the various arguments in the function. Thus, whereas the Lintner-type estimating equation may give a good fit to time-series data over short- to medium-term periods and highlight the role of adjustment lags in dividend policy, and thereby also provide a useful basis for short- to medium-term predictions, it does not go sufficiently far in elucidating the factors that influence firms' appropriation policy. For that, the appropriate method is to try out explicitly various factors that are indicated by a priori reasoning to be capable of exercising a significant influence on this aspect of firms' behaviour.

We saw in Section IV.1 that in addition to the dividend adjustment lag, several other factors have been identified in the literature as potentially important influences on corporate dividend and retention behaviour. In his elaboration of the Lintner schema, Brittain[1] demonstrated that factors such as investment demand, tax considerations, interest rates, etc. exercised a systematic influence on the desired pay-out ratio, and that an explicit consideration of these factors was necessary for a more comprehensive explanation of the relevant trends in corporate policy. It is to these factors that we now turn.

One factor that has featured very prominently in the literature is corporate demand for investment funds. A major difficulty in empirically testing the role of this factor is finding a suitable quantitative measure for it. Ideally, one should use an estimate of the planned (ex ante) investment expenditure of the concerned enterprises. But data on corporate investment intentions are rarely available in practice, which means that one has to settle for the actual (ex post) investment expenditure in the hope that it may approximate current investment plans reasonably well. However, since the realisation of investment plans is normally spread over more than one planning period, and since both the current and expected demand for investment funds may influence the retention policy, it may prove better to use some

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[1] Brittain, op. cit.

kind of an average of the actual investment outlays over a few successive planning periods rather than use only the current year figures.

For our estimates, corporate demand for long-term investment funds was approximated by using the rate of gross corporate investment in fixed assets in the current year and a similar rate averaged over a two-year period including the current and following years. A more inclusive definition of corporate asset growth was also tried whereby the current and two-year average growth rates were estimated for total corporate net assets. The latter may be looked upon as a more comprehensive measure of corporate 'expansion requirements' (à la Dobrovolsky) than the former.

Table IV.2 gives the results of the inclusion of these measures of asset growth in the corporate savings function along with net corporate profits. All four measures have the right signs, are significant at the 5 per cent level[1] and bring about a substantial improvement in $\bar{R}^2$ over that yielded by the simple bivariate model. The estimate of the equation including the current rate of gross investment in fixed assets (I) is, however, affected by serial correlation. The Durbin-Watson statistic is in the inconclusive range with the two-year average rate of gross investment in fixed assets (I') and with the current rate of growth of total net assets (g). It is only in the case of the two-year average rate of growth of net assets (g') that the value of the statistic confirms the null hypothesis of no serial correlation. In all cases, however, the statistic shows an appreciable improvement over that for the bivariate model. We shall see below that the statistic improves further with the addition of some more explanatory variables.

Two additional points with respect to the results appear to be worth noting. First, measures defined as two-year averages provide better fits to the data than do the corresponding current year measures. This is a plausible result in view of the considerations noted above such as lags in

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[1] To be precise, the coefficient on I falls fractionally short of this level of significance.

TABLE IV.2. Regression Results for Models Using Alternative Measures of Investment Demand/Expansion Requirements, 1961-75.

$R = -37.433 + 0.661P + 1.741I$	$\bar{R}^2 = 0.518$		(IV-2a)
$\quad (-2.046) \quad (3.982) \quad (2.101)$	$DW = 0.788$		
$R = -59.489 + 0.765P + 3.326I'$	$\bar{R}^2 = 0.670$		(IV-2b)
$\quad (-3.269) \quad (5.011) \quad (3.416)$	$DW = 1.252$		
$R = -26.058 + 0.567P + 1.703g$	$\bar{R}^2 = 0.671$		(IV-2c)
$\quad (-2.300) \quad (4.590) \quad (3.406)$	$DW = 1.121$		
$R = -39.015 + 0.662P + 2.513g'$	$\bar{R}^2 = 0.777$		(IV-2d)
$\quad (-3.594) \quad (5.813) \quad (4.706)$	$DW = 1.780$		

where I = Gross investment in fixed assets (i.e. buildings, plant and equipment) during the current period, expressed as a percentage of total fixed assets at the beginning of the period

I' = Average rate of gross investment in fixed assets over a two-year period including the current and following years, with equal weights to both years [a]

g = Growth in total net assets (i.e. net fixed assets plus net current assets, the latter including items such as inventories and financial assets) during the current period, expressed as a percentage of total net assets at the beginning of the period

g' = Average rate of growth of total net assets over a two-year period (derivation similar to that of I')

[a] Dhrymes and Kurz (1964), op. cit., have used a weighted average of investment in the current and next years, with the weights for the two years determined by trying out several alternative values and settling for the pair that yielded the highest R^2 in the estimated dividend functions.

Note: Some absolute measures of investment expenditure and asset growth were also tried in the above equations but they almost invariably yielded unsatisfactory results. Apart from contributing to a lessening of collinearity between the independent variables, it appears that relative measures of the kind used here approximate changes in the intensity of investment demand (or, more generally, expansion requirements) over time much better, from the standpoint of the relevant decision-making process, than do their absolute counterparts.

the realisation of investment plans and the influence on retention policy of both the current and expected demand for funds. However, when the above corporate saving models were further elaborated by including some additional explanatory variables, the current year expansion rates in many cases did almost as well as the corresponding two-year average rates.

Second, growth in total net assets has greater explanatory power in the estimated functions than does growth in fixed assets only. The reason for this appears to lie in the fact that the former includes, in addition to increase in fixed assets, increases in assets such as stocks of inventories and financial investments. Whereas the sole corporate motivation behind the accumulation of fixed assets is to expand, the accumulation of the latter types of assets is also motivated by some other considerations, such as the maintenance of an adequate stock of working capital and strengthening the company's financial reserve position, that accompany the process of physical expansion. We shall see later that these considerations, like the fixed investment requirements, may also exercise a significant influence on corporate saving policy. Thus, it appears that the relatively greater explanatory power of the variable representing growth in net assets in the above results is due to the reason that this variable subsumes the influence on saving policy of the demand for funds not only for investment in fixed assets but also for the other purposes just noted. It represents the changing intensity of the composite demand made by these various motives in the course of corporate growth on a company's profits in competition with the distribution motive.

Perhaps a better way of examining the influence of the growth objective on corporate saving policy would be to use some measure of the rate of return on investment available to the corporate enterprises. This derives from the premise that higher expected profitability will, cet. par., lead to greater investment and, in turn, to greater saving. Here again, however, we run into the same measurement problems as the ones associated with the use of investment outlays or asset growth. Data on profit expectations do not exist, and one has to settle for the available figures on realised profitability.

We regressed the corporate saving ratio on some measures of the realised corporate profitability. Profits were measured variously as gross and net of depreciation and taxes, and were expressed as proportions of the net worth (equity assets) and net assets (equity assets plus long-term liabilities) at the beginning of the current period. In all cases, the rate of profit was positively and significantly correlated with the saving rate, though the exact strength of the correlation varied with the measure used. Profit rates net of taxes yielded somewhat higher R^2's than did profit rates gross of taxes. R^2's were also higher when profit rates were defined as net rather than gross of depreciation but the difference was not large. The rates were more strongly correlated with the saving ratio when the value of net assets rather than net worth was used as the denominator. However, when profits were defined net of both taxes and depreciation, the estimated R^2's were quite similar for both the denominators. Table IV.3 reports regression results for the measures of profitability that yielded relatively higher R^2's.

TABLE IV.3. Regressions of Corporate Net Saving Ratio (Retention Ratio) on Corporate Profitability, 1961-75.

$R^* = \underset{(-2.748)}{-29.246} + \underset{(6.498)}{6.439}\, p_{na}$	$R^2 = 0.779$, $DW = 2.220$	(IV-3a)
$R^* = \underset{(-2.525)}{-32.049} + \underset{(5.646)}{5.608}\, p_{nw}$	$R^2 = 0.726$, $DW = 2.009$	(IV-3b)
$R^* = \underset{(-4.019)}{-64.079} + \underset{(6.462)}{6.387}\, p_{gna}$	$R^2 = 0.777$, $DW = 1.981$	(IV-3c)
$R^* = \underset{(-3.051)}{-65.658} + \underset{(4.847)}{5.406}\, p_{gnw}$	$R^2 = 0.662$, $DW = 1.515$	(IV-3d)

where R^* = Retained earnings expressed as a percentage of post-tax net profits

p_{na} = Profits net of tax and depreciation expressed as a percentage of net assets at the beginning of the period

p_{nw} = Profits net of tax and depreciation expressed as a percentage of net worth at the beginning of the period

p_{gna} = Profits net of tax but gross of depreciation expressed as a percentage of net assets at the beginning of the period

p_{gnw} = Profits net of tax but gross of depreciation expressed as a percentage of net worth at the beginning of the period

The important thing to note, however, is not which measure of profitability yields the strongest correlation with the saving ratio but the general result that there existed a positive and strong correlation between the rate of corporate saving and corporate profitability over the period examined.[1] Higher profitability seems to have promoted corporate saving at the expense of dividend distribution by stimulating corporate growth.

To pursue this finding a little further, we examined the relationship between growth and profitability in the sector. A company's rate of growth may be thought of as depending on two broad sets of factors, namely the set of factors influencing the company's ability to grow and the set of factors influencing its willingness to grow. The ability to finance growth is closely related to the level of achieved profitability. Higher profitability means the availability of larger resources for growth through retention. Besides, a higher level of achieved profitability may be interpreted by potential investors as signifying a higher level of future profitability, which will strengthen the company's credit rating in the capital market. It may, as a result, be able to raise a greater volume of external finance at more favourable terms. This effect will be the greater the greater is the extent of capital market imperfections which make the raising of external finance more difficult. The profit constraint on the ability to grow will be more important in the case of small, closely-held enterprises whose owners tend to be less willing to incur large outside debt due to the real or imagined threat posed by creditors to their control. This is how higher profitability may stimulate growth from the supply side. Higher profitability may stimulate growth from the demand side as well by

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[1] Considering that the profit rates have a fair element of 'noise' in them to begin with, the high significance of the profitability measures and the associated high R^2's are very encouraging.

increasing the company's willingness to grow. Insofar as the entrepreneurial objective is to maximise the present value of expected future profits, a higher level of achieved profitability may stimulate greater investment as it may be taken to reflect, under conditions of imperfect information, higher future profitability. However, a company's willingness to grow does not depend on profitability as directly as does its ability to grow. There are several other factors influencing the former. These include factors such as the state of demand, the nature of the market, attitudes of the management, technological opportunities for expansion and organisational considerations.

In an expanding corporate sector, one should normally expect to find a positive relationship between growth and profitability. However, if factors other than profitability, which exercise an important influence on a company's perceived opportunities for expansion, represented the major constraint on growth in the sector, this relationship would tend to be relatively weak. On the other hand, the relationship could be expected to be relatively strong under conditions in which, say, there existed an important financial constraint ongrowth or in which expectations of higher future profitability based on the current level of profitability stimulated growth relatively unhampered by the other factors. Also, with changes in the relevant conditions over time, the strength and nature of the relationship between growth and profitability will also change. Thus, for example, the relationship would be expected to diminish in strength if the existing imperfections in the capital market were to a large extent overcome in the future or some new institutional means introduced to help finance corporate investment, which would alleviate the financial constraint on growth, or if the rates of profit started to fluctuate quite violently, which would

make the current level of profitability a more unreliable guide to future profitability.[1]

Table IV.4 presents some estimates of the growth-profitability relationship for our set of corporate enterprises. The annual rate of growth of net assets was regressed on some measures of profitability used in the saving ratio-profitability regressions. In most cases, the latter turned out to be positively and significantly related to the former.

TABLE IV.4. Regressions of Corporate Growth on Profitability, 1961-75.

$g = \underset{(-0.855)}{-3.861} + \underset{(2.503)}{1.052}p_{na}$	$R^2 = 0.343$ $DW = 1.553$	(IV-4a)
$g = \underset{(-1.491)}{-9.927} + \underset{(2.586)}{1.067}p_{gna}$	$R^2 = 0.358$ $DW = 1.367$	(IV-4b)
$g = \underset{(-0.549)}{-2.855} + \underset{(1.960)}{0.797}p_{nw}$	$R^2 = 0.242$ $DW = 1.426$	(IV-4c)

Profit rates defined as net of taxes and expressed as proportions of net assets again yielded the highest R^2's. The estimates indicate that an increase in the post-tax rate of return on net assets by one percentage point tended to raise the growth rate by a similar amount.[2] Changes in profitability, thus defined, 'explain' about 35 per cent of the total variation in the growth rate over the period examined. The explained proportion is, however, lower when post-tax profits are expressed as ratios of net worth. With these profit rates, the estimates indicate that

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[1] For a more detailed treatment of the various influences on the growth-profitability relationship, see, for example, R.L. Marris, The Economic Theory of Managerial Capitalism, London, Macmillan, 1964; Singh and Whittington, op. cit., and E. Penrose, The Theory of the Growth of the Firm, 2nd edition, Oxford, Basil Blackwell, 1980.

[2] The results reported in the table are for simple linear models of the type $Y = a + bX$. Some linear logarithmic formulations of the growth-profitability relationship were also tried but the simple linear model gave the best results (i.e. higher levels of significance of the profit rate variable and higher R^2's). The profit variable became insignificant at conventional levels of significance when lagged rather than current profits were used. However, results quite similar to those reported in the table were produced when the average growth rate over the current and next years was regressed on the current rate of profit.

an increase in profitability by one percentage point tended to raise the growth rate by about 0.8 of a percentage point.[1] In the case of all the results reported in the table, the constant term is negative, but insignificant different from zero. This indicates the tendency for growth rates to be very low, even negative, at a zero level of profitability.

These results provide supporting evidence for the inference drawn earlier that higher rates of profit induced increases in the corporate saving ratio by stimulating corporate demand for funds to finance higher rates of expansion. This is further corroborated if the saving ratio is regressed directly on the rate of corporate growth. Like the rate of profit, the rate of growth turned out to be positively and significantly related to the saving ratio (Table IV.5).

TABLE IV.5. Regressions of Corporate Net Saving Ratio on Rates of Corporate Growth, 1961-75.

$R^* = 19.168 + 2.565g$	$R^2 = 0.399$	(IV-5a)
(2.375) (2.820)	DW = 1.155	
$R^* = 16.545 + 2.880g'$	$R^2 = 0.330$	(IV-5b)
(1.592) (2.328)	DW = 1.689	

It will be noted, however, that the rate of growth explains a much smaller proportion of the total variation in the saving ratio than does the rate of profit.[2] This can be due to several factors. If the major channel of influence on the saving ratio is through changes in the demand for funds for growth purposes, as the above results seem to indicate, the greater

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[1] The fall in the coefficient relating the rate of growth to the rate of profit is what one would expect. The rate of return on equity assets was generally much higher than the rate of return on total net assets, reflecting the fact that corporate profitability was on average much higher than the interest rate paid on borrowed capital. The greater explanatory power of the latter rate of return in the estimated equations is, however, more difficult to account for. From investors' point of view, it is the former rate of return that is generally the more relevant measure of profitability.

[2] When the saving ratio was regressed on both the rate of profit and the rate of growth in the same estimating equation, the latter dropped out of significance at the conventional levels. The greater explanatory power of the former is all the more remarkable considering the 'noise' element in the figures for profits.

explanatory power of the rate of profit can be due to the reason that it approximates these changes much better than does the actual rate of growth. Further, higher rates of profit may lead to increases in the saving ratio in some other ways in addition to promoting the desired rate of growth. For example, insofar as higher rates of profit mean a more rapid growth of corporate income, the association of higher saving ratios with higher profitability may in part reflect the working of lags in the adjustment of dividend distribution to large short-term increases in income. Supporting evidence for this aspect of corporate appropriation policy was examined earlier. Firms may need to distribute a smaller proportion of an enlarged profit stream to meet their policy objective of a relatively stable level of dividends. By the same token, they may need to raise this proportion when the level of profitability declines subsequently. A related factor is that firms may feel constrained to distribute a higher proportion of their income when profitability is low in order to prevent the reduced profitability from having a sharp depressing effect on the market value of their shares. A stable or increased level of dividends may serve to shore up the share values under such conditions by raising the expectations of investors regarding the future profitability of the firm. This kind of pressure for larger pay-out is reduced when the level of achieved profitability is high.

The above discussion highlights the role of profitability and the demand for funds to finance desired expansion as important influences on corporate saving policy. The operation of this profitability-growth-saving nexus may be examined in relation to the actual time paths of the relevant magnitudes. Table IV.6. gives the pre- and post-tax rates of profit (net of depreciation) on equity assets, the rate of growth of net assets and the net saving ratio for the non-financial corporate sector over the period 1961-75. These series have been estimated on a two-year moving average

TABLE IV.6. Profitability, Growth and Saving in the Non-financial Corporate Sector, 1961-75

(percentages)

Period	Pre-tax net rate of profit on equity assets[a]	Post-tax net rate of profit on equity assets[a]	Rate of growth of net assets[b]	Net saving ratio[c]
1961-3	18.94	11.50	21.33	54.26
1962-4	20.61	13.36	25.24	65.31
1963-5	19.12	13.09	27.88	67.43
1964-6	17.14	12.06	23.10	59.38
1965-7	15.60	11.47	14.26	53.01
1966-8	16.25	12.61	10.42	54.15
1967-9	18.21	13.76	11.71	53.13
1968-70	17.68	12.43	11.96	48.37
1969-71	13.81	8.72	12.23	34.14
1970-2	7.65	3.70	16.65	-26.85
1971-3	8.57	3.99	8.73	-51.40
1972-4	13.05	5.94	5.30	-29.72
1973-5	16.60	8.34	9.52	11.70

Source: Table D.1 and the main data source listed thereunder (namely Balance Sheet Analysis of Joint Stock Companies Listed on Karachi Stock Exchange - various issues).

[a] The two-year average profit rates have been obtained by expressing profits over the two-year period as a proportion of the value of equity assets arrived at by adding equity assets at the middle of the two-year period to an average of the equity assets at the beginning and end of the period (so as to give equal weightage to the opening and closing values).

[b] Two-year average compound growth rate.

[c] Retained earnings over the two-year period expressed as a proportion of the total post-tax net profits over the period.

basis so as to smooth out some erratic, very short-term fluctuations.[1]

We first look at the figures for the Second Plan period. The net saving rate remained around 60 per cent throughout the period, the highest level attained by the rate over the entire fifteen-year period being considered here. The profit series show that the net pre- and post-tax rates of return on equity assets averaged about 20 per cent and 13 per cent respectively, again the highest over the entire period. Associated with these high rates

[1] Comments made earlier regarding the understatement of the reported profit figures should be borne in mind while interpreting the figures shown in the table.

of profitability and saving were extremely high rates of growth, averaging about 25 per cent per annum and representing by far the highest levels recorded during the overall period. This broad statistical picture thus conforms quite neatly to the positive relationship between profitability, growth and saving indicated by our regression results.

It was stated earlier that profitability could induce higher growth rates from both the supply and demand sides. In a study of corporate investment behaviour in Pakistan, using cross-section data, Amjad has concluded that the major inducement during the Second Plan period came from the demand side in the form of high expected profitability on new investments.[1] The supply side, i.e. profits as a source of funds to finance investment, was relatively less important. External funds for investment were available quite readily. This was true in the case of both the foreign exchange and domestic currency loans. The rate of foreign capital inflow was high during this period, and foreign exchange financing was readily available from specialised government institutions at an overvalued official exchange rate. Sizable domestic currency loans were also available from a rapidly expanding banking system, and at extremely low interest rates.

It is an interesting phenomenon that despite the availability of external funds with relative ease and at low cost, the corporate sector saved at very high rates. The explanation lies in the very high rates of growth recorded during this period, induced by high profitability. Both large retained earnings and external funds were needed to finance this growth; a high degree of thrift accompanied a sizable inflow of external funds. It remains, however, an interesting question whether the extent of internal thrift would have been still higher if external finance had not been available so readily and cheaply. This requires a proper examination of

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[1] R. Amjad, 'A Study of Investment Behaviour in Pakistan, 1962-70', Pakistan Development Review, 15(1976), 134-53.

the role of changes in the cost and availability of external finance in retention policy. This is taken up later in this section.

The rate of profit declined during the Third Plan period. Forces underlying this decline included factors such as increasing competition in the industrial sector as a result of increased domestic production, some worsening of the industrial sector's terms of trade vis-a-vis the agricultural sector and a relative increase in the cost of production, particularly towards the end of the period when the promulgation of a new wage policy brought about a sizable increase in wage costs. The magnitude of the decline in profitability was not very large, however, as can be seen from the table.

In contrast, there was a sizable fall in the rate of corporate growth. Although part of this fall in the growth rate may be attributable to a growing industrial base as a result of past investments, there is no mistaking the fact that corporate industrial investment slowed down substantially. Since the fall in profit rates over the period was relatively small, a large part of the fall in the rate of industrial investment cannot be attributed to falling profitability. The major problems arose on the supply side. The principal development in this respect was a sharp curtailment in the availability of foreign exchange for industrial investment, primarily as a result of the suspension of all foreign assistance in the wake of the 1965 war with India. Although the aid flow was resumed a couple of years later, the receipts fell much short of the Plan target and the foreign exchange constraint on industrial investment remained quite severe. The restricted supply of foreign exchange loans from government financial institutions to finance the import content of industrial investment meant that the corporate growth rate remained substantially below that recorded during the Second Plan period despite the fact that the level of profitability did not compare very unfavourably with that in the preceding period. There was also some tightening of the domestic credit situation.

Another relevant factor was the widespread political and industrial agitation towards the end of the Third Plan period that brought down the Ayub Government in early 1969. This had a depressing effect on investment activity by adversely affecting investors' confidence.

The fall in the rate of corporate growth is reflected in the behaviour of the rate of corporate saving. The latter fell from an average of about 60 per cent during the Second Plan period to an average of about 50 per cent. It, however, remained high in absolute terms. This may be partly explained by the fact that the rate of growth, though now much lower than before, was still fairly high in absolute terms, exceeding 10 per cent per annum. The pressure of the demand for investment funds on companies' profits, therefore, remained substantial. The tightening of the external finance situation, principally the reduced availability of loans from government financial institutions, meant that a larger proportion of the required funds had to be raised internally. With the increase in the relative importance of internal finance, the influence of profitability on corporate expansion became more important from the supply side than from the demand side. This was in contrast to the situation in the Second Plan period wherein the latter channel of influence was more important.[1]

The corporate financial picture underwent a sharp change during the Fourth Plan period. There was a substantial fall in profitability. Net profit rates during the first couple of years were less than half the levels at the start of the period. There was a combination of influences at work behind this profit squeeze, most of which were a direct product of the political turmoil witnessed during these years that culminated in another war with India and separation of former East Pakistan from the rest of the country. Many companies reported incurring substantial financial

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[1] Amjad's study comes to a similar conclusion, ibid.

losses on account of loss of assets, markets and sources of supply in the former province, and as a result of various kinds of lapses in the functioning of the industrial machinery during the period of the political strife. The matters were made still worse by a growing labour unrest. The wage increases granted towards the end of the preceding Plan period and the substantial devaluation of 1972 exerted a sizable upward pressure on industrial costs that squeezed profits even further. Profits, however, started to pick up again towards the end of the Plan period, and in the final year were back at much the same level as prevailed in the late 1960s. The revival of profits owed much to factors such as the settling down of the economy after the earlier political chaos, a general re-invigoration of economic activity, some lessening of labour unrest and expansion in the demand for exports, both as a result of the devaluation at home and a general upsurge in demand abroad.

The decline in industrial profitability had its effect on industrial investment, as can be seen from Table IV.6, but after a lag. The new Martial Law regime emerging in the wake of the political and industrial strife of the late 1960s had brought about some restoration of industrial order, which led to some increase in industrial investment by revitalising investors' confidence. A part of this relatively higher level of investment continued into the early 1970s. However, with the emergence of new and much greater problems noted above and the consequent decline in profitability, industrial investment slumped to very low levels. This is reflected in the low rates of corporate growth halfway through the Fourth Plan period. A major aggravating influence on investment demand was a continuing threat of nationalisation. The scope and time-schedule of the government nationalisation programme started in 1972 was left unclear. When profitability began to pick up towards the end of the Plan period, and the Government sought to allay investors' fears about possible future nationalisation, corporate investment also showed a significant recovery.

Table IV.6 shows that the decline in corporate profitability and investment demand is amply reflected in the change in the corporate saving ratio. The ratio fell drastically and was negative during most of the Plan period. Dividend disbursals, on the other hand, were maintained around the levels allowed before the profit squeeze set in. Such was the extent of the fall in net profits that the maintenance of past dividend levels required substantial dissaving. With the revival in profitability and investment demand towards the end of the Plan period, the saving ratio also rose substantially, with most of the increase in profits being retained for investment and/or filling up depleted reserves.

Thus far our analysis of the trends in corporate saving in the country has been carried out largely in terms of three major influences on corporate appropriation policy, viz. profits, investment demand and companies' desire for relatively stable dividends. It will be recalled that in Section IV.1 above, we mentioned several other factors as potentially significant influences on this aspect of corporate policy. The rest of the analysis in this section is an attempt to determine the significance of these other factors in the case in hand. Whereas the influences considered thus far provide a fair account of the broad features of the changing picture with respect to corporate saving,the incorporation of these additional factors into the analysis would contribute to a fuller explanation of the complete time series if they were shown by the analysis to have been significantly related to the dependent variable.

First, the role of corporate demand for funds for purposes other than investment in fixed assets and distribution of dividends. These other purposes include raising adequate funds for meeting the working capital and reserve requirements of the company. Changes in company sales in the recent past have been used in some studies as a proxy for anticipated working capital needs. A sales change variable defined as the change in corporate sales since the previous period (both in absolute and proportional terms)

was tried but it did not yield significant results for our set of data. Measures such as companies' net surplus and net current assets did, however, turn out to be significantly related to corporate saving. Changes in these magnitudes indicate changes in companies' reserve and current financial positions, and hence reflect changes in the extent of their demand for funds for meeting their reserve, working capital and liquidity needs.

Table IV.7 gives the results of the inclusion of these variables in the corporate saving models alongside the profit and expansion requirements (fixed assets) variables. Net corporate surplus comprises reserve funds of various kinds excluding depreciation reserves while companies' net current assets represent the excess of their liquid and other current assets (viz. cash, deposits, securities and stocks) over their current liabilities of various kinds. Both the variables are significantly and negatively (in line with a priori expectations) related to corporate saving, indicating that changes in the companies' reserve and current financial positions exercised a significant influence, alongside other variables, on their decisions regarding retention of profits.

When the net surplus or net current assets variable was used together with the expansion requirements variable defined in terms of total net assets rather than fixed assets only, the former dropped out of significance at the conventional levels (results not shown in the table). This is what one would expect. Since net assets comprise both fixed and current assets, changes in this variable would index changes in corporate demand for funds for expansion that include changes in the requirements for funds not only for the expansion of plant and equipment but also for working capital and reserves that tend to grow alongside physical expansion. It will be recalled that we observed earlier that it was precisely because of this difference that the variable representing growth in total net assets had a greater explan power in the estimated retention functions in Table IV.2 than did the variable representing growth in fixed assets only.

TABLE IV.7. Regression Results for Models including a Variable Representing Corporate Reserve/Current Financial Positions, 1961-75.

$R = \underset{(1.594)}{17.067} + \underset{(5.947)}{0.676P} - \underset{(-4.332)}{0.140S_{-1}}$	$\bar{R}^2 = 0.751$ $DW = 1.179$	(IV-7a)
$R = \underset{(-1.291)}{-21.180} + \underset{(7.561)}{0.786P} + \underset{(2.856)}{2.123I'} - \underset{(-3.556)}{0.103S_{-1}}$	$\bar{R}^2 = 0.848$ $DW = 2.124$	(IV-7b)
$R = \underset{(2.395)}{26.771} + \underset{(5.932)}{0.605P} - \underset{(-4.782)}{0.133N_{-1}}$	$\bar{R}^2 = 0.781$ $DW = 1.207$	(IV-7c)
$R = \underset{(-0.737)}{-12.303} + \underset{(7.452)}{0.729P} + \underset{(2.859)}{2.017I'} - \underset{(-3.938)}{0.099N_{-1}}$	$\bar{R}^2 = 0.865$ $DW = 2.090$	(IV-7d)

where S_{-1} = Net ~~current~~ *corporate* surplus at the beginning of the current period (i.e. at the end of the last period)

N_{-1} = Net current assets at the beginning of the current period

Different kinds of tax considerations could be another important influence on corporate retention policy. Corporate taxation has thus far been taken into account indirectly by using post-tax profits in our estimating equations. As was stated in Section IV.1, empirical studies in the area have found this procedure to be an adequate way of allowing for the influence of corporate income tax on profit appropriation. This is based on the finding that the corporate income tax reduces the level of both retained earnings and dividends by reducing the volume of net profits but has little effect on the retention/pay-out ratio. We ran some regressions incorporating the corporate income tax variable explicitly and they largely confirmed this finding. Inclusion of aggregate corporate tax paid and the effective rate of corporate tax (i.e. aggregate corporate tax paid as a proportion of pre-tax profits) in models using post-tax profits did not make any substantial contribution to the results, though the coefficients on these variables had the expected negative sign and there was some improvement in $\bar{R}^2$'s. When pre-tax profits and the aggregate corporate tax paid were included in the same equation, the positive and negative coefficients (respectively) on the two terms had about the same absolute magnitudes.

Corporate income taxation may, however, influence significantly the retention/pay-out ratio where the tax system includes differential taxation of retained earnings and dividends with the express objective of influencing the disposal of profits. Taxation of retained earnings at rates lower than those applicable to dividends that was in force in the United Kingdom during the 1950s has been shown in some studies to have significantly altered the disposal of profits in the desired direction. In Pakistan, in contrast, several measures were taken by the tax authorities over the period under consideration that sought to encourage dividend distribution at the expense of retention. The objectives underlying these measures were, first, protection of tax revenue by preventing excessive tax avoidance by major shareholders of closely-held companies, belonging to upper income brackets and subject to high marginal rates of personal income tax, through high retention of profits; second, encouraging a broadening of corporate ownership through reducing the locking-up of profits within the same enterprises; and, third, promoting the channelling of funds through the capital market. Included among these measures were the following: (i) In closely-held companies distributing less than 60 per cent of their assessable income as dividends, the undistributed portion was deemed for tax purposes to have been distributed and the proportionate share of each shareholder was taxed at the normal income tax rate. Apart from a few early years, however, the operation of this tax provision remained suspended. (ii) In 1967/68, a 15 per cent rebate in corporate super-tax was allowed to companies on the part of their profits distributed as dividends. This clause remained in force only up to 1969/70. (iii) A 10 per cent surcharge on 'excess' free reserves of companies was levied in 1970/71. (iv) This surcharge was replaced in 1971/72 by an additional tax on undistributed profits - at the rate of 25 per cent for private limited companies and 15 per cent for public limited companies - where dividend distribution was less than 60 per cent of the total company income. This clause was itself withdrawn in the following year in view of

the special financial problems being faced by the companies during that period.

Clearly, an assessment of the impact of these tax provisions on the disposal of corporate profits is extremely difficult. First, none of the above provisions remained in force long enough to allow any systematic quantification of the impact. Second, with tax provisions of different kinds, it is difficult to find a suitable measure of the changing opportunity costs to companies of retention and distribution.

Of the tax provisions listed above, the most important, both in terms of the potential quantitative impact and the number of years of operation, was the concession involving a 15 per cent rebate in super-tax over the period 1967/68 - 1969/70. Over this three-year period, the corporate net saving ratio fell by almost 10 percentage points, from about 56 per cent to about 46 per cent (Table II.12). It appears that the said tax provision probably had a significant hand in this relatively sharp decline in the saving ratio. It is difficult to say much beyond such a conjecture.[1]

However, one form of the influence of tax differentials on the disposal of corporate profits for which we were able to obtain some representative quantitative estimates is what was referred to in Section IV.1 as the 'tax-shelter' hypothesis. As in many other countries, capital gains have been taxed in Pakistan at rates substantially lower than those applicable to ordinary personal income (which includes dividend income). The extent of the differential has, however, varied with time. The possibility that

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[1] Another tax measure with a potentially significant influence on the disposal of profits, albeit in the other direction, was the abolition in 1960/61 of the system of giving a partial credit to shareholders, at the time of taxation of dividend income, for the income tax paid by the company (though this was partially compensated by the granting of a tax-exempt allowance on dividend income). Haq and Baqai (op. cit., p. 300) consider this tax change to have significantly influenced the corporate pay-out policy at that time.

this differential may have been a significant influence inducing high retention ratios in the country has been recognised in some studies, though without any formal testing.[1] It has also been one of the motivations behind the various tax measures described above that sought to restrict 'excessively' high retention and encourage dividend distribution.

To test the tax-shelter hypothesis, it is necessary to derive a measure of the incentive to retain profits provided by the tax differential. One such measure could be the absolute difference between the marginal tax rates on ordinary income and capital gains, i.e. $t_y - t_g$. An alternative measure could be the ratio $(1-t_g)/(1-t_y)$, measuring the ratio of disposable income per unit of income from capital gains to disposable income per unit of ordinary personal income. Both of these measures were tried in our regression models. In addition, t_y was tested alone in some models. All three measures were expected to be positively related to retained profits.

As income tax rates rise with income levels under progressive taxation, another measurement problem is choosing a level, or levels, of income to which the relevant marginal tax rates should relate. One possible solution in this regard would be to use marginal tax rates derived as weighted annual averages of the rates applicable at different income levels, the weights being the shares of the respective income classes in the total stock ownership. These rates would indicate the tax saving for shareholders as a whole attainable by a proportionate reduction in dividends. Tax rates relating to top income groups may, however, be of greater relevance on account of the generally predominant influence of these groups on corporate policy. This consideration appeared particularly relevant in the present case in view of the highly skewed distribution of corporate stock ownership in the country and the generally close identity that existed over the period examined between major stockholders and managements. In view of these considerations, tax rates on top income brackets were chosen for use in the regression models. Since choosing any one level of income would have an

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[1] See Haq and Baqai, op. cit., pp. 297-301, and Final Report of the Taxation Commission (1974), op. cit., pp. 69-70.

element of arbitrariness, marginal tax rates relating to three different income levels at the top end of the income-tax scale[1] were separately tested in the models to minimise the risk of the statistical outcome being determined largely by an arbitrary selection of a single income level.[2]

All the above measures of the tax-shelter variable turned out to be significant at the 5 per cent level in virtually all the estimated models, carrying the expected positive coefficients. This was true both when net corporate saving was regressed on the tax-shelter variable along with net profits as well as when an investment demand variable was also added to the model. Some representative regression results are given in Table IV.8. These results provide strong confirmation of the view expressed by the tax authorities and other observers in the country that considerations about the personal tax liabilities of shareholders, especially major shareholders, have been a significant influence on corporate appropriation policy.

The choice of different levels of income for measuring the tax variable made little difference to the regression results. The variable was significant at the 5 per cent level no matter which of the three selected income levels was used as the basis for measuring it, and yielded roughly similar $\bar{R}^2$'s. Since the marginal tax rate series at these income levels were quite closely correlated, this was expected.

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[1] Statutory marginal tax rates at annual taxable income levels of Rs.40,000, Rs.60,000 and Rs.70,000 were used in the derivation of the tax-shelter measures. It may be noted that there are no statutory marginal tax rates as such in Pakistan on personal income from capital gains. Income from capital gains arising out of the sale of stocks and shares is taxed at the respective marginal rates on ordinary income, but after an initial percentage exemption that has been changed from time to time. Marginal tax rates on personal capital gains, t_g, used here are those that are implicit in this taxation scheme. Thus, for example, if capital gains are taxed at the respective marginal rate on ordinary income, t_y, after an initial exemption of one-third of such income, the implicit t_g is one-third of t_y.

[2] Derivation of the overall (weighted average) marginal rates was in any case ruled out by the fact that no data were available on the distribution of corporate stock ownership in the country by income classes.

TABLE IV.8. Regression Results for Models including a Tax-Shelter Variable, 1961-75

$R = \underset{(-2.838)}{-144.707} + \underset{(4.383)}{0.568P} + \underset{(2.796)^{y}}{1.865t}$	$\bar{R}^2 = 0.579$ DW = 1.356	(IV-8a)
$R = \underset{(-2.718)}{-58.642} + \underset{(4.600)}{0.671P} + \underset{(2.820)^{y-g}}{0.735t}$	$\bar{R}^2 = 0.582$ DW = 0.992	(IV-8b)
$R = \underset{(-3.000)}{-144.410} + \underset{(5.004)}{0.706P} + \underset{(1.912)}{1.369I} + \underset{(2.346)^{y}}{1.540t}$	$\bar{R}^2 = 0.710$ DW = 1.261	(IV-8c)
$R = \underset{(-4.706)}{-92.086} + \underset{(6.768)}{0.841P} + \underset{(3.221)}{1.837I} + \underset{(3.645)^{y-g}}{0.805t}$	$\bar{R}^2 = 0.772$ DW = 1.244	(IV-8d)
$R = \underset{(-3.872)}{-169.375} + \underset{(5.910)}{0.719P} + \underset{(2.924)}{2.446I'} + \underset{(2.659)^{y}}{1.735t}$	$\bar{R}^2 = 0.795$ DW = 2.062	(IV-8e)
$R = \underset{(-6.087)}{-98.059} + \underset{(8.173)}{0.862P} + \underset{(4.565)}{3.001I'} + \underset{(3.654)^{y-g}}{0.681t}$	$\bar{R}^2 = 0.852$ DW = 2.562	(IV-8f)
$R = \underset{(-3.154)}{-56.329} + \underset{(5.594)}{0.663P} + \underset{(2.861)}{1.352g} + \underset{(2.044)^{y-g}}{0.512t}$	$\bar{R}^2 = 0.745$ DW = 1.273	(IV-8g)
$R = \underset{(-3.828)}{-59.433} + \underset{(6.576)}{0.708P} + \underset{(3.824)}{2.092g'} + \underset{(1.712)^{y-g}}{0.397t}$	$\bar{R}^2 = 0.813$ DW = 1.978	(IV-8h)

where t_y = Statutory marginal tax rate on ordinary income[a] (%)

t_{y-g} = Difference between statutory marginal rates of tax on ordinary income and capital gains

[a] In the regression results shown in this table and elsewhere in this chapter, both t_y and t_{y-g} are measured at the taxable income level of Rs.60,000 per annum. The same variables measured at the taxable income levels of Rs.40,000 per annum and Rs.70,000 per annum yielded roughly similar results (see text).

Another point to note is that the tax rate on ordinary personal income alone was able to produce highly significant results. The more complex measures based on the differential between the tax rate on ordinary income and the tax rate on capital gains generally yielded higher $\bar{R}^2$'s than did the former alone, but the difference was not large. To determine the relative significance of the capital gains factor in the tax-shelter effect, the capital gains tax alone was tried in some regression models. The results (not shown in Table IV.8) were much weaker than those for the ordinary income tax and tax differential variables. $\bar{R}^2$'s were appreciably lower and the capital gains variable was only weakly significant

at the 10 per cent level (the variable consistently carried the expected negative sign). These results indicate that the level of the tax rates on ordinary personal income is the major factor in determining the strength of the incentive to forego current dividend income for the sake of tax saving.[1]

The relatively weaker influence of the level of capital gains taxation appears to reflect the real picture with respect to the operation of this tax. Current decisions regarding higher retention for the purpose of tax avoidance may be taken without much concern for the tax liability associated with the ultimate realisation of capital gains that may accrue as a result. For one thing, the capital gains tax can be deferred for as long as realisation is avoided. Evidence shows that only a small proportion of capital gains is realised in practice.[2] The tax is escaped completely on transfer of the stock to one's heirs. In Pakistan, this also holds good for transfer by gift. A related consideration is the relative ease with which capital gains generally go unreported.[3]

The relatively weaker effect of the capital gains tax on retention policy is also reflected in the lower size of the coefficient on the tax variable when it is defined as the difference between the rates of tax on ordinary income and capital gains than when it is defined to represent only the level of the former.[4] An increase of one percentage point in the

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[1] A similar finding is reported by Brittain, op. cit., pp. 88-9.

[2] Based on the U.S. data, a study by Bailey found that generally about 80% of capital gains remain unrealised (M. Bailey, 'Capital Gains and Income Taxation', an unpublished paper cited in Brittain, op. cit., pp. 88-9).

[3] Even in a developed country such as the U.S., it has been reported that as much as one-third or more of the individual taxpayer capital gains goes unreported (cf. H.H. Hinrichs, 'Unreporting of Capital Gains on Tax Returns or How to Succeed in Gainsmanship Without Actually Paying Taxes', National Tax Journal, 17(1964), 158-63.

[4] This was reflected also in the results of the models involving only the capital gains tax.

difference between the two taxes is indicated to have a greater influence on retained earnings when this increase results solely from an increase in the rate of the ordinary income tax than when it is caused by a combination of changes in the rates of both the taxes.

Next we examine the results of the regressions run to test the influence on retention policy of factors associated with the external finance situation facing the enterprises. We saw in Section IV.1 that there existed some evidence in support of the hypothesis that changes in the cost and availability of external finance, which provides an alternative to internal finance (i.e. retained earnings) for financing planned expansion, could exercise a significant influence on retention behaviour.

The cost side of external finance was tested by plugging into the saving models some measures of the interest cost to the corporate enterprises of medium-to long-term borrowed funds. Three different measures of interest cost were tried, namely the annual yield on long-term government bonds, the weighted average rate of interest on all types of scheduled bank advances and the weighted average rate of interest on scheduled bank advances secured by machinery and similar fixed business assets.[1] All three measures, however, yielded closely similar results, reflecting the more or less parallel time trends in them. For this reason, some representative regression results for models including an interest rate variable shown in Table IV.9 relate only to one of these interest rate series, namely the weighted average rate of interest on scheduled bank advances secured by fixed industrial assets.

Another point to be noted about the interest rate variable in these results is that this variable has been defined in real terms, the real interest rate on borrowed funds having been derived from the corresponding nominal rate by subtracting from the latter the annual rate of increase in

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[1] In all three cases, the annual figures used were averages of the respective quarterly figures.

TABLE IV.9. Regression Results for Models including an Interest Rate Variable, 1961-75.

$$R = \underset{(-1.645)}{-18.514} + \underset{(4.518)}{0.618P} + \underset{(2.841)}{1.384r_f} \qquad \bar{R}^2 = 0.585 \quad DW = 0.675 \quad \text{(IV-9a)}$$

$$R = \underset{(-2.817)}{-29.726} + \underset{(5.331)}{0.646P} + \underset{(2.354)}{1.238g} + \underset{(1.785)}{0.843r_f} \qquad \bar{R}^2 = 0.726 \quad DW = 0.898 \quad \text{(IV-9b)}$$

$$R = \underset{(-3.739)}{-38.391} + \underset{(6.311)}{0.688P} + \underset{(3.277)}{2.002g'} + \underset{(1.483)}{0.665r_f} \qquad \bar{R}^2 = 0.801 \quad DW = 1.732 \quad \text{(IV-9c)}$$

$$R = \underset{(-2.892)}{-51.626} + \underset{(5.316)}{0.762P} + \underset{(2.114)}{2.355I'} + \underset{(1.528)}{0.834r_f} \qquad \bar{R}^2 = 0.708 \quad DW = 1.155 \quad \text{(IV-9d)}$$

$$R = \underset{(-3.985)}{-82.555} + \underset{(6.935)}{0.844P} + \underset{(2.490)}{1.529I} + \underset{(2.631)^{y-g}}{0.655t} + \underset{(1.204)}{0.542r_f} \qquad \bar{R}^2 = 0.782 \quad DW = 1.155 \quad \text{(IV-9e)}$$

where r_f = Weighted average rate of interest on scheduled bank advances secured by machinery and other fixed business assets, reduced by the rate of change in the wholesale price index (%)

the national wholesale price index. Nominal interest rates were also tried but they all gave unsatisfactory results. The coefficients on these rates were consistently negative, contrary to what one would normally expect. Real interest rates, on the other hand, yielded relatively much better results, with consistently positive coefficients. This difference could be due to both statistical and behavioural factors. Nominal interest rates are subject to a higher degree of collinearity with other nominally defined variables than are real interest rates. On the behavioural side, the borrowing decisions may turn chiefly on the real rather than nominal cost of funds - especially during periods of relatively rapid price changes, which is true of the later half of the period under consideration.

Examining the results in Table IV.9, we see that the real interest rate variable is significant at the 5 per cent level when added to the simple bivariate relationship between profits and retained earnings. However, the serial correlation present in the bivariate relationship is not removed by the inclusion of this variable. When other explanatory variables such as the ones representing the demand for funds for expansion and the tax-shelter effect are added to the model, the interest rate variable is not

able to meet the competition from the rival variables and drops out of significance at the conventional levels. It, however, remains consistently positive in regression models involving different combinations of these variables, with the value of its coefficient in most cases around 1.5 times the standard error.

On the whole, these results point to a relatively weak correlation between changes in the real cost of borrowed capital and the behaviour of corporate retained earnings. The weak correlation may partly reflect statistical difficulties; it is perhaps asking for too much to expect to find many variables significant in the same estimating function when the total number of observations is relatively small, such as in the present case. There may also be some questions about the representativeness of the interest cost measures used in the regressions. There are, however, other factors which provide an explanation as to why the interest cost factor could be a relatively weak influence on retention policy. These factors are related to the actual trend in interest rates in the country and to the general financial picture with respect to industrial financing. Interest rates generally remained much below the level of industrial profitability and such changes as took place in the former did not normally make much more than a marginal difference to the relative levels of the two. With interest rates at low levels, the scale of corporate reliance on borrowed capital appears to have been conditioned much more by the availability of funds than by their cost. This was particularly true in the case of foreign currency loans which financed the import content of industrial investments. These loans were available from specialised financial institutions, to enterprises which had been successful in securing appropriate government clearances, not only at low interest rates but also at an exchange rate which remained heavily overvalued till the devaluation of 1972. Under these conditions, even the relatively weak correlation between interest rate

changes and retention behaviour shown by the regression results would appear either largely fortuitous or a reflection chiefly of the influence of changing conditions with respect to the availability of external funds (partly captured by the interest rate changes) rather than their cost.

Of course, if interest rates were flexible, changes in the availability of loanable funds would be duly reflected in the changes in the rates. One would then not have to speak separately of the effects on retention policy of the cost and availability of funds, for one would also imply the other - high interest rates implying tight money and capital market conditions and vice versa. The interest rate policy in Pakistan has, however, been one of relatively rigid interest rates fixed by a combination of directives from the central bank and mutual agreements between the leading commercial banks. The rates have in general been kept much below the levels that would clear the financial markets by equating supply and demand. Under such a scheme of slowly changing and artificially depressed interest rates, the availability of funds relative to the demand for them could change quite substantially, with only a part of it getting reflected in the changes in the rates. Such changes in the supply and demand situation with respect to loanable funds for industrial uses could result from several factors such as, on the supply side, changes in the amount of funds available with specialised financial institutions for making foreign currency loans following changes in the volume of foreign capital inflow, changes in the supply position in respect of local currency loans following changes in the financial resources of the banking system and in its investment policy, and, on the demand side, changes in the general level of investment activity in the industrial sector.

If the weak correlation between the interest rate variable and retained earnings in the above results could be attributed largely to the fact that changes in interest rates reflected only partially the changes in the availability position with respect to external finance, then one would expect to find a stronger correlation between the external finance

situation and retention policy if the availability factor could be captured more accurately by an alternative regressor. We used net long-term borrowing of the corporate enterprises during a year as one such regressor. Since we have seen that the use of external finance remained an attractive proposition from the cost side throughout the period, with interest rates generally at levels at which the demand for external funds substantially exceeded the supply, changes in the actual scale of long-term borrowing may be expected to reflect fairly well the changes in the availability position with respect to long-term external finance.

Regression results presented in Table IV.10 show that unlike the interest rate variable, the new external finance variable is significantly related to retained earnings when used as a regressor along with profits and a variable representing the state of corporate expansion requirements. The relation bears the expected negative sign. This shows that given the level of profits and expansion requirements, the availability of larger volumes of long-term funds externally induced a greater reliance on such funds and a reduction in internal financing. An increase in the long-term borrowing by one unit is shown to have been associated with a reduction in retained earnings of about one-fifth of a unit, indicating the order of the substitution of one form of financing for the other. Thus, whereas both external and internal funds may be needed jointly to finance rapid industrial expansion, such as was witnessed during the Second Plan period, our results show that changes in the availability conditions with respect to the former did have a significant substitution effect on the latter.

These results are in line with the view expressed above that external finance conditions appear to have influenced corporate retention policy more from the availability than cost side. Equation IV-10c in the table shows that the external finance inflow variable remains significant even when the regression model is expanded to include some additional regressors such as the tax-shelter variable.

TABLE IV.10. Regression Results for Models including an External Finance Inflow Variable, 1961-75

$$R = \underset{(-2.364)}{-21.897} + \underset{(4.393)}{0.467P} + \underset{(4.948)}{2.559g} - \underset{(-2.638)}{0.209EF} \qquad \bar{R}^2 = 0.787 \quad DW = 2.234 \qquad \text{(IV-10a)}$$

$$R = \underset{(-3.067)}{-51.874} + \underset{(4.647)}{0.659P} + \underset{(3.295)}{3.670I} - \underset{(-2.245)}{0.280EF} \qquad \bar{R}^2 = 0.648 \quad DW = 1.651 \qquad \text{(IV-10b)}$$

$$R = \underset{(-5.852)}{-95.082} + \underset{(7.884)}{0.816P} + \underset{(4.285)}{3.218I} + \underset{(3.687)}{0.695t_{y-g}} - \underset{(-2.365)}{0.202EF} \qquad \bar{R}^2 = 0.844 \quad DW = 2.213 \qquad \text{(IV-10c)}$$

where EF = Net long-term borrowing during the current year, estimated as the difference between the values of total long-term liabilities (to be discharged after a period of more than a year) outstanding at the beginning and end of the year [a]

[a] It should be noted that this measure is somewhat biased by the transfer of maturing long-term liabilities to the short-term category.

Finally, a few words about the role of company characteristics such as size, the nature of the ownership-management relation, and capital structure. Evidently, to determine the place of these factors in corporate dividend and retention behaviour, one needs an analysis based on detailed cross-section data. In the case of factors such as the nature of ownership and control, the required company-wise information stretches well beyond what is available in published company accounts. A proper consideration of these factors was, therefore, out of the question in the present analysis based entirely on time-series data. At any rate, since these factors change relatively slowly, they are much less important than the ones considered above in explaining changes in corporate appropriation policy over a period of the length of ours. The debt-equity ratio, a prominent feature of companies' capital structure, was tried in some regressions but the results were found, not surprisingly, to be uniformly unsatisfactory.

Some relevant evidence is, however, available in some existing studies in the country, though this relates only to the question of company size. In an early study of industrial establishments in the city of Karachi,

Ranis found that average retention ratios of firms in different size groups did not differ significantly.[1] This supports the general finding in the literature in this regard. Some indirect evidence to this effect is also provided by White's study of industrial concentration in the country.[2] Among his several results comparing the performance of the group of companies quoted on the Karachi Stock Exchange that were owned by the country's leading industrial families and the group of companies quoted on the Exchange that were owned by other private entrepreneurs, one related to their saving behaviour and showed that the difference between the two groups in this respect was insignificant. Since the former group of companies were on average much larger in size than the latter, this piece of evidence is in line with Ranis' finding.

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1 G. Ranis, Industrial Efficiency and Economic Growth: A Case Study of Karachi, Karachi, The Institute of Development Economics, Monographs in the Economics of Development, No. 5 (1961), p. 21.

2 White, op. cit., pp. 153-4.

CHAPTER V

SOME ADDITIONAL ISSUES, POLICY IMPLICATIONS AND CONCLUSION

The preceding chapters have been concerned with an analysis of saving behaviour in Pakistan over the period 1950/51 - 1976/77, using the detailed estimates of saving developed in Part II of the thesis. Major trends in saving in the country were examined in Chapter II, both at the national and sectoral levels. The sectoral classification employed divided the national economy into three sectors, viz. non-corporate private sector, corporate sector and government sector. Also in Chapter II we looked at the structure of saving and changes in it over time. This involved an examination of changes in the sectoral composition of saving and of changes in the composition of saving within sectors. The latter included an examination of the changing asset-structure of saving in the non-corporate sector and of the changing institutional origin of saving in the rest of the economy comprising the corporate and government sectors.

The saving behaviour of the non-corporate and corporate sectors was analysed in detail in Chapters III and IV respectively. The analysis was based on a quantitative evaluation of the role of various possible determinants of saving, using time-series data. The functional relationships estimated were discussed and related to the actual time paths of the relevant variables. Available evidence based on cross-section data was examined in the case of some factors which could not be incorporated into the quantitative exercise either because of lack of proper data or because of the time-series nature of the exercise.

In Section 1 of this chapter we assess the role of some additional potentially significant influences on saving behaviour that have not so far been included in our analysis. These are,first, foreign capital inflow and the substitutability between national and foreign savings; second, fluctuations in export earnings and,third, taxation and the substitutability between private and public savings. A proper consideration of these factors

requires that they be examined in relation to the overall savings picture in the economy and, in the case of the last of these factors, with regard to possible trade-offs between private and public sector savings. Since the functional analysis in the preceding chapters focused almost exclusively on the saving behaviour of the private non-corporate and corporate sectors, the consideration of these factors was put off until this point.

Section 2 of the chapter contains the major findings of our analysis of the saving behaviour in the country and includes a summary discussion. The discussion involves an assessment of the importance of these findings and an examination of their policy implications. Some concluding remarks in Section 3 mark the end of the chapter and of Part I (Analysis) of the thesis.

V.1. Some Additional Issues Relating to Saving Behaviour

In the early attempts at modelling the effect of foreign capital inflows on capital accumulation and growth in developing countries, a common assumption made was that foreign resources were fully additive to domestic savings such that investment in the recipient country would increase by the full amount of the inflow. There were also suggestions in the literature that the inflow of foreign resources might even induce an increase in domestic savings by, say, alleviating the foreign exchange constraint on domestic investment activity, and thereby increase investment by more than the full amount of the inflow.[1]

Empirical tests carried out later, on the other hand, tended to show a negative correlation between domestic savings and capital inflows.[2] In

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[1] The early approach is exemplified by studies such as Rosenstein-Rodan, 'International Aid for Underdeveloped Countries', Review of Economics and Statistics, 43(1961), 107-38; and H.B. Chenery and A. Strout, 'Foreign Assistance and Economic Development', American Economic Review, 56(1966), 679-733.

[2] See, for example, A. Rahman, 'Foreign Capital and Domestic Savings: A Test of Haavelmo's Hypothesis with Cross-Country Data', Review of Economics and Statistics, 50(1968), 137-8; K.B. Griffin and J.L. Enos, 'Foreign Assistance: Objectives and Consequences', Economic Development and Cultural Change, 18(1970), 313-27; K.B. Griffin, 'Foreign Capital, Domestic Savings and Economic Development', Bulletin, Oxford University Institute of Economics and Statistics, 32(1970), 99-112; T. Weisskopf, 'The Impact of Foreign Capital Inflow on Domestic Savings in Underdeveloped Countries', Journal of International Economics, 2(1972), 25-38, and Singh, op. cit.

some studies this negative correlation was interpreted as a causal relationship indicating that capital imports tended to have a negative influence on domestic savings. The rationalisations offered included such technical factors as a short-run shortage of investment opportunities that causes foreign capital partially to pre-empt potential savings by local investors and such behavioural responses as a relaxation of the domestic savings effort, e.g., less governmental effort to collect taxes, induced by the availability of large amounts of external funds on soft terms.[1] Others reasoned that no such rationalisations were perhaps required as the negative correlation could simply mean that a part of capital imports was being used for consumption, with little or no reduction in the proportion of domestic resources saved and invested. It was pointed out that since domestic savings were defined as domestic investment less capital imports, the use of a part of capital imports for consumption would show up as a reduction in domestic savings by definition, i.e. even if no reduction took place in the domestic savings effort following the suggested causal mechanisms. It was further noted that the allocation of a part of capital imports to current consumption was entirely consistent with a rational social welfare function as a society would be expected to regard both current and future consumption as normal goods.[2]

Although the two interpretations differ widely, they both contradict the assumption made in the early models that capital imports were fully additive, or even complementary, to domestic savings. We should, however, note that the empirical evidence has been much less than uniform. Although

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[1] See Rahman, op. cit., and Griffin, op. cit.

[2] See, for example, the discussion on Griffin op. cit., in 'Foreign Capital, Domestic Savings and Economic Development: Three Comments and a Reply', Bulletin, Oxford University Institute of Economics and Statistics, 33(1971), 135-61. See also, G.F. Papanek, 'The Effect of Aid and Other Resource Transfers on Savings and Growth in Less Developed Countries', Economic Journal, 82(1972), 934-50, and W.T. Newlyn's 'Comment' on the Papanek paper in Economic Journal, 83(1973), 867-9.

most of the studies have reported a negative correlation between capital inflows and domestic savings, the values of the estimated coefficients have varied substantially, and so have their levels of statistical significance. The estimated relationship has been found to be statistically insignificant in several cases. These differences have been particularly pronounced in the case of studies using time-series data for individual countries. Positive regression coefficients have also been reported, though such cases have been few and generally statistically insignificant.[1] On the whole, the variability of the statistical results points to the need for a proper analysis of individual country experience. Even though the weight of the existing evidence supports a negative correlation, such an analysis is needed to determine the magnitude and significance of the correlation for individual countries.

Pakistan has been one of the larger recipients of foreign resources. The rate of inflow was relatively small during the 1950s, averaging about 3 per cent of GNP. It also showed a good deal of variation from year to year. There was a substantial increase in the inflow during the early 1960s. During the first half of the decade, the inflow of foreign resources averaged about 7 per cent of GNP. There was a fall in the rate of inflow in the second half of the decade. Foreign aid remained suspended for some time in the wake of the 1965 war with India and the subsequent resumption took time to get under way. The resource inflow over the period still averaged about 5 per cent of GNP. The political crisis in former East Pakistan in the early 1970s led to a sharp fall in the inflow. During the first three years of the period, the resource inflow amounted to less than 2 per cent of GNP. It, however, jumped up again in the mid-1970s as the dust of the crisis began to settle down and aid flows were resumed. The rate of inflow over this period was as high as it was in the early 1960s, averaging about 7 per cent of GNP.

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[1] See, for example, K.L. Gupta, 'Foreign Capital and Domestic Savings: A Test of Haavelmo's Hypothesis with Cross-Sectional Data: A Comment', Review of Economics and Statistics, 52(1970), 214-16.

To determine the quantitative impact of external resources on saving in the country, we regressed the national saving rate on annual net capital inflow expressed as a proportion of GNP, first alone and then in combination with some other regressors. The regression results are shown in Table V.1. Net capital inflow was estimated as being equal to the deficit on current account of the balance of payments. Since the overall inflow is composed of resources of different kinds with potentially different impact on the domestic economy, the ideal arrangement would have been to disaggregate the overall inflow into its major components and estimate their impact separately. However, this was not possible as the relevant breakdown of the overall figures was not available. Another point to note is that the regression results do not cover the 1950s. The reason for this is that the breakdown of the national current account deficit between former West and East Pakistan could be obtained only for the period 1959/60 onwards.

It will be seen that the results are marred by serial correlation when the regressors include only the capital inflow variable and per capita real income. The results improve substantially with the addition of some other regressors which were tried in the earlier chapters and were found to be significant. When the rate of growth of real income is added to the estimating equation, the capital inflow variable appears significant at the 10 per cent level, with a coefficient of about -0.3. The inflow variable, however, becomes insignificant with the addition of other variables such as the rate of inflation or the real rate of interest. The inference to be drawn from these results is that when the various possible determinants of saving are considered together, the inflow of foreign capital does not appear to have exercised any major influence on the overall propensity to save in the country. The coefficient on the inflow variable remains consistently negative, suggesting that some of the external resources probably did go into consumption, but becomes

TABLE V.1. Foreign Capital Inflow and National Saving: Regression Results, 1959/60 - 1976/77.

$$\frac{(S)}{(Y)_n} = \underset{(11.037)}{12.322} \underset{(-1.221)}{- 0.218 \frac{F}{Y_n}} \qquad \bar{R}^2 = 0.028 \text{ (V-1a)}, \quad DW = 1.049$$

$$\frac{(S)}{(Y)_n} = \underset{(4.004)}{17.145} \underset{(-1.166)}{- 0.008 Y^*_n} \underset{(-1.576)}{- 0.299 \frac{F}{Y_n}} \qquad \bar{R}^2 = 0.049 \text{ (V-1b)}, \quad DW = 1.107$$

$$\frac{(S)}{(Y)_n} = \underset{(3.696)}{13.964} \underset{(-1.038)}{- 0.006 Y^*_n} \underset{(2.707)}{+ 0.385 \frac{(\Delta Y)}{(Y)_n}} \underset{(-1.874)}{- 0.298 \frac{F}{Y_n}} \qquad \bar{R}^2 = 0.331 \text{ (V-1c)}, \quad DW = 1.547$$

$$\frac{(S)}{(Y)_n} = \underset{(2.428)}{8.412} \underset{(0.903)}{+ 0.005 Y^*_n} \underset{(2.184)}{+ 0.259 \frac{(\Delta Y)}{(Y)_n}} \underset{(-3.109)}{- 0.168 \frac{\Delta P}{P}} \underset{(-0.319)}{- 0.050 \frac{F}{Y_n}} \qquad \bar{R}^2 = 0.587 \text{ (V-1d)}, \quad DW = 1.786$$

$$\frac{(S)}{(Y)_n} = \underset{(3.185)}{10.365} \underset{(0.093)}{+ 0.001 Y^*_n} \underset{(2.395)}{+ 0.284 \frac{(\Delta Y)}{(Y)_n}} \underset{(2.981)}{+ 0.163 r} \underset{(-0.689)}{- 0.099 \frac{F}{Y_n}} \qquad \bar{R}^2 = 0.572 \text{ (V-1e)}, \quad DW = 1.715$$

where F/Y_n = Net foreign capital inflow expressed as a proportion of national income (%)

Y^*_n = National real per capita income

$\frac{(\Delta Y)}{(Y)_n}$ = Rate of growth of real national income (%)

statistically insignificant when confronted with additional competing regressors.[1,2]

The evidence thus appears to indicate that the country was able to channel most of the capital inflow into investment. Any utilisation of foreign resources for consumption purposes (or substitution of foreign savings for domestic savings) that might have taken place was relatively

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[1] Regressions were also run with the level, rather than the rate, of national saving as the dependent variable, but the results were not found to be much different. The capital inflow variable became insignificant as additional explanatory variables were included in the estimating equation.

[2] In another attempt at testing the relationship between saving and capital inflow in Pakistan, Ahmed and Ahmad found the coefficient relating the national saving rate and net capital inflow (expressed as a proportion of GNP) to be positive but statistically insignificant. The study covered the period 1959/60 - 1969/70 and related to Pakistan including former East Pakistan [see M. Ahmed and E. Ahmad, 'A Test of Griffin-Enos Hypothesis for Pakistan', Pakistan Economic and Social Review, 12(1974), 27-33]. For a good general account of the role of foreign capital inflow in the economic development of Pakistan, see Nurul Islam, 'Foreign Assistance and Economic Development: The Case of Pakistan', Economic Journal, 82(1972), 502-30.

insignificant.[1] The result thus diverges from the general empirical finding of a significantly negative correlation between domestic savings and foreign capital inflow. It lends support to the observation made above that the existing evidence was insufficient for making any firm generalisations about the said relationship and that a proper analysis thereof required individual country studies.

Another point to be noted is that in order to assess the significance of foreign capital inflow as an influence on saving in recipient countries, the proper method is to test the variable in the presence of other potentially competing variables in a multivariate regression analysis. Simple regressions including only one or two independent variables can give grossly misleading results. Our regression results have shown that the capital inflow variable appeared significant when the only other variables in the estimating equation were national income variables. It became insignificant when other variables such as the rate of inflation and the rate of interest were also added to the estimating equation. Clearly, in the absence of the latter variables, their effect was being falsely picked up by the inflow variable. Most of the empirical studies in the area have

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[1] The effect of capital inflow on the national propensity to save might actually have been positive on balance. To the extent the inflow of capital exercised a significant positive influence on the rate of growth of income in the country, a part of the strong positive correlation between the growth rate and the propensity to save in the regression results would be attributable to this factor, and this positive effect of capital inflow on savings through income growth might have more than offset whatever substitution took place between the inflow and domestic savings. It is, however, difficult to say much about the possible strength of such an effect. The growth-inflow relationship depends on many factors; these include not only the size of the inflow itself and the proportion thereof channelled into investment but also several other factors such as the efficiency, factor intensity and gestation period of the investment projects financed with foreign funds as well as the effect of foreign financing on the overall pattern of resource allocation in the economy. Ahmed and Ahmad found this relationship to be insignificantly different from zero in the case of Pakistan (op. cit.). Their study, however, employed only simple bivariate regressions of income growth on inflow, which renders the results unreliable. In order to quantify the growth-inflow relationship properly, what is needed is a multivariate analysis including several growth determining variables. (A similar point is made below regarding the specification of savings models for testing the savings-inflow relationship.)

included only one to two independent variables, which renders their results rather doubtful. Attempts at a proper multivariate analysis incorporating the capital inflow variable have been very few to date.[1]

Another hypothesis relating domestic saving to transactions with the rest of the world that has been tested in the literature is that the former is positively related to export earnings. Results reported by Maizels[2] for a cross-section of developing countries showed that a better explanation of variations in savings in these countries was obtained (i.e. higher R^2's) if the aggregate income variable was decomposed into export and non-export incomes. He hypothesised that the marginal propensity to save in these countries was higher in the export sector than elsewhere (the coefficient on the export-income component was higher than that on the non-export income component). No reason, a priori or otherwise, was, however, given for expecting such a difference. Another explanatory factor pointed out by Maizels was that government revenue (and hence government savings) depended heavily on taxes on the export sector in many developing countries. In a subsequent study, Lee[3] reran Maizels' regressions, using a larger sample of countries. His statistical results were similar to those of Maizels. In another study, Chenery and Eckstein[4] reported a positive and significant correlation between domestic saving and the export/GNP ratio. They attributed the result chiefly to the role of exports as a source of foreign exchange to finance the import content of investment.

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1 See Singh, op. cit., for an example.

2 A. Maizels, Exports and Economic Growth of Developing Countries, Cambridge, Mass., Harvard University Press, 1968.

3 J.K. Lee, 'Exports and the Propensity to Save in LDC's', Economic Journal, 81(1971), 341-51.

4 H.B. Chenery and P. Eckstein, 'Development Alternatives for Latin America', Journal of Political Economy, 78(1970), 966-1006.

We ran some regressions on the Pakistan data using export earnings as an independent determinant of saving. Both the Maizels-Lee and Chenery-Eckstein formulations were tried. Further, the estimating equations tried involved combinations of the export variable with several other determinants of saving. In no case was the decomposition of national income between export and non-export incomes found to contribute significantly to R^2 nor was the export/GNP ratio found to be statistically significant.[1] The outcome cannot, however, be explained away simply as possibly reflecting a relatively small export sector. Export earnings in the country have averaged around a sizable figure of about 9 to 10 per cent of GNP over the years. Seen in the light of the hypotheses put forward in the literature positing a significant positive relationship between savings and exports, the following observations may be made regarding the statistical outcome. First, there is no clear a priori basis for expecting a higher propensity to save in the export sector than elsewhere in the economy. This issue is largely an empirical one. No significant differential was indicated by our results. Second, although it is true in the case of Pakistan that a sizable proportion of tax revenue comes from export taxes, we shall see below that the overall magnitude of tax revenue itself does not show any significant relationship with saving, be it saving in the government sector alone or in the economy as a whole. Finally, as for the hypothesis that export earnings influence saving by alleviating the foreign exchange constraint, the statistical insignificance of both the export and capital inflow variables indicates the absence of any large influence on saving of the kind postulated by the constraint hypothesis. Both variables remained insignificant when tried together in the same estimating equation. The inference to be drawn from the regression results, therefore, is that the influence of export income on saving over the period examined was sufficiently accounted for by including both the export and non-export incomes in a single income variable.

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[1] And for this reason, the regression results are not reported here.

Finally, we consider the role of taxation. Economists have generally regarded taxation as an important policy instrument for raising the level of savings in developing countries. The literature on development economics is full of exhortations calling for a vigorous use of tax policy to this end.[1]

The empirical evidence on the relationship between saving and taxation has, in contrast, been somewhat mixed. Several studies have reported only a weakly positive, or even a negative, relationship between national saving and taxation. Sectoral results reported by these studies show that the reduction in consumption in the private sector as a result of higher taxation tended to be almost completely, and in some cases more than completely, offset by a rise in government expenditure on consumption induced by the increase in tax revenue.[2] This is sometimes called a 'Please Effect', so named after Stanley Please's hypothesis that increased taxation may fail to raise the level of national saving, and may even reduce it,because of a high marginal propensity to consume by governments out of increased revenues.[3] A much greater number of studies have, however, reported a significantly positive relationship between national saving and taxation; increased public savings as a result of higher taxation have been shown to more than offset the reduction in savings in the private sector caused by reduced post-tax incomes, thereby precluding a 'Please Effect'.[4] Thus,

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1 See, for example, A.T. Peacock and G. Hauser (eds.), Government Finance and Economic Development, Paris, OECD, 1965,and W. Heller, 'Fiscal Policies for Underdeveloped Countries', in R. Bird and O. Oldman (eds.), Readings on Taxation in Developing Countries, Baltimore, Johns Hopkins Press, 1967.

2 See, for example, K. Krishnamurty, 'Savings and Taxation in Developing Countries: An Empirical Study', IBRD, Economics Department Working Paper No. 23, August 1968, and L. Landau, 'Differences in Saving Ratios Among Latin American Countries', unpub. Ph.D. thesis, Harvard University, 1969.

3 See, S. Please, 'Savings Through Taxation - Mirage or Reality?', Finance and Development, 4(1967), 1-10,and S. Please, 'The Please Effect Revisited', IBRD, Economics Department Working Paper No. 82, July 1970.

4 See, for example, E. Morss, 'Fiscal Policy, Savings and Economic Growth in Developing Countries: An Empirical Study', IMF Departmental Memoranda, DM/68/43, July 1968; Singh, op. cit., and J.F. Brothwell, 'Government Finance', in Newlyn (ed.), op. cit.

whereas the evidence is divided, the weight of the evidence appears to support the view that the level of savings in an economy can be increased through increased taxation. But one thing that has emerged very clearly from the divided nature of the evidence is that merely an increase in taxation would not achieve the desired end; the tax increase has to be coupled with financial discipline in public expenditure policy so that the increased revenue is not frittered away on increased public consumption.

In order to determine the influence of taxation on saving in Pakistan, we estimated several savings functions including a tax variable, e.g. the tax/GNP ratio, among the regressors. Some representative results are reported in Table V.2. It will be seen that the tax variable consistently carries a negative sign. It is, however, statistically insignificant in all cases. These results indicate that changes in the level of taxation in the country did not have any significant effect on aggregate saving. If anything, the effect was weakly negative.[1]

This does not, however, necessarily imply a 'Please Effect'. Similar regressions were run separately for saving in the overall private sector and the government sector. The tax variable was found to be consistently insignificant in both sets of regressions, though it carried the expected negative sign in the case of private sector saving and the expected positive sign in the case of government sector saving. These results (not reported here) indicated that the insignificance of the tax variable in the aggregate savings function was a reflection of the general insignificance of the level of taxation as an influence on saving in the economy rather than of a mutual cancelling out of two opposing and significant effects on saving and consumption in the private and government sectors (i.e. a 'Please Effect').

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[1] The dependent variable in the reported regression estimates is the aggregate (national) saving rate. Regressions were also run with the absolute level of aggregate saving as the dependent variable and both the tax/GNP ratio and the total tax revenue were alternately tried as regressors. There was, however, little change in the results with respect to the tax variable; it remained negative and statistically insignificant.

TABLE V.2. Taxation and National Saving: Regression Results, 1950/51 - 1976/77

$$\frac{(S)}{(Y)}_n = 6.163 + 0.026Y^*_n - 0.896 \left(\frac{T}{Y}\right)_n \qquad \bar{R}^2 = 0.184 \text{ (V-2}$$
$$(1.665)\quad (1.993)\quad (-1.041) \qquad DW = 1.075$$

$$\frac{(S)}{(Y)}_n = 3.763 + 0.016Y^*_n + 0.395 \left(\frac{\Delta Y}{Y}\right)_n - 0.344 \left(\frac{T}{Y}\right)_n \qquad \bar{R}^2 = 0.352 \text{ (V-2}$$
$$(1.101)\quad (1.292)\quad (2.693)\quad (-0.433) \qquad DW = 1.447$$

$$\frac{(S)}{(Y)}_n = 1.979 + 0.025Y^*_n + 0.227 \left(\frac{\Delta Y}{Y}\right)_n - 0.156 \frac{\Delta P}{P} - 0.438 \left(\frac{T}{Y}\right)_n \qquad \bar{R}^2 = 0.480 \text{ (V-2}$$
$$(0.630)\quad (2.173)\quad (1.549)\quad (-2.571)\quad (-0.615) \qquad DW = 1.480$$

$$\frac{(S)}{(Y)}_n = 3.113 + 0.021Y^*_n + 0.248 \left(\frac{\Delta Y}{Y}\right)_n + 0.151r - 0.440 \left(\frac{T}{Y}\right)_n \qquad \bar{R}^2 = 0.459$$
$$(0.993)\quad (1.864)\quad (1.681)\quad (2.349)\quad (-0.605) \qquad DW = 1.447$$

where $\frac{T}{Y}_n$ = Total tax revenue expressed as a proportion of national income (%)

We saw in Chapter II that resources mobilised in the country through taxation formed a much smaller proportion of national output than those found in many other developing countries. This was particularly true in the case of direct taxation which remained as low as around 2 per cent of GNP. Although the overall tax/GNP ratio did show some variation, these variations took place within a rather narrow range. Over the period of about three decades under review, the ratio showed a trend increase of barely three percentage points whereas the country's GNP increased considerably. Under these conditions, the insignificance of taxation in the time profile of saving in the economy should cause little surprise. Saving in the private sector was largely unaffected as the tax net covered only a small proportion of the population. The tax rates at high income levels were quite steep but the tax was blunted in practice by a number of concessions and exemptions. As for government saving, we saw in Chapter II that apart from some years in the 1960s, it behaved quite erratically, determined largely by changes on the expenditure side; changes in public outlays - particularly on defence, general administration and subsidies - tended to be large in relation to changes in public revenues that were weighed down by a narrow-based and inelastic tax system.

The above thus shows that the insignificance of the tax variable in the regression results should not be construed as indicating the inefficacy of taxation as a policy instrument for mobilising savings. No serious attempt was made in the past to employ taxation as a major means to this end. Most of the changes made in the tax laws focused on the allocative function of taxation (e.g. manipulation of tax rates and allowances with a view to favouring certain groups and activities in the economy) rather than on its resource-mobilising function. The regression results, therefore, in no way plead against the use of tax policy as an important instrument for mobilising resources for development, e.g. resource mobilisation through a vigorous tax reform to raise public revenues by broadening the tax base and plugging the many existing holes in the tax structure. On the contrary, they show that little can be achieved in the way of resource mobilisation via taxation short of such a reform.[1]

V.2. Major Findings and Their Policy Implications

No systematic analysis of saving behaviour in Pakistan has been attempted in the past. One major reason for this has been a lack of proper data on saving. What we have done in this study is first to compile a consistent set of time series of saving in different sectors of the economy, covering almost the whole of the post-Independence period, and then use these time-series data to analyse the dynamics of national saving behaviour.

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[1] Government savings are generally defined, as in this study, following the conventional definition of investment expenditure, i.e. outlays on items such as physical construction and equipment. This leaves out a large part of government expenditure which contributes to the process of development but which does not fall under the conventional definition of investment, e.g. public outlays on education and health. Thus, even if a sizable growth of tax revenue does not lead to any commensurate increase in national savings conventionally defined, there may still take place a significant increase in the overall 'development effort' in the economy if private consumption expenditure, especially luxury consumption, is replaced by public 'consumption' expenditure on such activities (cf. Brothwell, op. cit.).

This section contains a summary discussion incorporating the major findings of our analysis of past saving behaviour in the country. The discussion relates these findings to the structure and course of the Pakistan economy, its institutional arrangements and past policy framework, and assesses their importance. Also, on the basis of an examination of the policy implications of these findings, a critical view is taken of the mix of policies employed in the past and some suggestions are made for the reform of public policy in the future.

Our examination of the trends in saving revealed that a slow upward drift was discernible in the national saving rate if the period under analysis i.e. 1950/51 - 1976/77, is viewed as a whole. It was, however, observed that this weak upward tendency disappeared completely if a few early years of the period (over which the rise in savings and investment could be regarded as having been due largely to certain basic institutional developments in a new economy) were left out and the attention focused on the period of planned development only, starting with the First Five-Year Plan in the year 1955/56. Although the rate of saving fluctuated a good deal over the latter period stretching over more than two decades, and these fluctuations were of both a very short-term (i.e. year to year) and medium-term (i.e. sustained over a period of a few years) character, the changes in the rate took place around a more or less horizontal secular trend. The failure of the saving rate to show a sustained increase occurred despite a substantial increase in real per capita income over time. Over the length of the period of planned development, real per capita income rose by almost one-half. The absence of any significant secular increase in the saving rate also occurred despite the fact that raising the national saving rate was one of the foremost objectives of the planning strategy pursued. The result, therefore, casts serious doubts on the efficacy of this strategy, as we shall

see further below. Moreover, it was observed that the average rates around which the changes occurred were a good deal lower in Pakistan than those found in a number of other countries at roughly comparable levels of per capita income.

Disaggregating national saving by sectors indicated that an overwhelming proportion originated in the non-corporate (or household) sector. The average contribution of this sector over the years has been around three-fourths of the total. This is what one would expect in the case of an economy such as Pakistan's with a predominantly large agricultural sector and a large proportion of commercial, trading and manufacturing activities in the hands of household establishments or other small-scale unincorporated businesses. The share of the corporate sector in national saving was shown to be still quite small in comparison, though substantially higher than what it was at the beginning of the period. It rose from about 5 per cent in the early 1950s to about 15 per cent in the mid-1970s, the increase reflecting the growth in the relative size of corporate activity in the economy. This growth has been associated primarily with growth in large-scale manufacturing, though corporate participation in non-manufacturing activities has also registered a sizable increase. The contribution of the government sector was indicated to have been quite variabl It was relatively stable during the 1960s, averaging around 15 per cent of the total, which roughly matched the share of the sector's tax and non-tax revenues in GNP. Outside this period, it varied a great deal and was often very low, even negative.

The time path of savings generated by each sector was analysed separatel The analysis took into account several variables in an attempt to identify major determinants of sectoral savings behaviour and thereby to account for the behavioural changes that took place over time. Some hypotheses were

also examined in relation to overall national saving, or in relation to both sectoral and national savings. These concerned some important variables that may influence saving on an economy-wide basis; and, in some cases, differently in different sectors.

Major findings with respect to the saving behaviour of the non-corporate private sector may be noted first. The main determinant of saving in the sector was, of course, the level of the sector's disposable income. However, the relationship between the sector's average saving rate and real per capita income was found to be very weak. It was weakly positive when the period 1950/51 - 1976/77 was considered as a whole, but broke down completely when the regressions were restricted to the period of planned development only, i.e. 1955/56 - 1976/77. The non-corporate sector being the predominant source of savings in the country, the absence of any sustained increase in the national rate of saving over the latter period despite a sizable increase in national per capita income mainly reflected the failure of the sector's saving rate to rise secularly with an increase in the sector's per capita income.

The permanent income model emphasising short-term adjustment lags between income and expenditure gave a better explanation of the year-to-year changes in the sector's saving than did the simple Keynesian model based on current income only. The propensity to save out of transitory income was found to be much higher than that out of permanent income, indicating that large and rapid increases in household income have a positive impact on the rate of saving. The rate of growth of income was also tried directly in the regressions and was found to be a highly significant determinant of the rate of saving in the sector. It was, however, stressed that the positive correlation between the two might not be attributable solely to short-term adjustment lags as hypothesised by the permanent income model, for high rates

of income growth could contribute to raising the saving rate in developing economies in several other ways as well. It appears that the sharp acceleration of income growth that took place during the early- and mid-1960s was a major factor behind the peak saving rates then recorded. The latter must in turn have helped to strengthen the former. By the same token, the slowing down of income growth towards the late 1960s and a further deceleration in the early 1970s (the period of the country's gravest political crisis) appear to have been important factors in causing the saving rates to fall appreciably from their earlier peak levels. This suggests a need to maintain the momentum of growth in the economy over a period of years so as to bring into play a sustained and mutually complementary relationship between savings and income growth.

The much better performance of the permanent income model than that of the simple current income hypothesis and the high significance of the rate of income growth as an influence on the propensity to save appear to be closely related to the structure of the Pakistan economy. Economic activity in the country is dominated by self-employed people, a very large proportion of whom are farmers. The incomes of this occupational category are subject to a relatively high degree of variability. In the case of farmers and other self-employed rural operatives, in addition, the consumption levels have a substantial traditionally determined component, which means that the overall level of consumption of this group responds relatively slowly to variations in income in the short run. These two factors together make for a relatively greater importance of variations in income as an influence on national saving behaviour. They give rise to relatively large savings out of transitory increments in income and, by the same token, relatively large reductions in savings in the case of transitory decrements in income.

The above is supported by some evidence available for countries with

a broadly similar economic structure. For example, several studies of India have reported that the hypothesis of a positive differential between the propensities to save out of transitory and permanent components of income gives comparatively much better results for the rural sector.[1] Unfortunately, this could not be tested directly in this study because separate series on incomes and savings in the rural and urban sectors are not yet available in Pakistan. It will, however, be recalled that we observed in Chapter III that a major factor behind the jump in saving rates in Pakistan in the early- and mid-1960s was a sharp acceleration in the growth of income in the agricultural sector after a period of near stagnation in the 1950s. This is consistent with the point made above and indicates that the pattern of income growth in this sector is of pivotal importance in the overall relationship between changes in income and saving in the country. An implication of this is that the vicissitudes of weather that have long been a major determinant of year-to-year variations in agricultural output constitute an extremely important influence on the year-to-year behaviour of the national rate of saving.

Issues concerning the distribution of income and household saving behaviour were also examined. Two interesting questions examined in this regard related to the influence of changes in the sectoral, i.e. rural-urban, and functional, i.e. entrepreneurial-non-entrepreneurial, distribution of income. The notion that the propensity to save is higher out of entrepreneurial than non-entrepreneurial incomes and also higher out of urban than rural incomes has been a central element in the planning strategy that was followed in the country in the past. The strategy relied heavily on the urban industrial sector for the realisation of its objective of raising the national rate of saving. A key element in the strategy was an indirect redistribution of resources from the massive rural/agricultural sector to a relatively small

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[1] See, for example, Choudhury (1968), op. cit., and Gupta (1970b), op. cit.

urban entrepreneurial class engaged in the large-scale industrial sector, through such devices as the manipulation of intersectoral terms of trade. The favoured sector was further supplied with a host of financial incentives to encourage saving and reinvestment on a large scale out of the enhanced incomes in the sector.[1]

As the relevant income distributions were not available in the country's national accounts, the distributional questions could not be examined within the framework of the general time-series analysis of the sector's savings function. Reference was, however, made to some available evidence from cross-section data. The evidence indicated that given proper investment opportunities, the propensity to save in rural areas could be as high as, or even higher than, the propensity to save in urban areas. It was noted that the notion of a relatively much higher urban propensity to save had very little *a priori* basis and was not supported by any firm statistical evidence. Indeed, as just noted, the most impressive increases in the growth rate and the rate of saving in the country actually coincided with the period of the most dynamic growth in the agricultural sector, *i.e.* the 1960s. Thus the policy of favouring

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[1] For a detailed description of the rationale of the planning strategy employed and of its various policy instruments, see M. ul Haq, *The Strategy of Economic Planning*, Karachi, Oxford University Press, 1963; G.F. Papanek, *Pakistan's Development: Social Goals and Private Incentives*, Cambridge, Mass., Harvard University Press, 1967, and the various Five-Year Plan documents. (Of course, the strategy employed did not exhibit a uniform character all along. It did undergo variations with time. The policy-mix discriminated against the agricultural sector far more strongly in the 1950s than in subsequent years. However, it remained subject to an urban industrial bias throughout.) For the actual extent of the movement in intersectoral terms of trade against agriculture, see S.R. Lewis (Jr.), 'The Effects of Trade Policy on Domestic Relative Prices: Pakistan, 1951-65', *American Economic Review*, 58 (1968), 60-78, and S.R. Lewis (Jr.), 'Recent Movements in Agriculture's Terms of Trade in Pakistan', *Pakistan Development Review*, 10 (1970), 381-92. Some studies have also attempted a quantification of the resource transfer from agriculture, and in all of them it has been found to have been very substantial: See K.B. Griffin, 'Financing Development Plans in Pakistan', *Pakistan Development Review*, 5 (1965), 601-30; S.R. Lewis (Jr.), *Pakistan: Industrialisation and Trade Policies*, London, Oxford University Press, 1970, Chapters IV and VI; and S.K. Qureshi, 'The Strategy of Development Financing: A Case Study of Pakistan, 1949-69', unpub. Ph.D. thesis, Harvard University, 1974.

industry at the expense of agriculture was in error insofar as it was premised on arbitrarily assumed differentials in sectoral saving propensities.

As for the functional distribution of income, there is a substantial amount of evidence indicating that the propensity to save tends to be higher out of entrepreneurial than non-entrepreneurial incomes. This is also supported by whatever cross-section evidence is available in Pakistan. There is, however, little basis for assuming, as the government policy seemed to do, that a high propensity to save out of entrepreneurial incomes is a phenomenon that existed mainly in the modern industrial sector dominated by big business. The basic factor behind the general finding of higher saving out of entrepreneurial incomes is a close link between the saving and investment decisions of the entrepreneurial groups. As these groups are directly involved in the process of investment, their saving behaviour is substantially and favourably influenced by their direct access to profitable investment opportunities. This should be as true in the case of small entrepreneurs as in the case of large entrepreneurs, and also as true in the rural sector as in the urban sector. There is little a priori basis for positing a different response of savings to investment opportunities between them.

That access to profitable investment opportunities stimulates saving calls for a diffusion of such opportunities in the economy so as to secure vigorous participation of a broader section of the population in the national savings effort rather than their concentration in one sector of activity. The income-redistributive/resource-transferring framework that underlay the public financial strategy was thus quite misconceived. Policies employed to promote investment by the favoured groups had a depressing influence on investment opportunities, and hence on saving propensities, elsewhere in the economy. That there was no substantial increase in the national saving

rate over the entire period of planned development shows that these policies had little success in raising the overall propensity to save in the country, which was their prime objective. What is more, they appear to have been positively counter-productive. First, these policies encouraged accumulation in a relatively small sector of the economy at the expense of discouraging accumulation in other sectors, especially in agriculture - by far the most important sector of production. Second, since the redistributive mechanism mainly worked indirectly through manipulation of prices, the resulting price distortions led to considerable efficiency losses in the allocation of resources. This depressed both the generation of savings (through arresting income growth) as well as their real social value in use (through misallocation of investment).[1] Third, by concentrating on intermediation between savers and investors based on indirect income transfers, these policies also had a depressing effect on savings by divorcing rewards from the act of saving (more about this below). Fourth, whereas the policies thus met with little success in achieving their savings objective, they led over time to a substantial increase in inequalities of income and wealth. These played a major role in the political turmoil which surfaced in the country towards the end of the 1960s and continued into the 1970s. The political instability

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[1] Power and Khan have drawn attention to one particular aspect of how the allocative biases of the development strategy employed affected savings adversely. The industrial structure that emerged under the policy of aggressive industrialisation was dominated by industries producing consumer goods for the local market, a natural consequence of the policy of restricting the import of consumer goods through import quotas and high tariff walls and, at the same time, ensuring a cheap supply of foreign industrial capital goods by allowing these goods to be imported liberally at a highly overvalued exchange rate. This led to a bias in public policy towards 'consumption liberalisation'. The output-mix in the industrial sector was not consistent with a high-savings policy ; full utilisation of the installed industrial capacity required maintaining consumer demand at a high level [see A.R. Khan, 'Import Substitution, Export Expansion and Consumption Liberalisation : A Preliminary Report', Pakistan Development Review, 3 (1963), 208-31, and J.H. Power, 'Industrialisation in Pakistan : A Case of Frustrated Take-off', Pakistan Development Review, 3 (1963), 191-207].

during and after the period of turmoil had a strong adverse effect on private sector investment in the economy, especially in the industrial sector (the very thing that the policies had sought to promote).[1]

The policy in the future should aim at broadening the base of entrepreneurial savings in the country. In a developing country, it is necessary to open up as many avenues and sources of initiative and enterprise as possible. This would require a change in intersectoral and intrasectoral priorities from the pattern of the past. There is a need to promote investment opportunities, and hence entrepreneurial savings, in the sectors which have suffered from the policy biases of the past. Of prime importance is promotion of investment opportunities in agriculture. Farmers have in the past shown a vigorous responsiveness to available opportunities for profitable farm investment. This was most prominently illustrated in the 1960s by the scale of their investment in tubewell irrigation. Investment opportunities in agriculture can be expanded and broadened through ensuring that the return on agricultural investment is not artificially depressed by price twists created by biases in public policy, and through complementary public investment programmes, rural credit schemes and land reform. In semi-urban and urban areas, saving and investment by entrepreneurs engaged in small- and medium-scale manufacturing activities would be encouraged if they are not discriminated against, as they were in the past, in such matters as the availability of complementary external finance, import licences, etc.

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[1] The strategy of development financing followed in the past, especially its reliance on indirect redistributive mechanisms, has been the object of criticism in several other studies as well : See K.B. Griffin and B. Glassburner, 'An Evaluation of Pakistan's Third Five-Year Plan', Journal of Development Studies, 2 (1965/66), 431-59; A.H.M.N. Chowdhury, 'Some Reflections on Income Redistributive Intermediation in Pakistan', Pakistan Development Review, 9 (1969), 95-110; Nulty, op. cit.; S.N.H. Naqvi, Egalitarianism versus Growthmanship, Karachi, Pakistan Institute of Development Economics, 1971; and K.B. Griffin and A.R. Khan, (eds.) Growth and Inequality in Pakistan, London, Macmillan, 1972, esp. Introduction and Parts I and IV.

An important finding of this study is a strong positive correlation between the real return on financial assets and household saving. The real rate of interest on bank deposits was found to exercise a strong effect on household saving in financial assets. The evidence also indicated a significant complementary effect of financial asset accumulation on investment in real capital assets, à la McKinnon's hypothesis.

The real rate of return on financial assets is an especially important influence on saving behaviour in the case of those groups in the population which, either because of resource constraints or because of vocation or tradition, do not normally invest directly in physical capital goods, e.g. wage-earners and the salaried middle class. This is particularly true of small savers among these groups, for whom practically the only means of earning some return on their modest savings is either to deposit them with commercial banks or to invest them in small postal savings deposits or certificates, both of which carry fixed nominal yields. In addition, the importance of financial assets such as commercial bank and postal deposits as instruments of saving in Pakistan, and hence of the real rate of return on these assets, has increased substantially over time with the spread of banking facilities. Increasing amounts of rural savings in excess of farmers' own investment requirements have taken the form of interest bearing deposits.

The evidence in favour of a complementary effect of financial asset accumulation (following an increase in the real rate of return on such assets) on investment in real capital assets reflects the predominance in the country's economy of household entrepreneurs and small unincorporated business units with limited access to external finance for financing planned real investment. Since self-finance is the dominant means of financing investment for these entrepreneurs, an increase in the real rate of return on financial

assets stimulates both financial and real asset accumulation; higher financial savings enlarge the conduit of self-finance for later investment in real capital assets. Higher financial savings channelled through the financial system also serve to stimulate real investment where the latter was previously constrained by a lack of outside funds. Our evidence has shown that although a predominant part of the impact of a change in the real rate of return on financial assets in the past took the form of a positive change in financial asset accumulation, a sizable part thereof took the form of a complementary change in real asset accumulation.

The policy actually followed in Pakistan, however, has been one of low interest rates. The rates were kept substantially below the equilibrium level. As the nominal rates were low and were adjusted upward only by small amounts at discrete intervals, the real return on financial assets became negative whenever there was even a moderate increase in the rate of inflation. The low interest rate policy was justified on the ground that it was necessary for promoting investment, especially industrial investment. There was also a general presumption that a rise in interest rates would have little effect on overall savings in the economy as all that would happen would be a portfolio adjustment in favour of interest-bearing financial assets.[1]

The investment argument is unpersuasive given the conditions that prevailed. At the going interest rates, there was always a very wide margin between the cost of borrowing and the return on industrial investment. Even a substantial increase in interest rates would have had little effect on investment demand. True, some investment would have been curtailed, but only because that investment was sub-marginal; this would have been more than compensated by new investment as other and more profitable investment projects

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[1] See S.A. Meenai, Money and Banking in Pakistan, 2nd Edition, Karachi, Royal Book Company, 1977, Chapter XII.

previously starved of funds would have been able to proceed.

The major beneficiary of the low interest rate policy was the urban industrial sector. As interest rates were kept well below the equilibrium level, the allocation of the limited funds channelled through the financial system was left to be determined largely by arbitrary influences and decisions. In this scheme of non-price rationing, it was no wonder that big industrial businesses were able to monopolise a disproportionately large share of the available funds. The tendency towards concentration of credit was further strengthened by an intimate interlocking of the ownership of big industrial and banking concerns which existed till 1974 when the latter were nationalised.[1] This led to a gross misallocation of investible funds; whereas funds were made available indiscriminately to big industrial businesses, many much more profitable investment opportunities in agriculture and small-scale industry remained untapped because the required amount of outside funds could not be secured. The process of accumulation in these sectors was consequently arrested. The low cost of borrowed capital was also a significant factor in distorting industrial factor proportions in the direction of excessive capital intensity. The low interest rate policy thus depressed rather than stimulated overall investment activity and growth of income in the country.

The level of investment was also depressed as savings were kept low. Our results contradict the presumption that higher interest rates would have had little effect on the overall level of saving. Our finding is that whatever changes did take place under the low interest rate policy in the real return available to savers on financial assets were strongly and positively correlated with the overall level of saving, i.e. including both financial and real asset

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[1] This oligopolistic interlocking of ownership was in fact a major factor behind the policy of keeping interest rates well below the free market level.

accumulation. This correlation can be expected to be even stronger for sizable increases in the real rate of return on commonly held financial assets such as bank deposits. The policy of keeping interest rates low for the supposed benefit of investment in one sector had a serious depressing effect on saving in the economy at large by penalising the savings effort of a large mass of small and medium savers in urban areas and rural farmers and other operatives with surplus funds who supplied the bulk of the total savings in loanable funds. It also depressed saving in the form of accumulation of financial balances by small entrepreneurs whose investment plans are to a large extent subject to the constraint of self-finance, thus hurting both financial savings and real investment. In addition, the low, often negative, real return on financial assets had an adverse effect on the productivity of savings as a significant proportion of savings that would otherwise have flowed into productive investment through the financial system was instead diverted into direct use by the savers in assets such as jewellery, stocks of consumer durables and real estate.

The low interest rate policy was an integral feature of the overall financial strategy followed in the past. Resources were transferred in favour of the industrial sector both through manipulation of prices and through the financial system. The sectors from which resources were transferred by definition received no return on the savings exacted from them in the form of income losses through adverse changes in relative prices. The return on the voluntary savings of these sectors in financial assets was also kept very small through low interest rates. On both counts, the sacrifices imposed on these sectors showed up as excess profits in the favoured sector.

We have seen that this strategy failed to bring about the desired increase in the propensity to save in the country. Not only that, it tended to depress forces that would otherwise have worked in the direction of raising

the national saving propensity as the level of per capita income rose. It also entailed substantial losses in terms of both strict economic efficiency and general social welfare. An alternative to this strategy of income-redistributive intermediation is provided by financial intermediation. The case for the latter is supported by the evidence and discussion in this study. This would involve letting the financial system perform the task of channelling resources from the surplus saving sectors to the centres of investment, a task that was previously sought to be accomplished in large part through indirect income-redistributive intermediation working via manipulation of prices and other discriminatory financial policies. The central element in this scheme would be a substantial increase in interest rates to levels reflecting the real opportunity cost of investible resources to the society. Reform of the present structure of interest rates in this direction is a prerequisite for establishing strong institutional links for financial intermediation between savers and investors. It will induce more voluntary savings through promising a higher return on financial assets, bringing more funds into the financial system and thereby broadening its base. The enlarged resources of the system will be allocated at a price reflecting the scarcity value of these resources, raising the efficiency of investment financed with them. The dismantling of arbitrary non-price rationing practices will let investible resources flow into areas previously neglected despite their potential for highly profitable investment schemes, thus stimulating the previously depressed processes of accumulation there and linking them with a unified economy-wide financial framework for the allocation of surplus investible resources. Such a financial reform would promote both saving and the efficiency of investment, securing the channelling of resources between savers and investors without iniquitous income-redistributive distortions in the economy. It would link reward with the act of saving, unlike the strategy

in the past whereby the latter was to a large extent divorced from the former as a major part of the return from the process of accumulation accrued not to those making the real sacrifices, i.e. savers, but to other groups favoured by the artificial redistributive mechanisms.

A sizable institutional framework has emerged in the financial sector over the years. There has been a substantial growth of banking. Banks have also spread into the rural areas with time. The degree of monetisation in the economy has increased. Our examination of the asset-structure of household savings showed that the share of financial assets in the total had risen and that the sector was thereby making more resources available for investment through the financial system. However, inadequate return on financial savings and a highly unequal and inefficient distribution of credit have prevented this institutional development in the financial sector from making its due contribution to the process of saving and investment. Financial growth that actually took place in the economy, and its contribution to the process of accumulation, would have been substantially greater had the policies followed been not so repressive of the reward for financial asset accumulation and not so arbitrarily discriminatory in the allocation of credit.[1] Financial reform along the lines indicated above is necessary both for making a fuller use of the institutional development that has already taken place in the financial field in the past and for further broadening its scope.

The financial asset portfolio of the sector was found to have been changing in favour of earning assets. The share of non-earning assets such

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[1] That the policies in the past restricted financial growth in the country is vividly illustrated by the fact that Shaw has used this policy framework as a prototype in his discussion of repressive financial policies followed in some developing countries. The prototype is captioned 'a Pakistan Strategy'. The sector which such policies are designed to favour, because it is assumed to possess certain special qualifications for leading the process of accumulation, is captioned 'a Karachi-like sector' (see Shaw, op. cit., Chapter 4).

as currency and demand deposits has fallen. Most of the relative increase in earning assets has come about through a relative shift in household deposit holdings in favour of interest-bearing time deposits. The share of assets such as shares and bonds in the overall portfolio has also increased, but it remains quite small. The market for corporate shares has grown in size but most of the transactions are confined to institutional investors and big entrepreneurial groupings. Corporate stock ownership has remained highly concentrated. Some measures were taken in the past to make companies raise the proportion of their new share flotations offered to the general public and thereby broaden the base of stock ownership, but with only limited success. For its part, the response of the general public to whatever opportunities of participation there were was generally very encouraging. This was particularly true in the case of investment-trust units and mutual-fund certificates floated by government sponsored agencies set up to promote public participation in the growth of corporate stock. Most of the mutual-fund issues offered were heavily oversubscribed. The vigorous nature of the public response to the opportunities available in the past calls for more concerted efforts in the future to widen the base of stock ownership. This will nct only stimulate savings but also contribute to a reduction of existing inequalities. Substantial progress can be made in this direction through encouraging a broad-based participation in the new flotations of companies whose management has been taken over by the Government under the nationalisation programme, and through further extending the scope of public institutions for capital investment.

There is also a need for developing the market for bonds. So far very little progress has been achieved in this direction. Transactions in bonds are to a large extent confined to gilt-edged securities and the market is almost entirely made up of institutional investors. In developing the market

for transactions in convertible bonds issued by non-government institutions, a major role can be played by public financial institutions through properly regulating the issue of capital and through providing adequate guarantees and underwriting support so as to build up the confidence of potential investors. Public institutions already set up in the country for this purpose will be able to play a more effective role in developing the capital market under a reformed financial policy that promises an adequate return on financial investment than they could in the past under the repressive regime of artificially depressed interest rates. The nationalised industrial units can contribute to this development by placing their new bond issues through the stock market.

It needs to be stressed that measures designed to promote the market for financial assets of various kinds are important since one major factor keeping the propensity to save low in countries with relatively under-developed financial systems is a lack of attractive instruments of saving. Our results have shown a strong positive relationship between financial asset accumulation and the overall level of household saving. Financial asset accumulation also contributes to raising the productivity of savings by making resources that might otherwise have been expended on relatively unproductive self-use to flow through the financial system to much more profitable investment outlets. That financial deepening in the system contributes actively to the promotion of saving and investment is an important relationship supported by the results of our analysis.

Inflation was found to have been strongly and negatively related to household saving. This was so despite the fact that the rate of inflation generally varied within a fairly moderate range of values. The explanation for this is to be found in the policy of keeping nominal interest rates low. At these low rates, which were adjusted upward only infrequently, even

relatively moderate increases in inflation were enough almost completely to erode the modest nominal return available on financial savings. The adverse effect of inflation on household financial savings more than counterbalanced any positive effect it might have had through its resource-redistributive effects. In order to take into account the composite effect on saving of redistribution of income through inflation both within the overall private sector as well as from the private to the public sector, the dependent savings variable was redefined by adding the corporate and government sector savings to household savings, but the coefficient on the inflation variable remained negative and highly significant. This indicates that the effect of inflation on saving was negative on balance not only in the household sector but also in the economy as a whole. Indeed, this should be intuitively obvious in the case of Pakistan. Since the household sector accounts for as much as three-fourths of the total annual saving in the country, it is difficult to imagine that the effect of a variable on saving in the economy as a whole could be positive if its effect on the household sector saving was strongly negative.

Some inflation may be an ineluctable concomitant of growth and structural change. The actual rate of inflation at any point in time is determined in addition by the precise orientation of the public financial policy being pursued and by cyclical swings in supply and demand. The inference to be drawn from the results of the present study is that financial policy should seek to ensure a reasonable real return to savers on their financial investments. To achieve this, it is necessary to follow a flexible interest rate policy, one that allows the nominal rates to adjust in line with the rate of inflation.

The above discussion of household saving behaviour in Pakistan and its implications for public policy was based on the findings of our examination of the trends in the level and structure of household saving in Chapter II

and our detailed analysis of the household savings function in Chapter III. The functional analysis in Chapter III left out some demographic and cultural factors that can also significantly influence the household propensity to save. These include factors such as the burden of dependency in the population, the prevalence of the extended family system, etc. There were two main reasons for this. First, the determination of the influence of these factors requires a detailed cross-section analysis at the household level whereas this study has used aggregate (sectoral and national) time-series data. Second, these factors change rather slowly over time; they are, therefore, not as important as the factors included in the discussion are in the context of the present study concerned with an analysis of the time path of savings in the country. They do, however, have a definite place in an explanation of the average level of the propensity to save in an economy over time as compared with that in another economy. There is evidence to the effect that a rapid growth of population, such as has taken place in Pakistan, depresses the saving propensity by raising the dependency ratio and constraining the growth of per capita income.[1] Evidence also exists to the effect that cultural institutions such as the extended family system commonly found in the rural sectors of developing countries also have a depressing effect on the habit of thrift.[2] Clearly, these factors are important. But it is also clear that they change relatively slowly with general development and the spread of education.

Next we examine the major findings with respect to corporate sector saving behaviour. The analysis of the corporate savings function showed profits as being the single most important determinant of corporate saving. Not only

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[1] See, for example, N.H. Leff, 'Dependency Rates and Savings Rates', American Economic Review, 59 (1969), 886-96.

[2] For an interesting and informative account of the effects of different kinds of socio-cultural institutions and attitudes on saving and accumulation, see R.D. Lambert and B.F. Hoselitz (eds.), The Role of Savings and Wealth in Southern Asia and the West, Paris, UNESCO, 1963; see in particular the paper entitled 'Pakistan' by A.F.A. Husain, pp. 245-315.

did the amount saved depend on the volume of profits, but the proportion of the profits saved was also related strongly and positively to the rate of profit. Higher profitability induced larger ploughing back of profits by stimulating investment and thereby raising corporate demand for long-term funds. Other proxies for corporate investment demand such as corporate fixed-investment outlays and rates of expansion were also tried and were found to be strongly related to retention behaviour.

High corporate profits and rates of growth were the major influences behind the peak rates of corporate saving in the 1960s. The profitability-growth-saving nexus also provides the chief explanation for the sharp fall in the rates of corporate retention in the first half of the 1970s. A substantial fall in corporate profits was reported during the political crisis of 1971 and in the following couple of years. The fall in profits had an adverse effect on corporate investment plans. Corporate investment plans were also depressed as a result of uncertainties stemming from the unsettled political and industrial climate in the wake of the events of 1971 and a continuing threat of further nationalisation arising from the Government's nationalisation programme initiated in 1972.

Another important finding was that firms desired a relatively stable dividend policy. There is substantial supporting evidence for this hypothesis relating to advanced industrialised countries, and it appears that in this respect industrial companies in Pakistan tend to behave in quite the same way as companies in these countries. Rapid increases in profits were associated with larger than usual retentions as dividend disbursals were adjusted with a lag. Similarly, the immediate impact of losses was largely borne by retained earnings as firms attempted to maintain dividends at or near the levels allowed in the recent past. This was evidenced most clearly by the behaviour of corporate dividends and retentions in the 1970-75 period. Although there

took place a substantial fall in profits, dividends were more or less maintained at the levels allowed before the profits squeeze set in, with the result that net retentions were negative in some years.

Corporate taxation reduced both retained earnings and dividends by reducing disposable profits but had little effect on the proportions retained or distributed. This is in line with the general finding in the literature on this point. The appropriation of profits was, however, found to be significantly influenced by differentials in the tax treatment of ordinary personal income (including dividends) and capital gains. A relative increase in the rates of tax on ordinary income at the top end of the income scale induced larger retained earnings as this meant greater savings in the personal tax liabilities of the stockholders through retention of profits.

The highly significant relationship between the rates of tax on stockholders' personal income and corporate retained earnings is mainly a reflection of the management-ownership structure of the corporate sector in the country. As noted in Chapter IV, this relationship is expected to be strong where there is a close identity between management and ownership, i.e. in companies run under a predominantly owner-controlled management, and where a high proportion of the corporate stock is concentrated in the hands of a relatively small high-income class. Both these conditions have been characteristic of the corporate industrial sector in Pakistan. Company management has almost invariably been dominated by major stockholders, and an overwhelming proportion of the total stock has been concentrated in the hands of a relatively small group of industrial families and investors. It should be noted that the picture with respect to owner-control of management underwent a significant change towards the end of the period of our analysis as a result of nationalisation of some important industries. The ownership pattern of the privately held stock, however, has so far been little affected by this change.

The cost of external finance did not play a major role in the time path of corporate saving. Interest rates on borrowed capital were found to be only very weakly related to retained earnings. This is what one would have expected given the policy of keeping interest rates low and the existence of a large spread between these rates and industrial profitability. The weak correlation found lends support to the point made earlier that the argument that raising interest rates from their low levels would have hurt industrial investment was ill-founded.

Conditions with respect to the availability (as distinguished from the cost) of borrowed capital did, on the other hand, exercise a significant influence on corporate saving policy. Greater availability of external funds was associated with greater reliance on such funds and lower retention of profits. The large spread between industrial profitability and interest cost made borrowing a highly profitable proposition for firms and rendered their financing decisions, given their overall requirements for funds, quite sensitive to the amount of external funds that they could lay their hands on under the existing regime of non-price rationing of these funds.

This implies that over the range of values that the substitutive relationship between internal and external corporate financing applied, a less liberal credit policy towards the corporate industrial sector would have had little effect on investment in the sector, as greater internal financing would have more or less made good the reduced supply of external finance. The extra funds thus left with financial intermediaries could have been channelled into other areas and activities where the process of accumulation was being constrained by a lack of complementary outside funds, thereby raising total saving and investment in the economy. It would also have contributed to raising the overall productivity of investment in the economy insofar as the easy supply of external finance to one sector was at the expense of comparatively more profitable investment opportunities in

the others. This is in line with the observation made earlier that the excessively liberal credit policy towards large-scale industrial financing in the past had a depressing effect on the overall level and productivity of savings and investment in the economy.

The corporate sector reported net saving rates of around 60 per cent during the 1960s when industrial profit rates were at their peak. These 'high' rates of saving and reinvestment would appear to have justified the highly favoured status accorded to this sector under the planning strategy employed in the past. However, this is not the conclusion which emerges when other considerations are taken into account.

First, the true rates of saving in the sector were in all probability much lower than those reported in the published corporate accounts. The practice of understating profits for the purpose of tax evasion was quite widespread in the sector.

Second, there is the question of the social benefit of the scheme of inducing high corporate savings through high corporate profits. As we noted above, the policy of promoting industrial profitability through manipulating prices and a host of direct financial incentives involved a high cost in terms of the efficiency of production. The inefficiencies of the industrial structure that emerged under this policy have been well documented in several studies. In many cases, the large profits of big industrial enterprises merely represented incomes transferred from the relatively more efficient agricultural sector through the discriminatory policy measures. The very existence of many enterprises depended on the continuation of such artificially raised profits.[1] Clearly, the true

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[1] See, for example, S. R Lewis (Jr.), Economic Policy and Industrial Growth in Pakistan, London, George Allen and Unwin, 1969, and Lewis (1970), op. cit. Some studies came to the conclusion that the contribution to value added of some of the privately profitable industries was negative if outputs and inputs were valued at world (or true opportunity-cost) prices [see R. Soligo and J.J. Stern, 'Tariff Protection, Import Substitution and Investment Efficiency', Pakistan Development Review, 5 (1965), 249-70, and S.R. Lewis (Jr.) and S.E. Guisinger, 'Measuring Protection in a Developing Country : The Case of Pakistan', Journal of Political Economy, 76 (1968), 1170-98].

value to the economy of the amounts saved out of corporate industrial profits and their reinvestment in industrial enterprises was much less than is indicated by their nominal values at distorted domestic prices.[1]

Third, as noted above, some of the policy measures employed to stimulate profits and savings in the industrial sector had a serious debilitating effect on the savings effort in the rest of the economy. The discriminatory policies adversely affected saving and investment in the agricultural and small-scale industrial sectors. The policy of keeping interest rates low discouraged household saving in financial assets. The income loss through inefficiency in resource allocation also meant lower savings. Thus, when we look at the savings picture in the economy as a whole, the gain in savings in the favoured sector appears to have been more than offset by the loss in other sectors. The promotion of savings in one favoured sector was at the expense of discouraging savings in sectors generating the bulk of the country's total savings.

A rapidly expanding corporate industrial sector can make a substantial contribution to saving in an economy by ploughing back a large proportion of its profits. In developing countries, this contribution becomes increasingly important as the relative size of the sector grows with development. In their enthusiasm for exploiting the high saving potentialities of the sector through a rapid growth of the sector inspired by high profits, the planners in Pakistan were led to adopt policies that not only resulted in considerable inefficiency in the industrial structure that emerged but also seriously hurt the urge to save in the less favoured sectors. These policies were also responsible in part for the emergence of a high degree of concentration in the ownership-structure of industrial assets. A

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[1] 'The difficulty with the overall [financial] policy is that it has transferred the saving function to a relatively inefficient producing sector of the economy' [Lewis (1970), op. cit., p. 137].

more balanced approach towards sectoral priorities, one which was more in line with the relative productive efficiency of the different sectors and was less neglectful of the relative sectoral weights in the overall process of accumulation, would have been much less costly on these counts and would, at the same time, have encouraged the growth of an efficient corporate industrial base in the economy, one whose income creation and saving had much greater real value to the economy than was the case under the regime of artificially raised profits.

Some additional policy issues related to corporate saving may be noted here. First, promotion of high retention of corporate profits may be a less efficient way of financing investment than channelling funds through the capital market. The raising of funds for an investment project on the capital market involves competing with the demands made on the market's resources by other investment projects. The financing of investment thus goes through a sieving or selection procedure which serves to block the way of sub-marginal projects. This procedure is missing in the case of financing from retained earnings.[1] On the other hand, a policy of encouraging a larger dividend distribution and directing the distributed profits into investment through the capital market would act to reduce the overall level of savings as not the whole of the increment in distributed profits would be saved and reinvested by the recipients. The corporate retention rate is typically much higher than the personal saving rate.[2] Second,

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[1] Cf. W.J. Baumol et al., 'Earnings Retention, New Capital and the Growth of the Firm', Review of Economics and Statistics, 52 (1970), 345-55, and G. Whittington, 'The Profitability of Retained Earnings', Review of Economics and Statistics, 54 (1972), 152-60. These studies also provide empirical evidence, based on the U.S. and U.K. data respectively, to the effect that investment funds obtained through the capital market are generally used more profitably than are internally generated investment funds.

[2] For an empirical study of the trade-off between corporate retention and personal savings, see M.S. Feldstein and G. Fane, 'Taxes, Corporate Dividend Policy and Personal Savings: The British Postwar Experience', Review of Economics and Statistics, 53 (1973), 399-411.

policies encouraging high retention of profits may also have the effect of accentuating the problem of industrial concentration as a large proportion of the profits remain locked up within the same enterprises. A larger distribution of profits as dividends may help to broaden the industrial base, and also contribute to the development of the capital market in the process, as part of the distributed funds may be channelled through the capital market into new enterprises.

Any attempt to balance the potentially adverse effects of high retention of corporate profits on the allocative efficiency and ownership-structure of the corporate sector against the gain in the volume of savings (and investment) was beyond the scope of this study. We may, however, note this much that the formulation of public policy with respect to corporate finance should be based on a clear understanding of the possible trade-offs of the kind just noted.

As for saving in the public sector, the past behaviour was found to be largely unsatisfactory. It was only during the 1960s that the sector was able to generate a moderately high level of saving, one that was roughly commensurate with the share of the sector's tax and non-tax revenues in GNP. Outside these years, the sector's savings showed a highly erratic pattern and were, on average, very low.

The basic factor behind the weak role played by the public sector in the mobilisation of savings was an inelastic tax system with a narrow base. As a result, public revenues tended to grow at a slow, faltering pace. Under these conditions, the investible surplus generated by the sector depended chiefly on the behaviour of public non-development expenditure. The latter was quite sensitive to the changing pressures of time. The Government was able to maintain a measure of control over the growth of non-development expenditure during the 1960s. In most other years, however, the increase

in expenditure absorbed almost the whole of whatever increases could be secured in public revenues.

That the tax system failed to develop with income growth was in no small way related to the overall strategy of development financing. There was no significant direct taxation of agricultural incomes. Since agriculture was by far the most important sector of production in the economy, this considerably constricted the tax base. Although there were administrative and political difficulties in the way of instituting an agricultural income tax, a major consideration must have been that the sector was already being taxed heavily through various indirect mechanisms. The operation of indirect redistribution of income as a surrogate for direct taxation acted to reduce the pressures for instituting the requisite tax change. In the urban sector, on the other hand, the tax receipts remained low as the tax net was shot through with numerous concessions and exemptions that had been granted with a view to stimulating investment. The matters were made much worse by extensive tax evasion. As these factors severely restricted the scope of direct taxation, the tax system relied mainly on revenue collection through indirect taxes. The overall pattern of these taxes was, however, not sufficiently elastic, and was also regressive in nature.

The tax system was thus not properly harnessed under the strategy pursued in the past to perform its role as an important instrument for mobilising resources for investment. Its potential role in the agricultural sector was supplanted by indirect resource-transfer mechanisms. In the urban industrial sector, it was employed more as an allocative tool, an element in the trellis-work of incentives for promoting private industrial investment, than as a tool for raising resources for important public investment projects. Not surprisingly, the tax proceeds variable was found to be insignificant when tried in the aggregate and sectoral (public

and private) savings functions.

The inefficiencies and inequities that arose in the economy as a consequence of the planning strategy that relied chiefly on indirect resource transfers and concentration of financial incentives in the urban industrial sector have been noted above. The objective of putting the rate of saving in the economy on an upward course remained elusive despite these costs. Some elements of the policy reform that is needed for the future have been outlined above. To recapitulate the main points, we have advocated a less discriminatory approach to investment and growth as between sectors. This implies a need for a substantial re-examination of the generally excessive bias in the past in favour of large-scale urban industry, putting sectoral priorities on a more rational basis and providing small and medium entrepreneurs with a better investment environment for making their contribution to the process of accumulation. We have advocated a greater role for financial intermediation (as distinguished from the indirect income-redistributive intermediation that was central to the policy in the past) in channelling funds from surplus savings sectors to sectors whose demand for investment funds exceeds their own savings and in allocating funds between different investment projects within individual sectors. Consequently, we have called for an end to the policy of keeping interest rates depressed at levels well below the free market level, a policy which restricted financial growth in the economy in the past. An appreciable increase in interest rates is needed to ensure a reasonable real return to savers on their financial assets and to enable the price of loanable funds to perform the function of rationing the available funds in a system of financial intermediation disencumbered from the arbitrary rationing practices of the past that mainly favoured the privileged few. We have also pleaded for developing the capital market so as to promote the role

of assets such as shares and bonds as instruments of saving and financing. In this regard, we have emphasised broadening the base of corporate stock ownership through measures designed to encourage wider participation by the general public in new flotations.

To these we should now add the reform needed in tax policy. Direct taxation must play a vigorous role in raising resources for public investment. If the indirect income-redistributive mechanisms are wielded less strongly in the future and a rationalisation of investment policy infuses fresh vigour into agricultural investment, the environment for direct taxation of agricultural incomes will become much more favourable, both politically as well as in terms of its economic scope. Imposition of a proper agricultural income tax will go a long way towards broadening the tax base. A rationalisation of sectoral investment policy will also serve to block some of the many existing holes in the urban tax net, representing excessive tax concessions for the promotion of industrial investment. There is also scope for broadening the base of direct taxation by lowering the currently high minimum exemption limit on personal income tax. Equally, if not more, important is the need to tighten the tax net for curbing evasion which has been widespread in the past. A greater and more effective use of direct taxation is called for not only on the ground of raising savings and investment but also on the ground of promoting equity.

Public savings should play a much greater role in the mobilisation of investible resources in the economy in the future than has been the case in the past. One way to raise public savings is through making a more effective use of taxation, as just noted. Part of the increase should also come from surpluses generated by state enterprises. Recent years have seen a substantial growth of the state-enterprises sector, both as a result of

nationalisation and new investment. A reasonable rate of return (and reinvestment) on the huge investment of public funds in these enterprises would be a key element in the task of greater mobilisation of resources for development in the public sector. A major requirement for this would be an appropriate pricing policy for these enterprises, one that was actively geared to attaining the said objective.

V.3. Some Concluding Remarks

In this study, we have pursued two main objectives. First, we have attempted to develop a new set of estimates of saving in Pakistan. These estimates contain a breakdown of the overall annual saving flows between sectors and types of assets, and provide for the first time detailed information on saving in the country on a continuous and consistent basis for almost the whole of the post-Independence period. The savings estimates available thus far were too aggregative in character; having been derived residually from the national accounts, they supplied little or no information on the sectoral and asset-wise structure of aggregate savings.

Second, we have attempted an analysis of the past saving behaviour in the country. We have looked at the rates, sectoral composition and asset-structure of saving. Econometric estimation of aggregate and sectoral savings functionswith time-series data was the main tool of analysis used in identifying major influences on past saving behaviour. Ours constitutes the first systematic attempt at a quantitative study of the savings function in the country.

It is hoped that this study will prompt more research on savings and the savings function in the country. As this area has suffered from general neglect in the past, a substantial amount of additional research would be required to fill the many gaps in information that remain. Some suggestions about this are made below.

The available data on savings and investment require considerable improvement. The inadequacies of data were the principal factor that keptresearchers away from this field in the past. There is a need on the part of the country's statistics organisation to supplement its residual estimates of aggregate saving with detailed sectoral and asset-wise estimates of the type developed in this study. The estimates developed in this study up to the year 1976/77 should be updated regularly. Such detailed estimates are required both for analytical research and for informed policy-making. Our estimation exercise has pinpointed several gaps in basic data which need to be filled in order to improve further the quality of these estimates. In particular, there is a need for a more systematic collection of data on saving and investment in agriculture, rural small-scale industry and non-quoted urban enterprises. The statistical position with respect to stock changes (inventory investment) in the economy is especially weak and requires considerable improvement. Further, it would be highly desirable to subclassify the overall asset-wise estimates of household saving drawn up in this study on a rural-urban basis.

On the analytical side, the quantitative analysis of the savings function carried out in this study can be extended in several directions. For one thing, the analysis in this study was restricted to time-series data. The regression results need to be supplemented by evidence based on cross-section data. This is particularly true in the case of our corporate sector regressions which were based on a rather short time series. In addition to supplying corroborative evidence, a cross-section analysis is needed to examine the role of certain potentially important determinants of saving behaviour that cannot properly be taken into account in a time-series analysis. These include demographic factors such as family size, age-structure and the dependency burden; institutional and cultural factors such as the extended family system and property relations; and occupational and income differentials. Although the statistical base for this purpose

is at present not very substantial, the few household income and expenditure surveys and farm budget accounts that are available do provide a reasonable basis for some useful studies. There is also scope for extension within a time-series framework. The quality of the functional estimates would improve with improvements in the quality of the data used. With more research into other relevant functional relationships in the economy, it would be possible to try out the simple single-equation savings models of the type employed in this study in a multi-equation framework to capture the effect of possible interrelationships and feed-back mechanisms.

Another direction in which the results of this study can be extended is to analyse the problem of household portfolio choice, i.e. the allocation of household savings between different types of assets, and to integrate this analysis of the structure of household saving with the analysis of the overall household saving behaviour. The detailed sectoral and asset-wise estimates of saving built up in the study should stimulate research in this area in the future. These estimates should also encourage studies of the flow-of-funds in the economy, another important area that has received scant attention in the past on account of the paucity of relevant data.

PART II: ESTIMATION

A. PROBLEMS OF ESTIMATION, DATA AND METHODOLOGY

This part of the thesis gives a detailed account of the derivation of the set of savings estimates that form the statistical base of analysis in Part I above. These estimates provide for the first time continuous and consistent information on saving in Pakistan by sector of origin and type of asset formation. Spanning a period of about three decades, i.e. 1950/51 - 1976/77, the estimates furnish a detailed record of the time path and structure of saving in the country for almost the entire post-Independence period. It was noted in Chapter I that the savings estimates available in the past supplied little information on the sectoral and asset-wise structure of saving. The new estimates fill these important gaps in information. In addition to being central to the analysis in the present study, the utility of these estimates for general planning and research purposes in the country is obvious.

The construction of the new set of estimates has involved a large amount of work in the form of piecing together, scrutinising and consolidating relevant basic data drawn from a wide range of sources comprising official publications, special studies and research reports, balance-sheets and income-expenditure accounts of corporate institutions, survey reports, unpublished records, etc. Details of the estimation procedure employed in translating the scattered bits of data into a reasonably consistent and accurate set of estimates for saving in the economy are explained in Sections B to E below. The procedure used in estimating saving in the non-corporate sector is set out in Sections B and C while that in the case of saving in the corporate and government sectors is set out in Sections D and E respectively. The sectoral savings estimates are consolidated into a national savings series in Section F and compared, for a consistency

cross-check, with the available series derived indirectly from the national accounts . Tables containing the savings estimates are presented together at the end of these sections in an appendix.

Statistical and methodological problems that are specific to the estimation of saving in individual sectors have been discussed at relevant points in the respective sections. In this section we look at some general issues and problems involved in the estimation exercise.

A.1. The Concept of Saving

Saving by an economic unit can be defined as earned surplus during a given period. Alternatively, it can be defined as change in earned net worth during a given period. In the former case, it represents the difference between current income and current consumption expenditure, and is estimated from the current account of the economic unit. In the latter case, it represents the net change in the unit's assets and liabilities, and is estimated from the unit's balance-sheet. Clearly, these are two different ways of measuring the same magnitude and should yield identical estimates if a consistent set of definitions and data is used.

The way the aforesaid flow or stock items are defined and measured for the purpose of estimating saving depends on the particular system of accounting that is adopted. Three different concepts of saving corresponding to three commonly used systems of accounting may be distinguished here. The social accounting concept regards saving as an increase in the stock of capital assets that excludes all valuation changes in the form of capital gains or losses. Further, capital consumption or depreciation is calculated on the replacement rather than original cost of assets. The business accounting concept of saving includes all capital gains and losses and calculates depreciation on the original cost of capital assets. While saving according to these two concepts is measured on an accrual basis, the

cash flow concept measures it on a cash basis. As this concept is restricted to cash (or equivalent) payments and withdrawals on capital account, all types of depreciation allowances and unpaid accruals are disregarded.[1]

Of the three, the cash flow concept is used primarily in the analysis of the flow of funds. The business accounting concept is mainly used by business concerns in the preparation of their accounts. The social accounting concept is the one that is used in the national income and expenditure accounts, and the same has been employed in this study. The estimates of saving derived in the following sections are, as a result, conceptually consistent with other macroeconomic magnitudes included in the national accounts, e.g. income, investment, etc. These are also conceptually consistent with the estimates of saving derived residually from the national accounts and, therefore, allow us to compare the two sets of estimates.

A.2. Sectoral Saving Groups

An important question to be settled when building up sector-wise estimates of saving in an economy is the question of the level of sectoral disaggregation to be adopted. For the purpose of this study, the economy has been divided into three major sectors, viz. the private non-corporate sector (including households and unincorporated businesses), the corporate sector and the government sector. This three-fold sectoral division has conventionally been followed in similar macroeconomic studies of saving in other countries.

Clearly, what may be regarded as an appropriate sectoral division of aggregate saving is determined largely by the purpose of the exercise. For a study of the saving behaviour of an economy, some aggregation over individual units comprising the universe, households or enterprises, is

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[1] For a detailed discussion on the estimation of saving under different systems of accounting, see, for example, R.W. Goldsmith, A Study of Saving in the United States, Princeton, Princeton University Press, 1955, Vols. I and II.

obviously necessary for a meaningful analysis. This is because in such a context the behaviour of a single unit, though important from its own individual point of view, has little significance. The aggregation should not, however, be carried to such a level that weakens the analysis by failing to distinguish between groups that exhibit significant differences in their saving behaviour. These distinctions are of considerable importance if meaningful policy guidelines are to be derived from the analysis. What is required, therefore, is a proper balance in this regard, one that strengthens the analysis by highlighting the differential saving behaviour of various groups in the economy while at the same time facilitating it by disregarding individual variations within these groups. This involves identifying groups in the population that may reasonably be treated as relatively homogeneous in terms of their saving behaviour and motivations.

In practice, however, the group-wise or sectoral classification of an economy that is permitted by the available data falls much short of the ideal arrangement. Thus, for example, whereas it would be desirable to separate the business and household components of the non-corporate sector and see if the nature of the savings function was systematically different between the two, the limitations of data almost invariably force them to be grouped together. The major problem here is that the distinction between the household and the business enterprise is extremely nebulous in the case of many unincorporated business entities. In most of these cases, no separate income-expenditure accounts are kept for the household and the business activity. This is particularly true of households engaged in farming, cottage and small-scale industry, small trading activities, etc. which together account for a large chunk of the total unincorporated business activity in an economy. Such gaps in information also forced us to adopt the conventional three-fold sectoral classification. This level of dis-aggregation is the minimum desirable for analytical purposes but the maximum

permitted by the available data.

It should be noted that a section of private limited companies which, being incorporated enterprises, are normally placed in the corporate sector has been included in the non-corporate sector in the present study. As the relevant accounts were not available, saving in these companies had to be estimated indirectly by merging them with the non-corporate sector. To the extent the saving behaviour of corporate entities differs systematically from that of non-corporate entities, this has an adverse effect on the strength of our analysis of the latter. For several reasons, however, this effect must be very small. Firstly, private limited companies in the public and semi-public sectors have not been included in the non-corporate sector as the ones included belong only to the private sector. Secondly, most of the largest private limited companies belong to the former two sectors. Thirdly, many of the companies that have been merged with the non-corporate sector are small- and medium-sized enterprises that are owned by a handful of closely related people and run along the lines of unincorporated family business. Finally, saving in the non-corporate sector proper is overwhelmingly large in relation to that in companies that had to be merged with it.

A.3. Method of Estimation

Two broad methods of estimating saving were distinguished in Chapter I, namely the 'indirect' (or investment) method and the 'direct' method. The former, which is the one that has chiefly been used in Pakistan, estimates national saving as a residual derived by subtracting the national accounts estimate of net capital inflow from abroad from the national accounts estimate of gross national investment. As they are derived from national aggregates, the estimates of saving yielded by this method do not provide any information on the structure of saving, such as its sectoral composition. The 'direct' method, on the other hand, estimates national saving by

directly estimating saving in individual sectors of the economy. As such, it generates the required information on the structural aspects of saving in the process of arriving at the national aggregate. Given our three-fold sectoral classification, the method followed below is to build up a 'direct' estimate of national saving by estimating separately saving in the non-corporate, corporate and government sectors of the economy.

As noted earlier, saving by an economic unit (or a group) can be estimated either from its current account or from its balance-sheet. Ideally, one should use both the accounts so that estimates obtained from one could be used to cross-check those obtained from the other. Such detailed information, however, is rarely available. In estimating saving separately for the three sectoral groups, the type of account actually used was determined to a large extent by the availability of relevant data. The balance-sheet method has been used for estimating saving in the non-corporate private sector. As this method arrives at an estimate of saving from data on changes in various types of assets and liabilities of the concerned units or groups, the resultant estimates provide a detailed picture of the asset structure of saving in the sector. Saving in the other two sectors has been estimated by the current-account method. The relevant flow data have been drawn from corporate income-expenditure accounts in the case of the corporate sector and from government budget documents in the case of the government sector.

A.4. Limitations of Data

Construction of a detailed set of savings estimates for an economy, such as has been attempted in this study, requires a large body of basic data. Detailed information is needed on various types of financial and real asset formation in the economy and on various types of sectoral income and expenditure flows. Unfortunately, the data actually available in developing countries generally fall much short of meeting all the requirements. Pakistan is no exception to this. Consequently, one of the major problems encountered

in constructing the new set of estimates has been the inadequacy of basic data.

Because the estimation exercise included a large variety of items, the data that were required were scattered over a wide range of sources. Every effort has been made to collect and piece together this scattered information. In some cases, however, the required data were either not available or, if available, were subject to various limitations. In order to fill such gaps, a number of assumptions have had to be made. In making these assumptions, data were sought on related items which could give a reasonable indication as to the orders of magnitude involved and thereby minimise the margin of error. Whatever errors remain in the estimates were, therefore, unavoidable and will remain so until more basic data on the relevant items become available. The assumptions made and their statistical bases have been discussed at relevant points in the following sections along with an assessment of the margin of error they can possibly introduce into the estimates.

Up to the year 1970/71, a special problem was posed by the task of splitting national aggregates between former East and West Pakistan and arriving at net figures relating to the latter only, which constitutes the present Pakistan. Fortunately, however, reasonably firm statistical information was available for this purpose in most cases. In what follows, 'Pakistan' refers to the present Pakistan and 'Pakistan (EW)' to the erstwhile Pakistan.

A.5. Accounting Period Used in Estimation

The estimates of saving drawn up in this study relate to fiscal years, i.e. April-March for the period 1950/51-1958/59 and July-June for the period 1959/60 onwards. This accounting period was adopted because it corresponds to that used by the Statistics Division, the Planning Commission and other government organisations concerned with the estimation of national economic statistics and, therefore, facilitates comparison and analysis. In most

cases, the relevant basic data were available on a fiscal-year basis. In cases where the basic data related to accounting periods other than fiscal years, necessary adjustments were made to convert the same into fiscal-year estimates. These adjustments are explained in the relevant sections.

B. SAVING IN THE NON-CORPORATE PRIVATE SECTOR: FINANCIAL ASSETS

The non-corporate private sector is commonly defined as comprising all households, unincorporated business concerns - i.e. sole proprietorships and partnerships, trust funds and other non-profit organisations. A similar definition has been used in this study except that private limited companies in the private sector of the economy have been merged with the non-corporate sector. As explained in Section A, this had to be done as no separate data were available on these institutions.

B.1. Types of Assets and Liabilities

Saving in the sector has been estimated following the balance-sheet method. This method has the advantage that it yields valuable information on the asset-structure of the sector's saving. Data have been collected on changes in various types of assets held by the sector and saving in the sector estimated by aggregating the changes in individual assets and subtracting therefrom the total change in the liabilities of the sector over the same period.

Savings can be held either in the form of financial assets such as currency, deposits, etc. or in the form of real (or physical) assets such as buildings, equipment, etc. We have seen in Part I that this is an important distinction. In this section we estimate saving in the non-corporate sector in the form of accumulation of financial assets. Estimation of the real-asset component of non-corporate saving is explained in the next section.

Net saving by the non-corporate sector in financial assets equals its gross accumulation of such assets (i.e. gross financial savings) less the change in its financial liabilities (i.e. dissaving). The figure represents the net change in the sector's claims on other sectors of the economy. Financial assets and liabilities in the case of the non-corporate sector in Pakistan include the following items:

Financial Assets:

(i) Currency

(ii) Bank Deposits; both demand and time deposits, including deposits with scheduled banks, non-scheduled banks and National Development Finance Corporation (NDFC)

(iii) Life Insurance

(iv) Provident Funds

(v) Deposits and Certificates under various Small Saving Schemes

(vi) National Investment Trust (NIT) Units

(vii) National Prize Bonds

(viii) Corporate Shares

(ix) Government Securities

(x) Deposits and Shares of Co-operative Societies

Financial Liabilities:

(i) Loans from the Government

(ii) Loans from Banks; both scheduled and non-scheduled banks

(iii) Loans from Insurance Companies; both life and non-life companies

(iv) Loans from Co-operative Societies

(v) Loans from Specialised Credit Institutions, viz. House Building Finance Corporation (HBFC), Pakistan Refugee Rehabilitation Finance Corporation (PRRFC), Pakistan Industrial Credit and Investment Corporation (PICIC) and People's Finance Corporation (PFC)

(vi) Equity Support received from the Equity Participation Fund (EPF)

It will be noticed that the above list does not include another type of assets that are often bracketed with these financial assets in similar studies on saving, i.e. precious metals and jewellery, chiefly gold and silver.[1] The reasons for this are two-fold. First, available data on these assets are extremely limited. This does not allow derivation of any

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[1] See, for example, Saving in India, 1950-51 to 1961-62, New Delhi, National Council of Applied Economic Research, 1965, p.55.

representative estimates of annual net acquisition of these assets in different sectors of the economy. Second, although the motive behind the purchase of these assets and other financial instruments listed above may be the same, i.e. to save, there is one important difference between the two that argues against their inclusion in the same category as the latter. Whereas the latter set of assets are relatively costless in terms of resources needed for their creation and hence serve as a means of effecting a net release of resources from the purchaser of the asset to the issuer for possible use in the process of capital formation, no such release of resources takes place in the case of a transaction involving the former because demand for these assets itself constitutes an equivalent claim on resources (i.e. resources that are engaged in producing the commodities that are held as assets). It follows that while the acquisition of these assets may be motivated by a desire to save, from the standpoint of the economy as a whole it has the same effect on the availability of resources for development as does consumption. Thus a switch on the part of households from purchasing such resource-using physical assets as instruments of saving to other types of financial assets that are less demanding on resources will result in a net release of resources for development, even though the concerned households do not consider that their consumption has been reduced or saving increased. Since our task here is to estimate saving in different sectors of the economy that results in making resources available for investment, expenditure on the purchase of assets such as precious metals and jewellery should be excluded from the exercise following the above line of argument. Thus, apart from the limitations of data, there was an independent theoretical reason for leaving out these assets from our estimates of saving. As we shall see in the next section, expenditure on consumer durables has also been left out of the estimates for broadly similar reasons. It may be added that insofar as the motivation behind the

acquisition of these assets is other than to save, e.g. conspicuous consumption or ostentation in the case of jewellery, the above reasoning applies a fortiori.

The method and data used in estimating annual changes in each of the items that are included in the above list of financial assets and liabilities are described below. Two general points relating to the estimates may be noted first. Firstly, following the social accounting concept of saving, fluctuations in capital values have to be excluded from changes in the total value of assets held by the concerned economic unit - in this case the non-corporate sector. Among financial assets, this is relevant only in the case of shares and securities. Since we have used flow figures in the case of the said items, no bias has been created in our estimates on account of changes in asset valuation.[1]

Secondly, for most of the items, the relevant data were available on a fiscal-year basis, the accounting period adopted in this study. In cases where the available data related to accounting periods other than fiscal years, necessary adjustments have been made to convert these into fiscal-year estimates. This conversion has been made by means of a pro rata distribution of the values relating to a non-fiscal-year accounting period, say a calendar year, between the fiscal years that span it. This appears to us to be a reasonable way of bringing our series on non-corporate accumulation of various types of assets to a uniform basis for addition, comparison and further statistical manipulation.

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[1] In the case of shares, flow figures on total new flotations have been used. But in netting out the part of this flow that is 'taken up' by corporate institutions, data on their share holdings have been drawn from their balance-sheets. However, as in most cases the relevant figures were available in terms of both book and face values, no significant bias has been created on this score.

B.2. Gross Financial Asset Accumulation

Currency (Table B.1)

Currency in circulation equals total currency issued by the country's monetary authorities less the amount held by them. In Pakistan it equals total currency issued less the amounts held by the State Bank of Pakistan and in the tills of the scheduled banks.[1] Saving by the non-corporate sector in the form of currency holding is reflected in a net increase in the total currency balances held by the sector. Estimates of this have been arrived at by deducting from the total annual change in currency in circulation in the economy the estimated changes in the holdings of the corporate and government sectors.

Data on currency are reported regularly in several official publications, e.g. Annual Report on Currency and Finance, State Bank Bulletin, etc. However, the data reported up to 1970/71 in these publications relate to Pakistan (EW) only. The Research and Statistics Department of the State Bank of Pakistan were approached for data on the regional issue of currency but they expressed their inability to release any such data. Fortunately, separate estimates of currency in former East Pakistan, as prepared by the Planning Department of the Government of former East Pakistan, were available for the period 1958/59-1969/70 in Economic Survey of East Pakistan, 1969/70, and the same have been used by us in arriving at annual changes in currency in Pakistan over this period.[2] For the year 1970/71 we have assumed that

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[1] There are two types of commercial banks in Pakistan, viz. scheduled and non-scheduled banks. The former are the principal commercial banks in the country and consist of banks having paid-up capital and reserves that exceed the minimum limit stipulated by the State Bank of Pakistan for scheduling. These also include two specialised credit institutions, viz. the Industrial Development Bank of Pakistan (IDBP) and the Agricultural Development Bank of Pakistan (ADBP).

[2] It is not known how the problem of currency leakages from one province to the other has been taken into account in these estimates. As such leakages are very difficult - if not impossible - to quantify with any degree of accuracy, it appears that no adjustment has been made for this and the estimates have been based solely on the regional issue of currency.

the share of Pakistan in the total change in currency in Pakistan (EW) was the same as it was in the previous year. Since no regional breakdown was available for the period up to 1958/59, the following procedure has been used. The share of Pakistan in total currency in Pakistan (EW) shows a declining trend over the period for which a regional breakdown is available, i.e. 1958/59 to 1969/70, but the decline is gradual and over the twelve-year period the share falls by three percentage points from about 71 per cent to about 68 per cent. We have assumed that this slow declining trend was also operative during the earlier years and that in 1950/51 the share of Pakistan was about two percentage points higher than in 1958/59, the increase being distributed evenly over the intervening years.

We have attributed 95 per cent of the estimated annual changes in currency in circulation in Pakistan to the non-corporate sector. As data on the currency holdings of the corporate and government sectors are difficult to obtain, varying proportions of the total change in currency in the economy were attributed to the non-corporate sector in some previous studies. Lewis and Khan[1] attributed the whole of the annual increments in currency over the period 1949-62 to this sector. This is clearly an extreme assumption. It is, however, true that unlike the currency balances of households and unincorporated enterprises, currency held by large corporate enterprises and government institutions does not change a great deal from year to year as most of their transactions are carried out through the treasury or bank accounts. For this reason, the attribution of between 10 to 25 per cent of annual changes in currency in circulation to the corporate and government sectors in studies by Ghafur and Alamgir and Rahman[2] appears

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[1] Lewis and Khan, op. cit., p. 25.

[2] A. Ghafur, op. cit., p. 76, and M. Alamgir and A. Rahman, Saving in Bangladesh, 1959/60-1969/70, Dacca, Bangladesh Institute of Development Studies, 1974, p. 85.

to be very much on the high side. Some evidence on this is provided by an economy-wide flow-of-funds exercise carried out at the State Bank.[1] There it is shown that the non-corporate sector accounted for almost the entire change in currency in circulation during 1965-66, the share of other sectors taken together being less than 1 per cent of the total. As the share of the non-corporate sector in this exercise was estimated residually, it is possible that it was overstated for complete information might not have been available on the currency holdings of all segments of the corporate and government sectors. In view of such a possibility and considering that the Bank figures relate to a couple of years only, a somewhat higher proportion, i.e. 5 per cent, of the annual increments in currency in circulation was attributed to these sectors in this study.

Bank Deposits (Table B.2)

Non-corporate saving in this form consists of net additions to the sector's time and demand deposits with scheduled and non-scheduled banks. Non-corporate deposits with the National Development Finance Corporation, established in 1973 for the purpose of raising finance for public sector enterprises, have also been included with these deposits in the same table.

(i) Scheduled Banks' Deposits

A complete time series on the demand and time deposits of scheduled banks is available in the various issues of Banking Statistics of Pakistan. This source does not, however, provide any breakdown of these deposits between former East and West Pakistan and it is only after 1974 that the figures presented are net of deposits in the former. But the required breakdown was available in some other publications. For the period 1961-71, this information has been taken from Regional Statistics of Scheduled Banks, 1961-66 and 1969-70, and Budget in Brief, 1971/72. For the period 1972-74,

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[1] Flow-of-Funds, Pakistan, 1965/66 and 1966/67, op. cit., pp. 16-17.

Pakistan's share in the total bank deposits has been estimated by subtracting from the latter the deposit liabilities of scheduled banks in former East Pakistan at the time of its separation from Pakistan (EW) in 1971. For the earlier period, the regional breakdown was available in Meenai[1] from 1954 to 1960. No such breakdown was available for the first few years up to 1953. But as the share of Pakistan in total bank deposits during the 1950s was stable around 80 per cent, we have assumed that its share was the same in these earlier years as well.

This, however, gives us only a series on total deposits in Pakistan and the share of the non-corporate sector in the total still has to be separated. For this purpose, information has been drawn from Banking Statistics of Pakistan which provide figures for deposits classified by types of owners. This classified information is available for the period 1961 onwards. There are five major categories of depositors and in the case of four of these the allocation of deposits between the non-corporate and other sectors poses no problems. Whereas 'personal deposits' and 'deposits of trust funds and non-profitable organisations' belong wholly to the non-corporate sector, this sector has no share in the deposits of 'government' and 'foreign' sectors. In the case of 'business deposits', however, the figures given include deposits of both corporate and non-corporate business constituents. Fortunately, this category has been divided further into eight sub-categories distinguished on the basis of the major economic activity of the depositors. In the case of 'agriculture, forestry, hunting and fishing', 85 per cent of total deposits have been attributed to the non-corporate sector. This is warranted by the fact that private non-corporate business plays an overwhelmingly large role in these activities and an allowance of about 15 per cent seems adequate for corporate institutions, e.g. agricultural co-operatives. In the case of 'public utilities', the non-corporate share is clearly negligible. Considering the predominant role of private non-

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[1] S.A. Meenai, Money and Banking in Pakistan, Karachi, Allies Book Corporation, 1966, p. 216.

corporate business in the fields of road transport and storage, 80 per cent of the deposits in the sub-category 'transport, storage and communication' have been attributed to the non-corporate sector. In the case of 'mining and quarrying', this proportion has been reduced to 10 per cent. This is indicated by a further breakdown of activities within this category and the predominance of corporate enterprises in the major ones among them. In any case, the share of this category in total business deposits is negligible. In the case of 'commerce', the deposits have been divided further into four sub-categories. Of these, in the case of two, viz. 'co-operatives' and 'insurance', the non-corporate share is obviously nil. Of the other two, viz. 'export/import' and 'retail and wholesale trade', 85 per cent has been attributed to the non-corporate sector as these activities are carried out mainly by this sector. Of the sub-category 'construction', 90 per cent has been attributed to this sector. This has been based on information drawn from a recent study of the construction industry in Pakistan.[1] Based on a survey, the study reports that of the total construction firms and contractors registered with public authorities in Pakistan, only about 0.5 per cent are public limited companies and these accounted for about 13 per cent of the total investment by the group over the period 1971-75. Considering that a great majority of building contractors in Pakistan are unregistered who were not covered in the survey, even a 90 per cent allocation to the non-corporate sector may be an underestimate. In the case of 'other services', which include small activities that cannot be defined and distinguished adequately, all deposits have been attributed to the non-corporate sector. Finally, in the case of 'manufacturing', the

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[1] A Study of Structure and Capacity of Construction Industry in Pakistan, report prepared by Nasiruddeen and Associates Limited, Karachi, for the Pakistan Planning Commission, Islamabad, 1975.

allocation of deposits has been based on the relative shares of the corporate and non-corporate business sectors in the total manufacturing activity in the country and information on this has been drawn from the national accounts and Censuses of Manufacturing Industries (CMI's), with production serving as an index of activity. An important question here is whether we can allocate the deposits of the manufacturing business between its corporate and non-corporate constituents in proportion to their relative shares in total manufacturing production. While in the absence of any direct information this may serve as a rough basis for allocation, we should allow for the fact that the share of the corporate sector, i.e. public limited companies, in total manufacturing production is much greater than its share in the total number of business concerns engaged in this field. This is because corporate units are generally much larger in size than non-corporate units.[1] An allocation of the deposits in proportion to relative shares in production would assume that liquidity requirements of business concerns increased proportionally with the scale of operation. This may not be a reasonable assumption to make considering that as the size of a firm increases, it may be able to introduce certain financial economies - e.g. as a result of vertical integration - such that its liquidity requirements do not increase proportionally with the scale of operation. Thus, ceteris paribus, we would expect that the liquidity requirements of, say, five small firms would be greater than those of a single large firm producing the same output. On the basis of this consideration, the share of the corporate sector in bank deposits held by

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[1] In 1970/71, for example, the share of public limited companies in total large-scale industrial production was about 52 per cent although they were only about 7.5 per cent of the total number of reporting firms (CMI, 1970/71).

the manufacturing business has been assumed to be a few percentage points less than its estimated share in manufacturing output. The downward adjustment made is 10 per cent of the latter.[1]

Data on deposits classified by types of owners are not available for the period before 1961. We see, however, that the share of the non-corporate sector in total bank deposits remained quite stable around 65 per cent during the early- and mid-1960s. Keeping this in view, we have assumed that it remained stable at roughly the same level during the 1950s.

(ii) Non-scheduled Banks' Deposits

Data on the deposits of non-scheduled banks have also been taken from Banking Statistics of Pakistan. All these deposits have been attributed to the non-corporate sector as corporate enterprises and government organisations cannot be supposed to bank to any large extent with financial institutions of limited means such as these banks. As can be seen from Table B.2, the business done by these banks is insignificantly small as compared with that done by scheduled banks.

(iii) NDFC Deposits

Data on the deposits of NDFC are reported in its Annual Reports. Information on the share of individuals and non-corporate businesses in these deposits was obtained directly from the Corporation.

Life Insurance (Table B.3)

Changes in the life fund of Pakistani and foreign insurance companies arising out of their business in Pakistan represent net saving by the non-corporate sector in the form of life insurance. Up to 1971, the relevant data are available in Pakistan Insurance Yearbook published annually.

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[1] It should be noted that the above point does not apply to interest-bearing time deposits held by firms as investments. However, such deposits account for only a small proportion of the total deposits held by the manufacturing business.

This information on the growth of the life fund, however, relates to Pakistan (EW) only. Alamgir and Rahman[1] have reported that the life fund of local insurance companies in former East Pakistan at the end of the year 1969 was about 34 per cent of the total life fund of local companies in Pakistan (EW). This is consistent with the information gathered by us from the State Life Insurance Corporation of Pakistan (SLIC), which indicates that the share of former East Pakistan in life insurance premia rose gradually over the period 1948-71 from about one-quarter to about one-third of the total. We have accordingly assumed that the share of Pakistan in the total life fund fell in uniform decrements from 75 per cent in 1949/50 to about 67 per cent in 1970/71.

Life insurance business in Pakistan was nationalised in 1972 and the entire business was entrusted to a new government-owned insurance corporation (SLIC). Data on the life fund for the period 1972 onwards have been taken from Annual Reports of the Corporation.

Another institution that carries out life insurance business in Pakistan is the Postal Life Insurance (PLI) Scheme run by the Federal Government. Data on the life fund under this scheme up to 1974/75 are available in Pakistan Insurance Yearbook. The relevant information for the years 1975-1977 has been drawn from federal budgets for these years. Again, no separate information on Pakistan has been provided in the Yearbooks for the period up to 1970/71. It is, however, reported in Budget in Brief, 1971-72 that the contribution of former East Pakistan to PLI was 34 per cent of the total during the First Plan (1955-60), 28 per cent during the Second Plan (1960-65) and again 34 per cent during the Third Plan (1965-70). These ratios have been used by us to separate the share of Pakistan in the total life fund of PLI.

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[1] Alamgir and Rahman, op. cit., p. 88.

Some life insurance business is also carried out by what are known as provident societies. As the magnitudes involved are insignificantly small, estimates relating to this business have been ignored.[1]

Provident Funds (Table B.4)

Provident funds are an important form of saving for salaried employees. Total contributions made by them plus employers' contributions and interest accruals on the funds less disbursements from the funds in the form of advances made to them constitute their saving in this form. We have tried to make our coverage of the provident fund schemes in various sectors of the economy as comprehensive as possible, though this has meant that in some cases the estimates have had to be based on somewhat limited statistical information. Industrial workers' savings in 'workers' participation funds' have also been included here.

(i) Government Employees

(a) Federal Government Employees

The basic source of data are the budgets of the Federal Government for relevant years. Figures relating to Pakistan (EW) up to 1971 have been allocated between former East and West Pakistan in proportion to their shares in total Federal Government employment. It has been reported by Rounaq Jahan[2] that in 1966, Bengali (East Pakistani) officers constituted about 21 per cent of the Class I employees of the Federal Government. The proportion of Bengali officers in the total Federal Government employment must, however, have been higher than this figure as they had a relatively greater representation in lower cadres. This is indicated in a Planning Commission study[3] which showed that about 27 per cent of the total Federal

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1 Between 1962 and 1967, for example, the total life fund of these societies in Pakistan (EW) ranged between 30 to 40 thousand rupees only.

2 Rounaq Jahan, 'East Pakistan During the Decade of Ayub', in Peter J. Bertocei (ed.), Prelude to Crisis: Bengal and Bengal Studies in 1970, East Lansing, Michigan, Asian Studies Center, 1972, p. 6.

3 Report on Economic Relations between East and West Pakistan, Planning Commission, Govt. of Pakistan, 1961, p. 47.

Government jobs were located in former East Pakistan, which represented about 20 per cent and 37 per cent respectively of gazetted and non-gazetted jobs. This study did not, however, supply any information on the distribution of federal jobs based on the domicile of officers. Allowing for the likelihood that the proportion of federal jobs located in former West Pakistan that were manned by Bengali officers was greater than the proportion of federal jobs located in former East Pakistan that were manned by West Pakistani officers (as the Federal Secretariat and other major federal offices were located in the former), we have used a figure of 30 per cent as representing the proportion of Bengali officers in total federal employment. Accordingly, 70 per cent of annual net saving in provident fund schemes of the Federal Government of Pakistan (EW) has been allocated to former West Pakistan.

(b) Employees of Provincial Governments

The relevant data have been drawn from provincial budget documents. No regional allocation of the aggregates is required in this case.

(ii) Employees of Local Bodies

Only limited information is available in this case. The only source of information from which some estimates could be derived were a group of studies on the financial position of local bodies in the country commissioned by the Pakistan Planning Commission in 1976.[1] These studies cover all types of local government institutions such as district councils, municipal and town committees, and improvement trusts. The data supplied by the studies cover the period from 1970 to 1975 and contain information on salaries paid by these institutions. We have estimated the provident fund contributions of the employees of these institutions in the said years by applying a

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[1] These are listed at the bottom of Table B.4, numbered 3(i) to 3(iii).

uniform rate of 8 per cent to the total salary-bill, the rate applicable in the case of government employees.[1] For years not covered by the Planning Commission studies, the following approximation was used. The estimates for the years 1970-75 were expressed as percentages of the corresponding estimates in the case of the employees of provincial governments. These turned out to be quite stable around 7.5 per cent. This ratio was applied to the estimates of provident fund contributions of the provincial government employees in other years to arrive at those of the local government employees.

(iii) Employees of Public Sector Enterprises[2]

Again, complete information is not available and the method followed is broadly similar to the one described in the preceding section. A study commissioned by the Pakistan Planning Commission in 1975[3] contains data on salaries and allowances paid to the employees of these enterprises during the years 1963/64 to 1972/73. In most cases, the proportion of salary contributed by the employees is the same as it is in the case of government employees, i.e. 8 per cent. However, since the jobs are mostly non-pensionable in the present case, the employers contribute an equivalent amount. Assuming that slaries constitute about 60 per cent of the total outlay on salaries and allowances,[4] total provident fund contributions -

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[1] This may overstate our estimates somewhat because provident fund facilities may not be the same in all types of employment and, in some rural institutions, may be altogether non-existent. A large part of this will, however, be offset by the fact that we have made no allowance for the interest accruing on the provident fund balances and that, in some cases of non-pensionable jobs, the employers may be making equivalent contributions.

[2] These do not include public sector enterprises which are part of the large-scale manufacturing sector covered in the CMI's. Thus, the addition of provident fund contributions in these enterprises to those estimated below for the large-scale manufacturing sector does not involve any double-counting. These also do not include corporate financial bodies in the public and semi-public sectors, e.g. State Bank of Pakistan; the latter have been placed in the category 'Financial Institutions' below.

[3] Economic and Financial Appraisal of Public Enterprises, a study prepared by United Consultants Limited, Lahore, for the Pakistan Planning Commission, Islamabad, May 1975.

[4] This is the average breakdown in the case of government employees. See M.L. Qureshi and Faiz Bilquees, 'A Note on Changes in Real Wages of Government Servants, 1959/60 to 1975/76, Pakistan Development Review, 16 (1977), 325-35.

including both employees' and employers' contributions - work out to about 9 per cent of the latter. This ratio has been applied to the figures for salaries and allowances in these enterprises during the years 1963/64 to 1972/73. For other years not covered by the said study, the same ratio has been applied to the estimates of salaries and allowances in these enterprises drawn from their published reports and various issues of Government Sponsored Corporations.

As in the case of employees of the Federal Government, 70 per cent of the provident fund contributions up to 1971 in public sector enterprises controlled by the Federal Government have been allocated to Pakistan.

(iv) Employees of Financial Institutions

(a) Scheduled Banks

As direct information on scheduled banks' provident funds is not available, estimates have been derived from their expenses on salaries and allowances as given in their profit-and-loss accounts. These are published annually in Banking Statistics of Pakistan. According to a survey[1] carried out in 1967/68 by the Ministry of Labour and Social Welfare, bank employees contribute about 8 per cent of their salaries to provident funds and an equivalent contribution is made by the employers. Again assuming that salaries constitute about 60 per cent of the total outlay on salaries and allowances, the provident fund contributions of both employees and employers work out to about 9 per cent of the latter. This ratio has been applied to the figures for total outlay of the banks on salaries and allowances.

Up to 1971, the resulting estimates relate to Pakistan (EW). These have been allocated between the two former provinces in proportion to the regional distribution of bank offices in the country.

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[1] 'A Survey of Voluntary Provident Fund Schemes in Factories, Industries, Commercial and Financial Establishments, 1967/68', Islamabad, Ministry of Labour and Social Welfare, 1968, unpublished.

(b) Insurance Companies

As in the case of banks, estimates of provident fund contributions have been worked out from data on salaries and allowances available in the revenue accounts of insurance companies as reported in the various issues of Pakistan Insurance Yearbook and Annual Reports of SLIC. According to the survey referred to in the preceding sub-section, the proportion of salary paid in the form of provident fund contribution in insurance companies is similar to that in the case of banks, and our estimates of the provident fund contributions in the former have been derived accordingly. Up to 1971, these estimates have been divided between former East and West Pakistan in the same way in which non-corporate saving in life insurance was divided, i.e. in proportion to their shares in total life insurance business.

(c) State Bank of Pakistan

A similar method has been employed in this case. Data on salaries and allowances have been drawn from Annual Reports of the Bank. Up to 1971, the East-West breakdown has been made on the assumption that the share of former East Pakistan in total Bank employment was the same as its share in total Federal Government employment, i.e. 30 per cent.

(v) Employees in Large-Scale Manufacturing Sector

As it is not a statutory requirement, provident fund schemes do not exist in many establishments in this sector and, for this reason, estimates of provident fund contributions in the sector cannot be derived from a series on total outlay on salaries (available, for example, in the CMI's) in the same way as they have been above in the case of some other types of institutions. The only source of information on the provident fund schemes in this sector are the three published issues of Annual Enquiry on Labour Welfare relating to the years 1969, 1971 and 1972.

Mailing lists for the purpose of this enquiry include all large-scale manufacturing establishments. However, because of non-response on the part of many establishments, estimates of provident fund contributions by employees and employers in reporting establishments have been suitably blown up. The method employed here involves expressing these blown-up estimates of provident fund contributions in the large-scale manufacturing sector as ratios of total expenditure on wages and salaries in the sector and then applying an average of the ratios for the three years to consistent time-series data on the latter. Although a time series is available in the CMI's for the period 1955-76 (albeit with some gaps), these estimates are not consistent from year to year on account of significant fluctuations in coverage. A consistent time series on wages and salaries has, however, been built up from the CMI's by A.R. Kemal,[1] covering the period from 1959/60 to 1969/70. In order to express the provident fund contributions in 1969, 1971 and 1972 as ratios of the estimates of wages and salaries in this series, the series has been brought up to 1971/72 by using the ratio of the unadjusted CMI estimates to Kemal's estimates during the preceding years.[2] For the three years, total provident fund contributions work out to an average of about 4 per cent of the total expenditure on wages and salaries in the sector. This ratio has been applied to Kemal's series. For the years prior to 1959/60, we have adjusted this ratio and applied it to another time series compiled by the Ministry of Labour and Social Welfare under the Payment of Wages Act 1936[3] and reported in the various issues

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1 A.R. Kemal, 'Consistent Time-Series Data Relating to Pakistan's Large-Scale Manufacturing Industries', Pakistan Development Review, 15 (1976), 28-63. Although this series has come under some criticism (see O.D.K. Norbye, 'Are "Consistent Time-Series Data Relating to Pakistan's Large-Scale Manufacturing Industries" Inconsistent? A Comment', Pakistan Development Review, 17 (1978), 99-108), it is quite adequate for our limited purposes.

2 This ratio is fairly stable over the late 1960s.

3 This Act applies to workers in the large-scale manufacturing industries earning less than Rs.200 per month.

of Annual Consolidated Report on the Working of Labour Laws in Pakistan. This series bears a stable relationship with Kemal's series and, during the period 1959-66, the former is stable around 45 per cent of the latter. Thus the ratio applied to this series has been raised proportionately from 4 to 9 per cent.

Data on wages and salaries are not available in the CMI's for the period 1972/73-1976/77. However, estimates of total employment cost[1] in these industries are available in the CMI 1975/76 for that year and in the provincial CMI's for the years 1972/73-1974/75. Provident fund contributions during 1969, 1971 and 1972 as estimated from the source cited above form on average about 5.5 per cent[2] of the total employment cost in these years as estimated from the CMI's. This ratio has been applied to the estimates of total employment cost for the period 1972/73-1975/76. The CMI data are not yet available for the year 1976/77. A provisional estimate has been made by adding the average annual change over the last two years to the preceding year's estimate.

Estimates of total provident fund contributions in the case of local bodies, public sector enterprises, financial institutions and the large-scale manufacturing sector derived as explained above are all gross of disbursements from the funds in the form of withdrawals by the employees. As no direct information on the withdrawals was available in these cases, it has been assumed that the ratio of withdrawals to contributions in the case of government employees provides a reasonable approximation for corresponding years.

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[1] Total employment cost, as defined in the CMI's, includes wages and salaries, cash and non-cash allowances and payments made to contract labour.

[2] The ratio has risen instead of falling because estimates of wages and salaries in Kemal's series are much higher than the same in the CMI's.

(vi) Workers' Participation Funds

This scheme was introduced in 1968 under which a proportion of the annual profits of industrial firms was to be credited to special funds (designated as 'workers' participation funds') for later disbursement to the labour. This proportion was initially fixed at 2½ per cent but was doubled in 1972. The legislation initially applied only to industrial undertakings employing more than one hundred workers but was extended in 1972 to cover all industrial undertakings employing more than fifty workers. Whereas no withdrawalswere originally allowed to the workers during the first three years of their becoming eligible to the benefits of these funds, an amendment in 1972 required the workers' share in profits to be distributed to them directly every year.

As the participation funds represent a liability of the company towards its workers, increments therein - i.e. profit-share credited less disbursements - constitute an increase in the latter's financial assets and, hence, saving. However, the workers' share in profits ceases to constitute 'saving' as from 1972 because thenceforward it has been paid to them directly in cash.

Unfortunately, there is no provision in the law for a systematic collection of data on the functioning of the scheme. An estimate for the year 1972 was available in Annual Enquiry on Labour Welfare (1972). As the estimate did not cover all industrial establishments under the purview of the scheme on account of non-response, it was blown up[1] and the resulting

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[1] The said estimate was blown up after having determined the proportion of reporting establishments in the total number of establishments to which this scheme applied in that year, i.e. industrial establishments employing more than fifty workers. The latter was estimated from CMI, 1970/71.

estimate converted to fiscal year 1971/72. The estimate for 1970/71 was taken from a recent study by Swati.[1] Estimates for 1968/69 and 1969/70 were derived by expressing the 1970/71 estimate as a proportion of the total profits of industrial companies listed on the Karachi Stock Exchange[2] in that year and applying it to their profits during the earlier two years.

Due to the non-availability of relevant data, no allowance could be made in the estimates for disbursements from the funds. However, as up to 1972 the regulations did not allow any withdrawals by the workers during the first three years of their becoming eligible to the benefits of the scheme, disbursements from the funds during the first four years - i.e. 1968/69 to 1971/72 - could not have been very large. Further, as no information was available on how the accumulated funds at the end of 1972 were distributed among the workers following the reported amendment in the functioning of the scheme, we have made no allowance for it in subsequent years. If the funds were distributed, then it should have appeared in our estimates as workers' dissaving in these years. If they were capitalised, i.e. converted into shares, then no account need be taken thereof.

Small Saving Schemes (Table B.5)

Data on the deposits, withdrawals, issues and discharges in respect of deposits and certficates under the various small saving schemes of the Federal Government are reported regularly in Pakistan Statistical Yearbook. Complete information is, however, not available in this publication for the period after 1971/72. The relevant data for these years have been taken from Annual Reports of the National Savings Organisation. Data on the interest payments on these schemes are available in federal budgets. Since up to

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1 M.A. Swati, 'Distribution of Income in Large-Scale Manufacturing Sector', Quarterly Economic Journal, (Jan.-Mar. 1978), Karachi, National Bank of Pakistan, p. 51.

2 Balance Sheet Analysis of Joint Stock Companies listed on Karachi Stock Exchange, 1968-73, Karachi, State Bank of Pakistan.

1971 these data relate to Pakistan (EW), the share of Pakistan in total interest payments has been estimated as being proportional to its share in total investment in these saving schemes. Total annual saving in these schemes is then estimated by subtracting withdrawals and discharges from deposits and new issues respectively and adding interest payments. The share of the non-corporate sector in this has been arrived at by deducting the estimated contribution by the corporate sector. Complete information on the latter is not available for the entire period. However, whatever information is available indicates that the share of the corporate sector is very small. In this sector, banks - commercial and co-operative - and insurance companies are the main investors in these saving schemes and data on their holdings are available for the period 1965 onwards in Banking Statistics of Pakistan and Pakistan Insurance Yearbook. During the period 1965/66-1969/70, for example, the overall share of these institutions in the total investment in these schemes ranged from less than 1 per cent to about 3 per cent. We have adjusted our estimates for the period 1965 onwards for changes in the holdings of these institutions. For earlier years, the whole of investment in these schemes has been attributed to the non-corporate sector.

National Investment Trust (NIT) Units (Table B.6.)

Data on annual net sales, i.e. sales less repurchases, of NIT units in Pakistan have been taken from NIT Annual Reports. From these we have deducted annual changes in the holdings of banks and insurance companies who are the major buyers of these instruments in the corporate sector. The latter have been estimated from various issues of Banking Statistics of Pakistan and Pakistan Insurance Yearbook.

National Prize Bonds (Table B.6)

Data on annual net sales of prize bonds have been taken from Annual Reports of the State Bank. Up to 1971, these data relate to Pakistan (EW). Some information on the regional contribution to prize bonds is, however, available in Budget in Brief, 1971/72, according to which 14.5 per cent of the total net sales during the Second Plan (1960-65) were made in former East Pakistan and that this fell to 6.75 per cent during the Third Plan (1965-70). These ratios have been used to separate the share of Pakistan. Banks are the only

major holders of prize bonds in the corporate sector and annual changes in their holdings, as estimated from Banking Statistics of Pakistan, have been deducted. Prize bonds held by insurance companies are negligible in relation to the total.

Corporate Shares (Table B.7)

These comprise paid-up shares, both ordinary and preference, of all corporate enterprises in the public and semi-public sectors and of public limited companies in the private sector. From the annual net issue of share capital in the country corresponding increments in the share holdings of agencies and institutions outside the non-corporate sector have been deducted to arrive at this sector's saving in corporate shares. We have excluded debentures of corporate bodies from our estimates as these are almost entirely held by institutional investors in the corporate sector.

Data on the issue of share capital of joint stock companies are regularly compiled by the Office of the Registrar of Joint Stock Companies and published in Share Capital of Joint Stock Companies Registered in Pakistan and Pakistan Statistical Yearbook. For our purposes, however, these data have some serious limitations. Firstly, they relate only to share capital issued by companies at the time of registration and take no account of increases in the paid-up capital of existing companies. Secondly, no breakdown is available between public and private limited companies.

The Office of the Controller of Capital Issues (CCI) is another source of data on the issue of share capital. All Pakistani joint stock companies are required by law to secure prior permission of the CCI if the capital they propose to raise exceeds Rs.5 lacs if they are public limited companies or Rs. 50 lacs if they are private limited companies.[1] Data compiled by the CCI are published regularly in several offical publications, e.g. Pakistan Economic Survey and Pakistan Statistical Yearbook.

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[1] For public limited companies, this limit has remained unchanged throughout the period under study. In the case of private limited companies, it was raised from Rs. 20 lacs to Rs. 30 lacs in 1975 and further to Rs. 50 lacs in 1977.

The published data report (on a regional basis) the amounts for which sanctions were issued in various years but do not provide any further breakdown by types of companies - e.g. public/private limited companies, government enterprises, etc. - or by categories of the new issues sanctioned - e.g. ordinary, preference and bonus shares, debentures, etc. The Office of the CCI, however, keeps a record of such information and a detailed breakdown of the capital issues sanctioned that we required for our estimates was kindly supplied by this Office on request. Consents granted to public limited companies have been estimated by deducting consents for the issue of debentures from the total issue of capital sanctioned to these companies.

One weakness in the CCI data is that they relate only to the issue of capital sanctioned annually and complete information on the amounts actually raised during a year is not available. Due to several factors, e.g. time lags, unforeseen changes in investment climate, etc., all the capital sanctioned during a year may not be actually issued within the same year. Although the actual issue of capital against the consents granted is not systematically followed up by the CCI, some exercises have been carried out which indicate a fairly consistent relationship between the two in the 1960s - about 60 per cent of the capital issue sanctioned is subscribed during the year of approval, about 30 per cent during the following year and the remainder during the second year after the year of approval. Up to 1970/71, the share capital actually issued by public limited companies from year to year has been estimated by us from the CCI data on this basis.[1] To this we have added the share capital issued by private limited companies

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[1] On the recommendation of the CCI, the same basis was also used in a World Bank study on industrialisation in Pakistan; see Industrialisation of Pakistan: The Record, The Problems and The Prospects, IBRD, South Asia Department, March 1970, Vol. III, Part I, Annex IV. It may also be noted that as the CCI data used here are net of sanctions that were later superseded because of non-compliance, the problem of some companies failing to issue all or part of the sanctioned capital is automatically eliminated.

in the public and semi-public sectors to arrive at the estimates shown in row 1 of Table B.7, the relevant data having been drawn from a study commissioned by the Pakistan Planning Commission[1] and various issues of Government Sponsored Corporations.

It would have been inadvisable to use the same basis for estimating the actual issue of share capital in the period 1971/72 onwards in view of the sharp fluctuations that took place in the capital market during the period. There was, however, little need for doing so. During this period, as a result of the nationalisation of a large number of industrial enterprises and financial institutions such as banks and insurance companies, the relative share of government sponsored corporations in the total CCI sanctions rose rapidly; it was about 70 per cent in 1974/75, 85 per cent in 1975/76 and 90 per cent in 1976/77. Since data on the actual yearly increments in the paid-up capital of these corporations are available in Government Sponsored Corporations and Annual Reports/Reviews of the Board of Industrial Management (BIM), we have direct information on the actual issue of capital against about three-quarters of the total capital sanctions granted during this period. As for the remainder, i.e. capital sanctions granted to public limited companies in the private sector, estimates of the actual issue of capital against sanctions have been based on information available in Annual Reports of the Investment Corporation of Pakistan (ICP) regarding the share capital issued by private sector companies during this period.

From these estimates of the total issue of capital, increases in the share holdings of agencies and institutions outside the non-corporate sector have been deducted to isolate the contribution of the latter. Information on the share holdings of banks - scheduled, non-scheduled and

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[1] Economic and Financial Appraisal of Public Enterprises, op. cit. This study has hereinafter been referred to as the UCL study.

co-operative-has been drawn from various issues of Banking Statistics of Pakistan and Statistics on Co-operative Banks. Pakistan Insurance Yearbook and Annual Reports of SLIC are the sources of information on the share holdings of insurance companies, both life and non-life. Estimates of investment in shares by other financial institutions, viz. NIT, ICP, PICIC, NDFC and PIC (Pakistan Insurance Corporation), have been obtained from their Annual Reports. Information on shares held by the government sector-[1] including non-financial public sector corporations, e.g. Pakistan Industrial Development Corporation (PIDC), BIM Corporations, etc. - has been drawn from the UCL study, various issues of Government Sponsored Corporations and Annual Reports/Reviews of the BIM. Where data were missing on some corporations, their annual reports have been consulted. Investment by foreigners in the share capital of Pakistani companies has been estimated from various issues of Foreign Liabilities and Assets and Foreign Investments in Pakistan (FLAF).[2] Complete information on the

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1 Mention must be made here of changes in the ownership of the shares of some industrial and financial institutions that have taken place as a result of their nationalisation over the period 1972-77. While in some of the taken-over units the entire equity capital was transferred to the government - e.g. banks, private limited companies in taken-over industries - in others the government acquired only controlling shares - e.g. public limited companies in taken-over industries. But in all these cases of transfer of shares to the government, compensation was paid mostly in the form of long-term interest-bearing bonds. Since this transfer involves exchange of one kind of asset for another, it does not constitute an act of dissaving on the part of the original shareholders. Thus in our estimates, increments in the non-corporate ownership of corporate shares have not been adjusted for a reduction in the share holdings of this sector as a result of nationalisation.

2 Information from this source covers the period 1959-70 only. For other years, the equity participation of foreigners in public sector enterprises has been estimated from various issues of GSC. Similar information in respect of private sector companies is not available and our estimates have not been adjusted for this. This gap in information could not, however, have exercised any large influence on our estimates because foreign equity investment in private Pakistani companies is understood to have been relatively small in the 1970s and because an overwhelming proportion of the foreign equity investment in Pakistan in the 1950s was in the form of direct investment in the field of oil exploration by companies incorporated abroad. See Foreign Investments in Private Sector, International Trade Section, Pakistan Planning Commission, December 1959.

share holdings of non-financial public limited companies in the private sector is not available. The State Bank publication Balance Sheet Analysis of Joint Stock Companies listed on Karachi Stock Exchange provides some data on the 'liquid' investments of non-financial companies listed on this Exchange for the years 1961-75. However, under this category are lumped together investments of these companies in shares, debentures and government securities and bonds. In order to separate the 'shares' component of liquid assets, information has been drawn from some other sources. The State Bank study on the flow of funds in Pakistan referred to earlier provides figures for the share holdings of these companies in 1965/66 and 1966/67, and these expressed as percentages of the total liquid investments of these companies in these years, as reported in the former publication, come to about 85 per cent. Further, estimates of the share holdings of the non-financial companies listed on the Exchange are available for 1969, 1970 and 1971 in another publication,[1] and here again share holdings account for a similar proportion of the total liquid investments of these companies. We have applied this ratio to the series on total liquid investments of these companies to arrive at their share holdings over the period 1961-75. As for the period up to 1960, data are available on annual increments in the paid-up capital of these companies. During the period 1961-70, the estimated increments in their share holdings are stable around 9 per cent of the same in their paid-up capital. This ratio has been applied to the latter for the period up to 1960. A similar procedure has been used for 1975/76 and 1976/77, data on the changes in paid-up capital having been taken from Annual Reports of the Exchange.

Changes in the share holdings of agencies and institutions outside the non-corporate sector estimated in the above manner relate to their

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[1] Corporate Companies at a Glance: Balance-Sheet Analyses and Comparative Appraisal of Corporate Companies listed on Karachi Stock Exchange, Karachi, Economic and Industrial Publications; 1969, 1970, 1971 and 1972 editions.

investment in the shares of both local and foreign companies. In order to arrive at their investment in the shares of Pakistani companies,[1] changes in their share holdings in foreign companies have been deducted. Data on this have been drawn from various issues of FLAF.[2]

The contribution of the non-corporate sector to the total issue of share capital in the country is then worked out by subtracting from the latter the estimated net increase in the share holdings of these agencies and institutions. Up to 1970/71, the resultant estimates relate to Pakistan (EW). To separate the share of Pakistan, we have applied to these estimates the ratio of capital issue in Pakistan to that in Pakistan (EW) as shown in row 1 of Table B.7.[3]

However, the estimates so obtained include bonus shares as well which have to be excluded in order to arrive at the non-corporate sector's saving in corporate shares. This is because the issue of bonus shares is merely a means of capitalising past savings of the corporate sector and does not, therefore, constitute an increase in the savings of the non-corporate sector. From the total annual issue of bonus shares, the share of the non-corporate sector has been estimated as being proportional to its share in the total issue of share capital in corresponding years (as estimated above).

Some adjustments, though minor, remain to be made. As stated earlier, sanction from the CCI is not required in cases where the capital proposed to be raised by public limited companies is less than Rs. 5 lacs. Since our estimates are based on the CCI data, they do not include share capital

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1 I.e. companies incorporated in Pakistan. The CCI data on capital issues apply to such companies only.

2 Again, information from this source is available only for the period 1959-70. However, as can be seen from Table B.7, the magnitudes involved are very small.

3 An assumption underlying our estimates up to 1970/71 is that equity issued in a province was subscribed entirely 'within' the same province. For a discussion on the question of the inter-provincial 'flow' of equity capital in former Pakistan, see Section D, pp. 301-4.

raised by these companies below the exemption limit. These data also do not take into account reduction in share capital as a result of companies going into liquidation. Date are, however, available in the issues of Share Capital of Joint Stock Companies Registered in Pakistan on registration of new companies classified by the size of their paid-up capital and also on the share capital of companies going into liquidation, and the same have been used to fill the above mentioned gaps in the CCI data. These data do not cover the period up to 1955/56 and the years 1974/75 to 1976/77; but as can be seen from the table, the magnitudes involved are relatively insignificant. Finally, we have added to the above estimates of non-corporate investment in domestic corporate shares changes in foreign shares held by Pakistani nationals. Information on the latter has been drawn from various issues of FLAF.[1]

Government Securities (Table B.8)

Some data on non-corporate contribution to the securities of the Federal and Provincial Governments were available with the State Bank. Estimates of this sector's contribution have been worked out by deducting from the total issue of new securities in a year the purchases of the State Bank, other banks, insurance companies, joint stock companies and local government institutions. Unfortunately, these estimates cover the period from 1960 to 1968 only. An extension of this type of exercise to other years runs into severe data bottlenecks. Although data on annual increases in the outstanding long-term debt of the Federal and Provincial Governments are available in several publications, e.g. Public Finance Statistics, State Bank Bulletin, etc., information regarding the proportions contributed by institutions outside the non-corporate sector is scattered and incomplete. However, the data

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[1] As before, information from this source is available only for the period 1959-70. However, here again the magnitudes involved are extremely small.

obtained from the State Bank show that the share of the non-corporate sector in the total issue of government securities is extremely small; it was on average about 1 per cent of the total over 1960-68. Considering the small share of this sector, data were not pursued for years not covered by the State Bank data and we have instead assumed that the non-corporate share was the same in other years as well, i.e. 1 per cent. Since the non-corporate share was stable around this average over a fairly long period (i.e. 1960-68), our assumption appears reasonable. This ratio has been applied to annual increments in the outstanding long-term debt of the Federal and Provincial Governments.[1]

Another problem remains. Up to 1971, data regarding the Federal Government securities relate to Pakistan (EW). A regional breakdown is, however, available in Budget in Brief, 1971/72, according to which the contribution by former East Pakistan was 8.16 per cent, 5.59 per cent and 7.01 per cent of the total respectively during the First, Second and Third Plans. The contribution by former West Pakistan has been somewhat over-stated in these estimates because the whole of the long-term federal debt held by the State Bank has been included in the province's account. Keeping this in view, we have attributed a uniform 90 per cent of annual net increments in the outstanding long-term debt of the Federal Government of Pakistan (EW) to Pakistan.

Saving through Co-operative Societies (Table B.9)

Saving through co-operative societies takes two forms, viz. deposits and participation in their share capital. Our estimates cover all types of co-operative institutions, viz. co-operative banks, agricultural/non-agricultural and credit/non-credit co-operative societies. Non-corporate

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[1] We have excluded short-term government debt, e.g. treasury bills, from our estimates as it is almost entirely subscribed by corporate financial institutions.

saving through these institutions equals the increase in deposits and shares held less the increase in financial liabilities in the form of loans.

Financial data on co-operative institutions in Pakistan are regularly compiled by the Office of the Registrar of Co-operatives and published in Pakistan Statistical Yearbook. The method adopted by us attributes the whole of the annual net increase in the deposits and share capital to the non-corporate sector, although a part thereof may be attributable to other sectors. Our estimates could not be adjusted to allow for the latter as sufficient information is not available on the deposits and share capital of co-operatives classified by types of owners. However, what little information is available shows that this is a minor omission.

B.3. Increase in Financial Liabilities (Table B.10)

Loans from the Government (Federal and Provincial)

These are of two types, viz. advances to government servants for house-building and purchase of cars and other means of conveyance, and loans to cultivators (called taccavi loans). Net non-corporate borrowing has been estimated by subtracting loan repayments from advances during each year.

Relevant data are available in the budgets of the Federal and Provincial Governments. As the budget estimates of loans by the Federal Government to its employees relate to Pakistan (EW) up to 1971, these have been split between the two former provinces in the same way as were the provident fund contributions of the Federal Government employees, i.e. in proportion to the provincial shares in federal employment. No provincial breakdown was required in the case of the Federal Government loans to cultivators as these were confined almost entirely to the tribal and federally administered areas of former West Pakistan. Since the magnitudes involved in the latter case are small, we have not shown them separately in the table and have merged them with loans to cultivators by Provincial Governments (who are the main source of such loans).

Loans from Banks

These comprise loans from scheduled and non-scheduled banks.

(i) Scheduled Banks

Data on scheduled banks' advances are available in the various issues of Banking Statistics of Pakistan where these have been classified by major economic callings of the borrowers. This classification enables us to separate the share of the non-corporate sector in total advances. Information on the regional breakdown of these advances up to 1971 has been drawn from the same sources as were used in the case of deposits. The method followed for the purpose of separating the share of the non-corporate sector in total advances is also similar except that in this case (i) the data classified by economic groups are available for almost the entire period of the time series, and (ii) the classification scheme in the source of the data is a little different.

All advances have been classified into nine economic groups. We have proceeded as follows. As in the case of deposits, 85 per cent of advances to the group 'agriculture, forestry, hunting and fishing' have been allocated to the non-corporate sector. Again, a ratio of 10 per cent has been used in the case of the group 'mining and quarrying' to isolate the non-corporate share. In the case of 'manufacturing' also, a method similar to the one used in the case of deposits has been followed, albeit with one modification. Whereas the share of the corporate sector in the case of deposits was assumed to be roughly proportional[1] to its share in total manufacturing activity (as measured by production), this assumption would be invalid in the case of advances as large corporate concerns are generally able to command a disproportionately large share in bank credit. This has been particularly true in the case of Pakistan where there were, till fairly recently, very close links between the ownership of industrial and financial

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[1] In fact, a little less than proportional.

enterprises. We have assumed that the share of the corporate sector (plus the government sector) in total scheduled bank advances to 'manufacturing' has been 1.25 times its share in total large-scale industrial production.[1]

Based on a recent study of the construction industry in Pakistan,[2] 90 per cent of the deposits of the 'construction' industry were allocated to the non-corporate sector. The same ratio has been used in the case of advances. As in the case of deposits, no part of advances against the group 'electricity, gas, water and sanitary services' has been allocated to this sector. In the case of 'commerce', four sub-groups have been shown. Of 'wholesale and retail trade', again an 85 per cent allocation has been made to the non-corporate sector. This sector obviously has no share in advances to 'banks and other financial institutions' and 'insurance'. Of the fourth sub-group 'real estate', the whole amount has been attributed to the non-corporate sector. This works out to about 65 to 80 per cent for the overall group 'commerce'. In the case of advances to the group 'transport, storage and communication ', the non-corporate share has been assumed to be the same as it was in the case of deposits, i.e. 80 per cent. As for the four sub-classifications of the group 'services', the allocation made to the non-corporate sector is 100 per cent in the case of 'personal services', 50 per cent in the case of 'community and business services' and 'recreation' (as charitable trusts and other non-profit organisations are included in the non-corporate sector) and nil

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[1] Data on scheduled banks' advances classified by the size of accounts reveal a highly skewed distribution, with a relatively small number of accounts at the upper end of the range absorbing a disproportionately large chunk of the total bank credit [see Banking Statistics of Pakistan, various issues; see also Meenai (1966), op. cit., Chap. XVI and Appendix I: for an account of the interlocking of the ownership of industrial, financial and commercial concerns in the country, see White, op. cit., Chap. IV]. Also, the credit made available by the banks to small-scale industry is relatively insignificant (see, for example, Report of the Working Group on Private Investment for the Annual Plan 1973/74, Islamabad, Pakistan Planning Commission, June 1973, Appendix B - report of the sub-group on private investment in small-scale industry). Thus, it is possible that despite the adjustment made above, the share of the corporate sector in bank advances remains understated.

[2] A Study of Structure and Capacity of Construction Industry in Pakistan, op. cit.

in the case of 'government services'. Estimated this way, the share of this sector in the overall group 'services' varies between 15 and 60 per cent depending upon the changing relative importance of the sub-group 'government services'. Finally, all advances in the case of 'employees and activities not adequately described' have been attributed to this sector.

(ii) Non-scheduled Banks

The sources of data and method of estimation are the same as used in the case of deposits. The lending operations of these banks are insignificantly small relative to those of scheduled banks.

Loans from Insurance Companies

The relevant information has been drawn from various issues of Pakistan Insurance Yearbook and Annual Reports of SLIC. Loans on mortgages of property, loans granted on policies or securities such as stocks and shares, and other miscellaneous loans to policy holders have been added together to arrive at the total liabilities of the non-corporate sector to insurance companies. The estimates cover all such loans granted by both life and non-life companies, local as well as foreign. As in the case of life-fund data, the estimates up to 1970/71 relate to Pakistan (EW) and, therefore, include loans advanced in former East Pakistan. In the absence of any other information, annual changes in the indebtedness of the non-corporate sector to insurance companies have been allocated between the two former provinces in the same proportions as were used in splitting annual increments in the life fund of these companies. This appears to be a reasonable approximation.

Loans from Specialised Credit Institutions

(i) House Building Finance Corporation (HBFC)

This Corporation was established in 1952 to provide loans for house-building. Annual figures on the outstanding advances of HBFC up to 1971 are available in Banking Statistics of Pakistan, 1975-76, but without a regional

breakdown. In Government Sponsored Corporations, 1970/71, sanctions of loans by HBFC have been shown with an East-West breakdown. We have used this as the basis for allocating annual increments in the Corporation's outstanding loans between the two former provinces. Up to 1967/68, HBFC could lend to either individuals or co-operatives. With effect from that year, its lending to the latter was stopped. It is reported in Government Sponsored Corporations, 1965/66 that the share of the latter was about 3 per cent of the total HBFC loans up to 1965. Thus, we have allocated 97 per cent of the annual increments in the Corporation's outstanding loans in Pakistan to the non-corporate sector.

For the period after 1971, data on the disbursement and repayment of HBFC loans are available in the recent issues of Pakistan Statistical Yearbook and Government Sponsored Corporations. In 1973/74, the lending operations of the Corporation were extended to include government approved agencies. Information on the share of such agencies in the Corporation's loan disbursements for 1973/74 onwards has been taken from Pakistan Economic Survey, 1977/78. Net changes in non-corporate liabilities to HBFC for the period 1971/72 onwards have been worked out by subtracting from the total loans disbursed during a year loans repaid and loans advanced to institutions and agencies.

(ii) Pakistan Refugee Rehabilitation Finance Corporation (PRRFC)

Data on the lending operations of PRRFC in Pakistan (EW) up to 1964 have been taken from Banking Statistics of Pakistan, 1968/69. Some information on the regional breakdown of these operations was available in Government Sponsored Corporations, 1965/66, according to which only about 7.5 per cent of the total PRRFC loans up to 1965 had been made in former East Pakistan. This proportion has been used to exclude that province's share from annual increments in the outstanding loans of the Corporation. The activities of the Corporation since 1965 have been confined largely to the recovery of its outstanding loans and data on the recoveries made have

been obtained from later issues of Government Sponsored Corporations.

(iii) Pakistan Industrial Credit and Investment Corporation (PICIC)

PICIC was established in 1957 to provide medium- and long-term capital to the private industrial sector. Data on the lending operations of the Corporation available in its Annual Reports and the various issues of Banking Statistics of Pakistan do not provide a breakdown between different types of companies. The liabilities of the non-corporate sector to the Corporation have been worked out by allocating to this sector a part of the annual net increments in the outstanding loans of the Corporation that is proportional to the share of private limited companies in the total fixed assets of all incorporated private sector enterprises (including both private and public limited companies) engaged in the field of large-scale manufacturing. Information on the latter has been drawn from the CMI's.

It should be noted that in the case of the loans advanced by PICIC, no allowance needs to be made for other types of non-corporate enterprises in the manufacturing sector, viz. individually owned enterprises and partnerships because these loans are made to relatively large-scale enterprises and carry minimum limits that are well beyond the normal scale of operation of the former. Further, the magnitude used as an index of approximation for the purpose of allocation is the share of a group in total fixed assets rather than in total output. The latter, it may be recalled, was used for the allocation of scheduled banks' advances to the manufacturing sector. The change has been made because loans are made only for fixed capital formation in the present case whereas a large chunk of ordinary bank loans takes the form of short-term working capital.

(iv) People's Finance Corporation (PFC)

Established in 1972, this Corporation provides loans to individual investors and enterprises with modest means. Data on the lending operations of the Corporation have been taken from Government Sponsored Corporations, 1975/76.

(v) Equity Participation Fund (EPF)

This fund was set up in 1970 to promote by means of equity support small- and medium-sized business, chiefly industrial, in former East Pakistan and in the less developed areas of former West Pakistan. Its activities in the latter assumed significant proportions only after its reactivation in 1973 following the Bangladesh crisis. The relevant data have been taken from Government Sponsored Corporations, 1974/75 and Annual Report, 1976/77 of the State Bank.

B.4. Net Financial Asset Accumulation (Net Financial Savings)

Finally, net saving of the non-corporate sector in financial assets has been worked out by subtracting the estimated annual increase in the sector's financial liabilities from the corresponding estimate for the sector's gross financial asset accumulation. The estimates are shown in Table B.11.

C. SAVING IN THE NON-CORPORATE PRIVATE SECTOR: REAL ASSETS

This section deals with the estimation of non-corporate saving in the form of direct investment in real assets. First, we discuss some general issues and problems related to this component of saving. This is followed by a detailed description of the data and method of estimation used.

C.1. Some Issues and Problems

Firstly, an important issue that is encountered while estimating saving in the form of direct expenditure on real assets is distinguishing between the investment and consumption components of such expenditure or, what amounts to the same thing, classifying goods (or assets) that are acquired through such expenditure as capital and consumer goods (or assets). Conceptually, the distinction between the two types of expenditures/assets is drawn on the basis that whereas the latter are directed towards the satisfaction of present wants, the former provide for an increase in productive capacity so that a higher level of income can be reached in the future that will permit attainment of a higher level of satisfaction. However, the application of this apparently clear conceptual distinction to the practical task of classifying various types of expenditures/assets as consumption or investment items runs into several problems - both of measurement and interpretation - that have been the subject of a good deal of controversy. The difference of opinion among economists is particularly serious with regard to such items as consumer durables and expenditure on education and health (the latter sometimes termed 'investment in man').

In the case of consumer durables, the difference of opinion regarding the question of their inclusion in the concept of saving[1] (or investment)

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[1] Goldsmith has termed it 'the most controversial feature of the standard saving concept...', Goldsmith (1955), op. cit., Vol. I, p. 28.

arises primarily because these goods display certain broad similarities with producer durables; like the latter, they are tangible and sizable assets that are not entirely consumed within an accounting period but provide a stream of services beyond it and, further, represent relatively large and postponable expenditures that are partly financed out of past savings and borrowed funds. At the same time, however, they do not contribute to an increase in production in the same direct way as the latter do nor, in the case of most of these goods, is their acquisition governed by considerations of return. In his monumental study on saving in the United States, Goldsmith[1] examines this issue at some length and advances the following reasons in favour of including consumer durables in saving. (i) As consumer durables are included in national wealth, they must also be included in national saving if the link between the cumulated value of the latter and the former is to be maintained. (ii) Some consumer durables are now as essential to the functioning of the system of production as are producer durables; he cites cars as an example. (iii) A more satisfactory explanation of variations in saving is obtained if the estimates of saving include expenditure on consumer durables than if they do not.

Examining these reasons we see that the first one relates merely to an accounting convention and has little substantive significance apart from that. Goldsmith's second reason, however, carries more weight. It is easy to imagine several consumer durables - e.g. cars, houses, etc. - that are essential to the functioning of a modern economy in the sense that production would be adversely affected if these were not available. It is, however, very difficult in practice to distinguish and estimate the consumption and investment components of expenditure on such items. Others take the view that although some of these goods do play a role in the system of production, this does not take the form of a direct contribution to output as it does in the case of producer durables. According to this view,

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[1] Ibid.

if this contribution to production in a roundabout way entitles these goods to be classed as items of investment, the list of items to be included under investment expenditure will have to be greatly extended and, if carried to its logical limit, will include all consumption expenditure for consumption increases productivity, exceptis excipiendis.

The third reason advanced by Goldsmith is underlain by an assumption regarding the behaviour of spending units which envisages a higher degree of substitutability between consumer durables and saving (excluding consumer durables) than between the former and other consumption expenditure. Thus in a behavioural sense, according to this line of argument, expenditure on consumer durables may be considered more akin to investment than to expenditure on non-durables. We make the following two observations on this point. Firstly, empirical evidence on the matter is not conclusive. Secondly, there is the question whether the definition of saving should at all turn upon such factors as the quality of the fit of the savings function that is obtained as a result. The answer, obviously, is that much depends on the purpose of the exercise. Clearly, if the purpose is to derive the most stable savings function possible, it would be preferable to include consumer durables in saving if the available empirical evidence supports such a specification. In some other contexts, however, a different classification may be more relevant. Thus, for example, in cases where economic implications such as addition to productive capacity are important, it may be more suitable to draw a line between consumer and producer durables and include only the latter in the concept of saving/investment. Another consideration that has a bearing on the question of the choice of an appropriate definition of saving is the nature of the study where this concept is to be used, i.e. whether it is concerned with aggregates or with individual spending units. This point has been made by Lydall in the following way:

> The matter [exclusion of consumer durables from the concept of saving] is not very serious when national income aggregates are under consideration; but when we come to study the behaviour of individual income units this definition is less satisfactory. For there are many individuals who, after building up a stock of funds over a period of time, suddenly spend a large sum of money on the purchase of a car, or perhaps, a house full of furniture. If durable goods are considered to be consumed at the time of purchase, such people will appear to have heavily overspent their incomes in the period in question, yet they may equally well be regarded as having simply transferred their savings from one form to another.[1]

In the present study which is concerned primarily with saving that generates resources for adding to the economy's productive capacity through capital formation and deals with aggregates rather than individual units, we have excluded consumer durables from the concept of saving. Indeed, this is by far the most commonly used definition of saving in the preparation of official statistics on saving (e.g. national accounts savings estimates) and in other studies in the area. It should, however, be noted that the official statistics almost invariably include expenditure on all types of housing construction, including owner-occupied luxury housing (which is clearly a luxury consumer durable), in the definition of saving/investment. On account of limitations of data, it is generally not possible to separate the private luxury housing component from total investment in housing construction with any precision. As our estimates of non-corporate saving in the form of direct acquisition of real assets have been derived mainly from officially prepared estimates of private investment, this component is also included in them.[2]

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[1] H.F. Lydall, British Incomes and Savings, Oxford, Basil Blackwell, 1955, p. 106.

[2] Motor cars are another type of consumer durable that is sometimes included in the official estimates of saving/investment. The practice in Pakistan appears to have been to treat a roughly determined proportion of the total purchases of motor cars on private account as investment, the remainder being excluded. Papanek used a ratio of 50% in the estimates of private investment prepared by him (see sub-section C.2 below). The corresponding ratio used in the estimates of investment prepared by the Pakistan Planning Commission and the Statistics Division is not known as the methodological notes accompanying these estimates are not sufficiently explicit on this point. However, we believe that this would be roughly similar to the one used by Papanek. Thus, a proportion of private expenditure on the purchase of motor cars is also included in our estimates of non-corporate saving in real assets.

Much of what has been said above also applies to expenditure on items such as education and health. There are valid arguments in the theory for extending the concept of investment to include such expenditure but in this case too the separation of consumption and investment components presents extremely difficult conceptual and statistical problems. Further, given the limitations of statistical resources in less developed countries, any such extention of the concept of investment would probably prejudice the use and reliability of such estimates that are available and which, though based on current concepts, already involve considerable problems of measurement. We have followed the general practice in this regard which includes only fixed investment expenditure on these items in investment, e.g. expenditure on school buildings, hospitals, etc., thereby excluding all current expenditure.

Secondly, our estimates of non-corporate saving in real assets have been restricted to fixed investment only and, as a result, changes in inventories have not been included. This has been forced on us because no reliable and consistent time series is available on the latter. The only estimates that are available for any reasonable length of time are those prepared by the Planning Commission for its Annual Plan reports. These estimates are, however, extremely crude. Whereas the methodology employed by the Commission in the case of its estimates of fixed investment has been set out clearly in its publications, no such details have been presented for the estimates of stock changes except that these refer to 'the value of physical changes in raw materials, work in progress and finished goods held by enterprises and government stock-piles'.[1] Except for a few items such as government stocks of some agricultural goods, little information is available on stock changes in other sectors of the economy and a large part of the Commission's estimates appears to be based on mere

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[1] National Accounts, 1973-74 to 1976-77, Karachi, Statistics Division, Ministry of Finance, GOP, 1977, p. x.

guess-work. Further, as these estimates are probably based on 'lumpsum' guesses in the case of sectors for which little or no direct information is available, the published estimates do not provide any sectoral breakdown, not even a broad classification between public and private sectors. It is also not clear whether the 'enterprises' for which estimates are made by the Commission include enterprises in the non-corporate sector at all.

We have presented the available estimates in Table C.1(a) and even a cursory look at them confirms the doubts expressed above. An indication of the arbitrariness of the Commission's estimates is that over the six-year period 1972/73 - 1977/78, a round figure of Rs. 1 million per annum has been repeated no less than four times. Other examples of the wide margin of error inherent in these estimates are provided by a lack of agreement between the different sets of estimates available. Not only are these estimates quite wide apart, in some cases even the direction of change is different. For example, whereas the estimates prepared by Baqai show a net accumulation of inventories in 1964/65 and a net decumulation in 1965/66, the Commission's series reports a higher value for 'inventory accumulation' in the latter than in the former.[1] A similar discrepancy exists for the year 1954/55. Further, except for the year 1959/60, Papanek's figures are consistently higher than those reported by the Commission despite the fact that the former are restricted to stock changes in the private large-scale manufacturing and commercial trading sectors whereas the latter supposedly cover a much larger area of the economy.[2]

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[1] A net decumulation in 1965/66 is also shown by the estimates reported in the State Bank of Pakistan's study of flow of funds in the country (Flow-of-Funds, Pakistan, op. cit., p. 16).

[2] Papanek's estimates are based on the results of an industrial survey carried out by him. Haq's estimates, another series shown in Table C.1(a), relate to the private large-scale manufacturing sector only and have been derived on the basis of an average ratio between inventories and value added in the sector estimated from the CMI's. Baqai's estimates, however, appear to be roughly comparable in scope to the Commission's estimates.

In view of these weaknesses in the available estimates and the non-availability of a proper sectoral breakdown, it was decided not to make any use of them in our direct estimates of saving. As stock changes can be a fairly large proportion of total investment, wide margins of error in the estimates can significantly distort or obscure what useful information we do have on other components of saving and investment.

It should, however, be noted that although stock accumulation in the non-corporate sector could not be included in the estimates of saving derived in this study, these estimates do include stock accumulation in the corporate and government sectors. As was noted in Section A, saving in these two sectors has been estimated from their income-expenditure accounts unlike saving in the non-corporate sector which has been estimated from the sector's balance-sheet (the asymmetry in the type of account used being a product of the type of data available). Since aggregate saving and investment in a economy are equal identically, where investment includes investment in both fixed assets and stocks, the estimates of saving yielded by the method used by us include automatically investment in stocks in the corporate and government sectors. The savings counterpart of this investment has two components: (i) a part of the own income of these sectors which is used to finance it; and (ii) a part of the income of the other sector, i.e. the non-corporate private sector, which 'finances' that part of the stock accumulation which is not financed according to (i) - this is reflected in the accumulation of an equivalent amount of financial assets by the non-corporate sector or, what amounts to the same thing, of financial liabilities by the other two sectors. The first is taken into account when saving in the corporate and government sectors is estimated from their respective income-expenditure accounts and the second when the non-corporate sector's saving in financial assets is estimated from the sector's balance-sheet.

Thus, although no reliable separate information on stock changes in the corporate and government sectors was available, the use of the income-expenditure account for estimating saving in these sectors meant that these were included automatically in the resultant estimates of national saving.

Had it been possible to estimate saving in the non-corporate sector also from the income-expenditure side, our estimates of aggregate saving would have included saving in the form of stock accumulation in this sector as well. Similarly, if detailed statistical information had been available on the assets and liabilities of the corporate and government sectors, it would have been possible to quantify separately the stock changes in these sectors, included as they are in our aggregate savings estimates. Unfortunately, neither is possible with the data currently available. The limitations inherent in the available alternative, i.e. using the Planning Commission's estimates of stock changes, have already been noted. In these circumstances, it is not possible to improve on the estimates of saving reported in this study by taking a more comprehensive account of stock changes in the economy.

Thirdly, the estimates of saving derived below are gross estimates as deductions for depreciation (or capital consumption) could not be made, again because of lack of reliable data. It is well known that estimation of depreciation is difficult.[1] The distinction between physical wear-and-tear of capital and depreciation due to obsolescence, differences in accounting practices, lack of agreement between depreciation allowances reported by businesses and actual capital consumption due, for example, to tax regulations allowing accelerated depreciation, are but a few problems that make the estimation of depreciation in an economy an extremely complicated

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[1] In the words of Goldsmith, this is 'the most difficult single problem in the measurement of saving, both conceptually and practically' (Goldsmith (1955), op. cit. Vol. I, p. 30).

statistical task. In less developed countries, the difficulties are further compounded by a lack of basic data. In most of these countries, various rules of thumb are followed for the purpose of making some rough estimates. In Pakistan, the only set of estimates available is prepared by the Statistics Division as part of its work on national income accounting. As these estimates are also in large part based on arbitrary rule-of-thumb assumptions, they do not provide a reliable basis for netting out depreciation from our estimates of gross saving. Assumed constant rates have been applied to annual gross value added in various sectors of the economy to arrive at these estimates. Some of the rates have been arbitrarily revised with time. Apart from the lack of a firm statistical basis for these rates, the estimates are weak because these are based on the assumption that depreciation fluctuates with output rather than with changes in capital stock. These weaknesses in the Statistics Division's estimates explain why the estimates of saving/investment used in official documents, e.g. Planning Commission's reports, and in other relevant studies in the country are almost always gross of depreciation.

Finally, non-corporate saving in the form of direct investment in real assets has been estimated below from flow or investment data rather than from data on the stocks of these assets. As a result, changes in the values of existing assets due to price movements have automatically been eliminated from the estimates.

C.2. Available Time-Series Data on Private Investment

Data drawn from available series on private investment in the country, suitably adjusted for some gaps in information and breaks in continuity, form the base of our estimates of non-corporate saving in real assets. A few attempts were made in the 1950s and the early 1960s, chiefly by the country's planning authorities, to compile reliable time-series data on private investment. Since the mid-1960s, this task has been carried out mainly by the Statistics Division. Below we present a brief description of

the available series, examine their shortcomings and discuss the adjustments that have been required in order to construct a continuous and consistent sector-wise series on private investment for the purpose of deriving our savings estimates.

Almost all the investment series up to the mid-1960s are based on what has variously been termed the 'input', 'production' or 'commodity flow' method. This involves estimation of investment from the supply side by collecting information on the availability of various types of capital goods. More specifically, estimates of private investment in machinery, transport and other equipment are arrived at by adding up imports and domestic production of these items and then netting out the share of the public sector estimated from budget documents and from information obtained directly from autonomous and semi-autonomous public enterprises. Data on imports and domestic production are drawn from Foreign Trade Statistics of Pakistan and the CMI's respectively. Allowance is made for import duties, taxes, and transportation and installation costs. As for investment in construction, the estimates are derived from data on the availability (i.e. domestic production plus imports less exports) of certain key inputs such as steel and cement on the basis of certain input-output type coefficients between the values of these inputs and total investment in construction. Allowance is made for lags between the time when these inputs become 'available' and the time of their final use on account of, for example, storage at ports, transportation, storage at site, etc. Again, the share of the private sector is worked out residually be deducting the public sector's consumption of these key inputs from the estimated total supply.[1]

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[1] For details of this method (including the values of various technical coefficients, length of lags, etc. actually used in estimation), see, for example, Report of the Consistency Committee on the Third Five-Year Plan, Planning Commission, July 1965, pp. 280-312; Final Evaluation of the Second Five-Year Plan, Planning Commission, Dec. 1966; and Tims, op. cit.

Now, the weaknesses inherent in this method are quite obvious. Firstly, although the values of the technical coefficients and lags used in deriving the estimates of investment in construction have been based on reasonably sound information on the patterns of input-use in construction activity in the country, the derived estimates remain rather sensitive to the average values actually used and are, therefore, liable to significantly wide margins of error on that score. Secondly, errors can also creep into the estimates of investment in machinery, transport and other equipment as c.i.f. and ex-factory values, in the case of imported and domestically produced items respectively, are marked up in some varying proportions to take into account certain other costs incurred by the final purchaser or investor, e.g. duties, taxes, transportation and installation charges, etc. Again, although the mark-up ratios are based on current statutory rates and different ratios are, therefore, used for different types of items and for imports and domestic production, the use of single average ratios for all investment within a category - e.g. imported transport equipment, imported machinery, domestically produced machinery, etc. - can introduce sizable errors. Thirdly, estimates of investment built up from the supply side cannot provide any reliable sectoral disaggregation unless supplemented by additional information from the expenditure side. This is why beyond a minimal asset-wise disaggregation, viz. between machinery, transport equipment and construction, the available estimates provide little information on investment classified by the sector of use. Fourthly, certain types of monetised investments that do not use modern capital inputs, or use them to a negligible extent, are completely left out. This is particularly true of certain types of investments in the agricultural/rural sector, e.g. land improvement, non-mechanised irrigation, rural construction using little steel or cement, etc. Finally, all types of non-monetised investment are also completely left out of the estimates. The Planning Commission has,

however, been making separate estimates for this important component of investment.

For the period 1963/64 onwards, a continuous time series on investment prepared by the Statistics Division is available which shows distinct improvements over the earlier series. The method employed is much sounder in that the estimates for most types of investments have been based on data on actual investment expenditures obtained through surveys and direct enquiries. Further, as a large part of the data have been collected from the expenditure side, the Division's estimates provide a detailed sectoral disaggregation of investment, both in the private and public sectors. In addition, an asset-wise breakdown of investment is provided in the case of major sectors such as agriculture and large-scale manufacturing.[1]

However, the Statistics Division's estimates also have some important limitations. Firstly, although the method employed by the Division is theoretically sounder - as most of the data are collected through actual surveys and direct enquiries and are, therefore, relatively free from the arbitrariness introduced into the earlier series by the use of certain assumed technical coefficients, investment lags, mark-up ratios, etc. - the authenticity of these estimates is to a large extent conditioned by the way this method has actually been applied. Much depends on sample sizes, sample structures, blow-up factors, etc. actually used for these surveys and also on the accuracy of the data supplied by the respondents (which may be more inexact, either because of definitional ambiguities or plain wilful mis-reporting, than the data on import and domestic production of key capital inputs such as steel and cement). Secondly, like the earlier series, the

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[1] Details of the Statistics Division's methodology are available in several of its publications; see, for example, National Accounts, 1973-74 to 1976-77, op. cit., pp. vi-x.

Statistics Division's estimates also suffer from some undercoverage. The most important omission again seems to be agricultural investment in land development and non-mechanised irrigation. Thirdly, in some cases where the 'survey' or 'direct enquiry' method could not be followed due to some reason, recourse has been made to the 'commodity flow' method used for deriving the earlier series. In such cases, the Division's estimates are subject to the same weaknesses as have been noted above in the case of these series. Finally, some gaps in direct information in respect of certain types of investments for some years have been filled somewhat arbitrarily through extrapolation, interpolation, etc.

All the available major series on private fixed investment in Pakistan are schematically presented in Table C.1. Where necessary, adjustments have been made to render them mutually comparable.

For the 1950s, the only continuous series available is the one compiled by the Planning Commission for the period 1951/52 - 1958/59.[1] Haq's series[2] incorporates this series in toto and adds estimates for monetised investment in agriculture that was to a large extent left out of the former. An independent set of estimates that overlap this series was prepared by Papanek.[3] Although the method employed by him is, in several respects, similar to the 'commodity flow' approach followed by the Planning Commission, a large part of his estimates is based on the results of an industrial survey conducted by him in 1958. Further, unlike the other series for the same period, his estimates provide a fairly detailed sectoral breakdown of the total private sector investment. Papanek's series, however, is not continuous as the estimates presented are separated by five-year intervals (the estimates are presented for the years 1949/50, 1954/55, 1959/60 and 1964/65).

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[1] Estimates of Private Investment, 1951-52 to 1958-59, Planning Commission, Govt. of Pakistan, Sept. 1959.

[2] Haq, op. cit.

[3] Papanek (1967), op. cit.

Under the auspices of the Statistics Division, an independent set of estimates of private investment with a detailed sectoral and asset-wise breakdown for the year 1962/63 was prepared by Elshout,[1] an attempt which appreciably influenced subsequent work in this field by the organisation. Tims[2] took Elshout's estimates for 1962/63 as bench-marks for working out the relevant input and investment coefficients and, following the contemporary practice, applied these coefficients to data on the import and domestic production of key capital inputs in order to extend these estimates both backward and forward to form a series covering the period 1959/60 - 1964/65. This series for the Second Plan period was later superseded by estimates prepared by the Planning Commission as part of the final evaluation of the Plan.[3] These estimates covering the period 1959/60 - 1964/65 were, in fact, an extension of the series compiled earlier by the Commission for the period 1951/52 - 1958/59.

Extensions of the Commission's series to later years have been reported from time to time in the Commission's documents such as Annual Plan reports and reports prepared for the Aid-to-Pakistan Consortium. A consolidated series for the period 1965/66 - 1969/70 obtained from these sources is shown in the table, added to the Commission's estimates for earlier years. (No regional breakdown of these estimates is available in these documents.) In recent years, the Commission has been relying mainly on the investment estimates prepared by the Statistics Division, shown at the bottom of the table, and its publications during this period have been reporting the same set of estimates, albeit in some cases with certain minor adjustments recommended by internal working groups on private investment set up for various annual plans. Thus, for the period 1969/70 onwards, the series

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1 J.R.L. van den Elshout, 'A (Revised) Estimate of the Gross Investment in Fixed Capital Assets in Pakistan in 1962-63', in Report of the Consistency Committee on the Third Five-Year Plan, op. cit., pp. 272-9.

2 Tims, op. cit., and Harvard Advisory Group, 'Investment Estimates for the Second Plan Period', in Report of the Consistency Committee on the Third Five-Year Plan, op. cit., pp. 306-12.

3 Final Evaluation of the Second Five-Year Plan (1960-65), op. cit.

prepared by the Division is the only available continuous series on private fixed investment in the country.

The summary description presented above includes all the 'basic' investment series that have been prepared from time to time by different organisations and individual researchers. All other investment series that appear elsewhere have been derived from these data. Although several weaknesses in the estimates have been pointed out, these must be seen in the context of a generally weak statistical base in less developed countries. The methods followed in some cases may be considered second-best or even crude, but then in most such cases these are the only options available for arriving at some reasonable approximations. One thing which enhances one's confidence in the 'reasonableness' of these estimates is that when the available series are reduced to a comparable basis, as has been done in Table C.1, they all appear to be in broad agreement with one another. As we shall see in the next section, the sectorally disaggregated estimates of investment that form part of some of these series are also in broad agreement. A few discrepancies between investment estimates for overlapping years that do exist can be explained largely in terms of later estimates based on more up-to-date and detailed information replacing the earlier estimates. Thus, for example, the lack of agreement between Tims' and the Commission's series for the period 1959/60 - 1964/65, especially in later years, is explained by the fact that whereas the former was drawn up halfway through 1964/65, i.e. December 1964, the latter was prepared two years later when more complete information on the relevant magnitudes during the Second Plan had become available. In fact, another set of estimates for the period 1960/61 - 1963/64 prepared by the Commission at the same time as Tims' series and released in the same publication[1] (not shown in the table) yields a series that is much more consistent with the

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[1] Report of the Consistency Committee on the Third Five-Year Plan, op. cit., pp. 280-306.

former. The same factor explains the difference between Papanek's and the Commission's estimates for the year 1964/65.

It is possible to argue that this broad consistency between the various sets of estimates may not be taken too seriously 'considering the similarity of their methods and the narrow foundation of hard data'.[1] But it 'is encouraging, nevertheless'.[2] Besides, it cannot be attributed entirely to methodological similarities and a narrow foundation of hard data . As noted above, there are important differences between the methods and types of data used by the Planning Commission, the Statistics Division and Papanek.

C.3. Derivation of a Composite Series on Private Investment by Sectors (1949/50 - 1976/77)

The purpose of having a critical look at the available major investment series was to prepare a firm basis for constructing a continuous, sectorally disaggregated time series on fixed investment in the private sector for the entire period of the study. The foregoing analysis enables us to establish comparability between, and the relative merits of, these series and points out certain weaknesses and gaps in them that need to be corrected and filled for this purpose. Above all, the examination of the methods underlying the various series, the extent of their coverage and the broad consistency between the series provide us with a fair amount of confidence in the available data and indicate that a reasonably firm and consistent composite time series can be derived from them.

The composite series prepared by us is shown in Table C.2. For the period 1963/64 onwards, we have used the Statistics Division's series which provides a detailed sectoral breakdown needed for the purpose of isolating the share of the non-corporate sector in total private investment. For the

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[1] Nulty, op. cit., p. 303.

[2] Ibid., p. 304.

rest of the Second Plan period, i.e. 1960/61 - 1962/63, the Planning Commission's estimates have been used which, for overlapping years, are consistent with the former. However, the Commission's estimates do not provide a sectoral breakdown of the overall private investment. The Statistics Division's estimates show that the sectoral shares were almost identical in the last two years of the Second Plan - i.e. 1963/64 and 1964/65 - and, further, did not vary much in the first couple of years of the Third Plan. On the basis of the observed stability of the sectoral shares in the early- and mid-1960s, we have assumed that these were the same in the first three years of the Second Plan as in the last two years.[1]

For the earlier period, i.e. 1949/50 - 1959/60, we have two major sources of information, viz. Haq and Papanek. Of these, only the latter provides a sectoral breakdown that is sufficiently disaggregated for our purposes. However, as noted above, this series is not continuous and the estimates are presented only for 1949/50, 1954/55 and 1959/60. The former, on the other hand, is a continuous series covering the period 1949/50 - 1959/60. For the overlapping year 1954/55, both yield almost identical estimates.[2] Further, whatever comparable information on sectoral breakdown is available in Haq's estimates is broadly consistent with that in Papanek's. Keeping in view these indicators of consistency between the two sources, we have used Haq's estimates of total private fixed investment over the period 1949/50 - 1959/60,[3] as these are continuous, and applied to them the

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[1] Although sectoral shares for the year 1959/60 available in Papanek's series may not be strictly comparable to those for the years 1963/64 and 1964/65 available in the Statistics Division's series (in view of the big jump in private investment that took place at the turn of the decade), broad similarities that exist between the two lend support to our assumption.

[2] For the other two overlapping years, i.e. 1949/50 and 1959/60, the figures are somewhat different; but then that may be due to the fact that Haq's estimates for these two years, unlike Papanek's, are not based on actual data but have instead been derived by extrapolation.

[3] Except for the years 1949/50 and 1959/60. As noted in the previous footnote, Haq's estimates for these years are extrapolated values. For the former, we have used Papanek's estimate - which is almost identical to that of the Planning Commission - and, for the latter, an average of the two.

sector-wise division of private fixed investment obtained from Papanek's estimates, as this is more detailed.

Since the sectoral investment ratios in Papanek's study relate only to 1949/50, 1954/55 and 1959/60, a problem that was faced was to derive corresponding sectoral ratios for the intervening years. In the case of agriculture (excluding irrigation) and irrigation, the ratios for the said three years do not exhibit much variation and corresponding ratios for the intervening years have been interpolated by means of a uniform distribution of actual changes over the five-year intervals. The shares of industry, transport and housing in the total private investment do, however, exhibit significant variation over these intervals and the use of a similar interpolation procedure in their case would have been inadvisable. The following method has been applied in the case of these sectors. For over-lapping years, figures for the ratio of private investment in industry and transport to total private investment available in Haq's continuous estimates are quite similar to those in Papanek's.[1] We have used these sectoral ratios for the intervening years, breaking them up between the constituent sub-sectors in the latter's scheme of sectoral classification in accordance with their indicated weights. With annual sectoral investment ratios for agriculture, irrigation, industry and transport worked out this way, the same for housing have been obtained residually.[2]

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[1] The relevant figures for the overlapping years 1949/50, 1954/55 and 1959/60 respectively are 69%, 76% and 66% in Haq's estimates and 60%, 74.5% and 66.5% in Papanek's estimates if inventory investment in the large-scale industry is included, and 66%, 72% and 55% in the former and 51%, 65% and 55% in the latter if it is excluded. Considering that Haq's estimates for 1949/50 and 1959/60 are extrapolated values, the similarity between the two sets of figures is encouraging. For other sectors in Papanek's classification, no comparable information on investment shares is available in Haq's estimates.

[2] It will be seen from Table C.2 that we have somewhat different schemes of sectoral classification for the period 1949/50-1959/60 and for the period 1960/61 onwards. This has been forced on us because the sources from which the sectoral estimates of investment have been drawn, viz. Papanek and the Statistics Division respectively, followed these different schemes, the latter being more disaggregated than the former.

Since the sectoral disaggregation of private investment available in Papanek's estimates relates to Pakistan (EW) as a whole, another problem that we faced was whether the sectoral investment ratios derived from these estimates could be applied to the estimates of private investment in former West Pakistan only. During the period 1963-70 for which the Statistics Division's sector-wise estimates of private investment are separately available for both the former provinces, we observe that the relative shares of various sectors in total investment were almost identical between the two except for agriculture and transport. Since non-monetised investment was a much larger proportion of total investment in agriculture in former East Pakistan than in former West Pakistan, the relative share of agriculture in investment was greater/smaller in the former if non-monetised investment was included/excluded. The smaller share of the transport sector in that province was mainly due to the different nature of its transport system based largely on simple means of navigation which require less investment in transport equipment than does, say, road transport. However, as private investment in former West Pakistan was in absolute terms much larger than that in the other province, sectoral shares in total investment in Pakistan (EW) followed the same in the former much more closely and, in the case of the above two sectors, did not diverge by more than 1 or 2 percentage points (although the interprovincial divergence was quite larger). In applying the sectoral investment ratios obtained from Papanek's estimates to private investment in former West Pakistan over the period 1949/50 - 1959/60, the ratios for these two sectors were adjusted accordingly.

Derivation of our composite series involves two further adjustments. Firstly, for the 1950s, estimates of non-monetised investment are available

only at five-year intervals, viz. for 1949/50, 1954/55 and 1959/60.[1] This is because Haq's continuous series on private investment which has been used by us for this period does not include this type of investment. Estimates for the intervening years have been obtained by straight-line interpolation between the available point estimates of the proportional contribution of this type of investment to total fixed investment - which reveal a declining trend[2] - and then applying these interpolated ratios to the estimates of total fixed investment in the aforesaid series.

It may be added that because of the inherent difficulty of accurately measuring non-monetised investment, the estimates presented herein are, at best, only rough approximations of the magnitudes involved. Although quite weak, these estimates have been included in our series in view of the following considerations. (i) In a developing country like Pakistan, non-monetised investment constitutes a sizable chunk of total investment. (ii) Although the estimates may in absolute terms be far from the true magnitudes, the declining trend in the relative importance of this type of investment revealed by them is in agreement with a priori expectations. (iii) For an intertemporal comparison of saving/investment ratios, it is important that non-monetised investment was included in the series as otherwise, given its declining relative importance, figures for the earlier years would be much more seriously understated than those for the later years. Thus, so long as our estimates can be regarded as reasonable indicators of the order of magnitude, there is a case for their inclusion in our investment series.

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[1] We have used the Planning Commission's estimates for these years. Estimates for 1949/50 and 1954/55 were also made by Papanek but these are not independent of the former as these were derived by extrapolating backward the trend in the Commission's estimates for the period 1959/60 - 1964/65.

[2] The Planning Commission's estimates give the following values for this contribution: 32% in 1949/50, 18% in 1954/55, 15.7% in 1959/60, 12.3% in 1960/61, 10.8% in 1961/62, 8.8% in 1962/63, 7.8% in 1963/64, 7.0% in 1964/65 and so on (The Third Five-Year Plan, Planning Commission, Govt. of Pakistan, June 1965, p. 5, and Final Evaluation of the Second Five-Year Plan, op. cit., p. 187).

Secondly, as noted in the previous sub-section, our estimates of investment are understated to the extent that these do not include private monetised investment in land improvement and non-mechanised irrigation.[1] Since this form of investment accounts for a significant proportion of total investment in agriculture, we have adjusted our composite series for this omission.[2] Some information on the relative magnitude of this type of investment is available in Annual Plan, 1973/74 and Annual Plan, 1974/75 which present the Statistics Division's estimates of investment in agriculture for these years as adjusted for this understatement by the Planning Commission's Working Group on Private Investment (Sub-Group on Agriculture).[3] According to the adjusted estimates, monetised investment in land improvement and non-mechanised irrigation is about 10 to 15 per cent of the total monetised agricultural investment in all other forms. An almost similar ratio is obtained from the projected estimates of private investment in agriculture for the period 1976-81 in Draft Fifth Five-Year Plan, 1976-81.[4] Further support for this order of magnitude is provided by the data on agricultural investment collected as part of Rural Credit Survey, 1972.[5] Here, the proportion of total investment in these activities, including the non-monetised component, is roughly similar to that indicated by the Working Group's estimates.

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1 Our estimates also do not take into account non-corporate 'investment' in the form of purchase of land and livestock. As most of such transactions are intrasectoral,, no serious understatement could have been caused on this score. A more important source of understatement, however, could be the omission from our estimates of capital formation in the form of increase in livestock through natural growth. No proper estimates are available on this.

2 However, expressed as a proportion of total investment in the private sector, the adjustment is very small (see Table C.2).

3 Annual Plan, 1973/74 and Annual Plan, 1974/75, Planning Commission, Govt. of Pakistan, pp. 28 and 29 respectively.

4 Draft Fifth Five-Year Plan, 1976-81 (First Version), Planning Commission, Govt. of Pakistan, Vol. I, pp. 128-9.

5 'Rural Credit Survey, 1972', Karachi, State Bank of Pakistan, unpublished.

Using this evidence, we have raised the available estimates of annual monetised investment in agriculture by 12.5 per cent in each year. The use of a single mark-up ratio for all years allows for the fact that the share of such labour-intensive activities as land improvement and non-mechanised irrigation in total agricultural investment is normally much higher in the early stages of development. As a large part of investment in these activities is non-monetised, the declining relative share of non-monetised investment in total agricultural investment in our estimates means that total investment in land improvement and non-mechanised irrigation (both monetised and non-monetised) as a proportion of total investment in agriculture has been falling over time, as one would expect. Our use of a constant mark-up ratio means only that monetised investment in these activities as a proportion of total monetised investment in agriculture has been assumed to be of the same order over the entire period which, given the absence of more information on the matter, may not be an unreasonable working assumption. Thus, our adjusted series on investment in agriculture shows that monetised investment in these activities plus non-monetised agricultural investment as a percentage of total investment in agriculture was a little under 40 per cent in the early 1960s, which fell to about 30 per cent in the early 1970s and to about 20 to 25 per cent at the end of the period of the time series. Another piece of evidence supporting these orders of magnitude is provided by the detailed estimates of sectoral investment prepared by Elshout[1] for the year 1962/63; these indicate a corresponding ratio in the range of 35 to 40 per cent for that year.

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[1] Elshout, op. cit., pp. 278-9.

C.4. Estimation of Non-corporate Private Sector Saving in Real Assets

Next we use our sectorally disaggregated time series on private fixed investment to estimate non-corporate saving in the form of direct investment in real assets. The following paragraphs describe how private fixed investment in various sectors of the economy has been apportioned between the corporate and non-corporate constituents of the private sector. Table C.3 presents the results.

Investment in Fixed Assets in Agriculture

This includes investment in farm structures (excluding residential buildings), machinery, tools and implements, transport equipment, non-mechanised irrigation works and other types of improvements on land (including the non-monetised component). Although an asset-wise breakdown of total fixed investment in this sector is provided in the Statistics Division's estimates, this does not indicate the share of co-operatives - the only private corporate element that may be thought of directly investing in the sector on any significant scale. This share, however, cannot be large as rural co-operatives play a limited direct role in agricultural production and investment since most of their activities are confined to credit operations. Some confirmation of this is provided by a more detailed breakdown of investment in the sector reported by the Planning Commission's Working Group on Private Investment.[1] For the year 1974/75, co-operative societies have been shown as accounting for just under 1 per cent of total fixed agricultural investment. The same order of magnitude is indicated in the Draft Fifth Five-Year Plan.[2] Considering the indicated insignificance of direct co-operative investment, we have allocated the whole of fixed agricultural investment to the non-corporate sector.

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[1] Annual Plan, 1974/75, loc. cit.

[2] Draft Fifth Five-Year Plan, 1976-81, loc. cit.

Investment in Fixed Assets in Large-Scale Manufacturing Industry

This includes investment in buildings and other construction including improvements on factory land (but excluding residential buildings), machinery and similar equipment, transport equipment and fixed assets such as furniture and other fixtures on factory premises. The CMI's provide some information on the shares of various types of organisations in the total fixed assets in the large-scale industry. From these we get the following figures for the combined share of individually owned enterprises, partnerships and non-government private limited companies (which are included in the non-corporate sector): 42, 38, 42, 36, 31, and 32 per cent respectively in 1964/65, 1965/66, 1966/67, 1967/68, 1969/70 and 1970/71. Although these figures do not exhibit a smooth trend,[1] a declining tendency is unmistakable, with values around 40 per cent in the early 1960s falling to about 30 per cent at the beginning of the 1970s. In the absence of any other information on the matter, an allocation of private fixed investment in the large-scale industry between the corporate and non-corporate industrial units roughly in proportion to their changing shares in total fixed assets appears to provide a fairly reasonable basis. For this, we have extrapolated the indicated declining trend in the share of the non-corporate units both backward and forward such that the following values are obtained: 50 per cent in 1949/50, 40 per cent in 1959/60, 35 per cent in 1964/65, 30 per cent in 1969/70 and 25 per cent in 1976/77.[2]

These orders of magnitude have been cross-checked against relevant information drawn from data on sanctions for the issue of capital granted

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[1] The lack of 'smoothness' may be due partly to fluctuations in the coverage of the CMI's.

[2] The allocation made to the non-corporate sector has been kept a couple of percentage points below its estimated share in total fixed assets in the corresponding year to allow for the decline in the latter.

by the Controller of Capital Issues.[1] This indicates that of the total sanctions granted to both public and private limited companies in the private industrial sector, the latter accounted for about 35 per cent in the early 1950s, which fell to about 30 per cent at the end of the decade and further to about 15 per cent at the end of the 1960s. Further, from the CMI's we get the information that individually owned enterprises and partnerships, the other two components of the non-corporate business sector, accounted for about 35 per cent of the total fixed assets of the non-corporate business sector in large-scale manufacturing in the mid-1960s and that this fell to about 30 per cent at the beginning of the 1970s. These two sets of values, taken together, are broadly consistent with the trend and orders of magnitude suggested by the values obtained from the CMI's and our extrapolated values based thereon.

Investment in Fixed Assets in Small-Scale Industry

The list of assets included is similar to that in the case of large-scale industry. Given the way the non-corporate sector has been defined in this study, whereby it includes non-government private limited companies, the whole of private fixed investment in small-scale industry may be allocated to this sector. Any share of corporate enterprises therein must be relatively insignificant.

Investment in Dwellings (Rural and Urban)

This includes all investment in residential structures, excluding the value of land, in both rural and urban areas. The only significant corporate element in this investment could be in the form of residential structures constructed by large corporate enterprises, especially those engaged in large-scale industry, for their employees. This cannot,

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[1] As reported in Report on Currency and Finance, Karachi, State Bank of Pakistan, various issues.

however, account for more than a small proportion of the total. The Statistics Division's estimates of investment in large-scale manufacturing provide an asset-wise breakdown as well which includes investment in residential structures.[1] This indicates that the investment in residential structures in large-scale manufacturing has been of an order of less than 5 per cent of the total private investment in dwellings. For example, this proportion was 2 per cent in 1973/74, 1.5 per cent in 1974/75 and 4.5 per cent in 1975/76.[2] The whole of this investment may be considered to have been undertaken by corporate enterprises as private non-corporate business concerns are generally not big enough to have their own residential colonies for their employees. Allowing for additional investment in residential buildings by corporate enterprises in other, relatively small sectors such as construction, transportation, electricity and gas, banking and insurance, etc., an allocation of 7.5 per cent of the total private investment in dwellings has been made to the private corporate sector.

Investment in Machinery and Equipment in Construction Industry

Allocation between the corporate and non-corporate sectors in this case has been based on a recent study of the construction industry in Pakistan.[3] This study, which is based on a survey, shows that public limited companies constitute only about 0.5 per cent of the total number of construction companies and contractors registered with public authorities in the country and that these accounted for about 13 per cent of the total investment in machinery and equipment made by this group over the period 1971-75. We have used a ratio of 12.5 per cent to exclude the share of such companies in the total investment in construction industry. This

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[1] However, when total private fixed investment is sectorally split, this component is shown against the category 'investment in dwellings' and not against 'investment in large-scale manufacturing'.

[2] National Accounts, 1973/74 - 1976/77, op. cit., pp. 25-6.

[3] A Study of Structure and Capacity of Construction Industry in Pakistan, op. cit.

downward adjustment has been made in view of the fact that a majority of building contractors in the country are unregistered and, as such, were not covered by the survey. However, the adjustment made is extremely small as most of the unregistered contractors are people of small means who use little or no mechanical equipment for construction.

Investment in Building Construction in Services Sector

Investment estimates under this heading include 'fixed capital expenditure on construction of buildings in the private sector made by educational services, research and scientific institutions, medical and health services, welfare institutions, business, professional and labour organisations, religious institutions, recreational and cultural services including motion pictures, personal and household services like laundries, barbershops and trading establishments - both in urban and rural areas'.[1] It is clear from this list that most of the investment in this field is attributable to the non-corporate sector as most of the activities listed are carried out by non-corporate businesses and institutions. A 15 per cent deduction appears adequate to allow for corporate participation in these activities, especially in commercial, business and trading activities and in the building of hotels.

Investment in Transport Equipment not included elsewhere

Private investment in land and water transport is included here.[2] As the transport equipment components of investment in the sectors examined above, except for the services sector, have been included in the estimates of total fixed investment shown against them, estimates shown under this category relate to commercial transport sectors such as road transport and shipping, business concerns engaged in the services sector, and households.

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[1] National Accounts, 1973/74 - 1976/77, op. cit., pp. ix-x.

[2] Private sector investment in air transport is negligible.

Private road transport which accounts for a large chunk of the total investment under this category is entirely in the hands of non-corporate businesses. However, as in the case of investment in buildings in the services sector, part of that sector's investment in transport equipment is also attributable to corporate enterprises, and for similar reasons an allowance of 15 per cent seems adequate. As for water transport, estimates of investment by corporate shipping enterprises have been drawn from their balance-sheets[1] and deducted from the estimates of total investment in this category.

Thus far the exercise of splitting sectoral investment estimates in our composite series on private fixed investment between corporate and non-corporate concerns has related to the period 1960/61 onwards over which this series consistently follows the Statistics Division's scheme of sectoral classification.[2] Despite a somewhat different and more aggregative sectoral classification of the composite series up to 1959/60, the ratios derived above for the purpose of splitting sectoral investment estimates do not require any substantial changes when applied to this period. Still, the whole of investment in agriculture, irrigation and small-scale industry is allocated to the non-corporate sector. For investment in large-scale manufacturing, the same extrapolated percentage shares of the corporate and non-corporate enterprises have been used. In the case of transport, again a 15 per cent deduction has been made and for similar reasons. Investment in shipping has been shown separately over this period and the whole of it has been attributed to the corporate sector.[3] Non-monetised investment,

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1 As presented in Balance Sheet Analysis of Joint Stock Companies listed on the Karachi Stock Exchange, op. cit., various issues.

2 Private fixed investment under three other sectoral categories included in the sectoral classification for this period, viz. 'mining and quarrying', 'electricity and gas' and 'banking, insurance and other financial institutions', has been attributed entirely to the corporate sector. The non-corporate share in fixed investment in these categories is negligible.

3 Non-corporate investment in shipping was significant only in former East Pakistan. Anyway, the relevant magnitudes are very small.

which also appears as a separate category over this period, has again been attributed wholly to the non-corporate sector. The only change, and that also a minor one, that has been required is in the case of 'investment in housing'. In Papanek's scheme of sectoral classification, on which the sectoral disaggregation of our composite investment series for this period has been based, the estimates of 'investment in housing' have been arrived at by deducting investment in construction in agriculture, irrigation and the large- and small-scale industry from the estimated total investment in construction in the economy. Comparing the two schemes of sectoral classification it follows that 'investment in housing' during this period also includes what in the subsequent period appears as 'investment in building construction in the services sector'.[1] This is also confirmed by the close similarity between the share in total private investment of 'investment in dwellings' plus 'investment in building construction in the services sector' and of 'investment in housing' in the Statistics Division's and Papanek's estimates respectively for the overlapping year 1964/65.[2] It will be recalled that in the case of investment in 'dwellings' and in 'building construction in the services sector', we made deductions of 7.5 and 15 per cent respectively for corporate participation. Further, the Statistics Division's estimates for the 1960s show that the latter was on average about one-half of the former. These two taken together call for a deduction of 10 per cent from the combined category 'investment in housing' as corporate share.

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[1] Plus also some investment in building construction in such relatively small sectors as mining and quarrying, and banking and insurance. Investment in 'electricity and gas' appears to have been included under large-scale industry in Papanek's classification.

[2] The relevant values are 23.2 and 24.6 per cent respectively. The former figure is composed of 14.5 per cent for 'investment in dwellings' and 8.4 per cent for 'investment in building construction in the services sector'.

C.5. Non-corporate Private Sector Saving - Financial and Real Assets

Finally, we have added the estimates of non-corporate saving in the form of direct investment in real assets, derived as explained above, to the estimates of non-corporate saving in financial assets, derived in the previous section, to arrive at total saving in the non-corporate sector. The resulting series is shown in Table C.4.

D. SAVING IN THE CORPORATE SECTOR

The corporate sector has been defined in this study as comprising all public limited companies in the private sector, all companies in the semi-public sector (including private limited companies), corporate financial institutions and co-operative societies.

An incorporated enterprise can be either a private limited company or a public limited company. The former is defined by the Pakistani Companies Act as one whose articles of association (a) set a maximum limit of fifty and a minimum limit of two on the number of its members, (b) prohibit any invitation to the public to subscribe to the equity or debentures issued by the company, and (c) restrict the right to transfer its shares, if any. In the case of the latter, on the other hand, the minimum number of members is seven with no upper limit and there are no restrictions on public subscription to its shares and debentures or on the transfer thereof.

It will be noted that our definition of the corporate sector does not include private limited companies in the private sector. As stated in Section A, such companies have been merged with the non-corporate sector. This procedure had to be adopted as data required for the purpose of drawing up separate estimates of saving by these companies were not available. Sufficient information was, however, available on similar companies in the public and semi-public sectors of the economy and these have been placed respectively in the government sector, which will be dealt with in the next section, and the semi-public sub-sector of the corporate sector. The semi-public sub-sector includes those companies where ownership and/or control of the enterprise are/is shared between private investors and the government. In the case of companies that have been nationalised during the period of the study, the procedure that has been followed is to retain

them in the corporate sector, with the change being reflected in the transfer of these companies from the private sub-sector of the overall corporate sector to the semi-public sub-sector. This has been done in view of the following two considerations. (i) To maintain the inter-temporal comparability of our series on corporate saving over its entire length, i.e. both before and after the period of nationalisation. (ii) Private participation in the share capital of a large number of companies remained substantially large even after the take-over by the government; their retention in the corporate sector is, therefore, consistent with our treatment of other similar companies in the semi-public sub-sector. Estimates of saving by the various categories of semi-public institutions (including the nationalised companies) have, however, also been shown separately so that they can be rearranged, if desired, in a scheme of sectoral classification different from the one employed here.[1]

We have excluded foreign companies, i.e. companies incorporated abroad but having business inside Pakistan, from our estimates of corporate saving as such companies do not belong to the domestic corporate sector. However, the entire amount of saving out of profits in companies incorporated in Pakistan but having foreign equity participation forms part of our estimates. In principle, it appears that saving in the form of re-investment of profits in such companies should be allocated between the foreign and domestic shareholders in proportion to their shares in stock ownership, for the reservoir, i.e. profits, from which the flow, i.e. saving,

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[1] As we shall see below, the distinction between the private and semi-public sub-sectors of the corporate sector has been made only in respect of non-financial companies. All corporate financial institutions have been placed under a single category, viz. 'Corporate Financial Institutions', without any such sub-classification. Thus, the nationalisation of insurance companies and banks in March 1972 and January 1974 respectively does not change the placing of these institutions in our sectoral schema.

emanates belongs collectively to these shareholders. This adjustment could not be made in the present study as detailed information on the distribution of stock ownership in companies with foreign participation was not available. However, given the relative magnitude of foreign portfolio (equity) investment in the private corporate sector in Pakistan, this gap in information could not in our view have produced any large divergence between the estimated saving in the domestic corporate sector and that 'attributable' to it after the said adjustment has been made.

D.1. Some Problems of Estimation

Corporate saving can be estimated either from the balance-sheets or from the income-expenditure accounts of corporate enterprises. From the former, the estimate of annual saving is arrived at by deducting the increase in all types of corporate liabilities during a year from the corresponding increase in all types of corporate assets, excluding all valuation changes in the form of capital gains or losses - whether realised or unrealised. From the latter, the said estimate is obtained by deducting all current corporate expenditure including the payment of dividend and profit taxes, from current corporate income, with similar adjustment for valuation changes. If a consistent set of data and concepts is used, both statements of company accounts should yield identical estimates of saving. In the present study, income-expenditure statements, or profit-and-loss accounts as they are more commonly labelled, have been used for the purpose of estimating corporate saving. However, in the case of one group of companies, viz. insurance companies, recourse had to be made to the asset approach as the relevant income-expenditure data were not available. Details of the method of estimation used in respect of each group of companies have been provided in the following sub-sections.

Data for the estimation of corporate saving have been drawn from the published annual accounts of the companies. The use of the published company accounts for an exercise such as the present one poses several important problems. Firstly, accounting practices differ between companies and aggregation across companies or comparison between them may, therefore, give misleading results unless due adjustments are made to render the individual accounts mutually consistent. These differences (or inconsistencies) in accounting practices stem partly from the different interpretations put on various accounting concepts by company accountants and partly also from the somewhat pragmatic nature of the process of accounting which involves a fairly large element of subjective judgment. Secondly, company accounts are prepared in accordance with the concepts and methods of business accounting which in many cases do not conform strictly to their economic equivalents. Thus, it becomes necessary to analyse carefully the meaning of the relevant concepts as they have been used in these accounts and duly adjust them, where necessary, to make them conform to economic principles. Thirdly, the problems arising out of inter-company differences in accounting practices and a possible lack of conformity between business accounting and economic concepts are compounded, in some cases at least, by a deliberate misreporting of company accounts; an important example of this is the misreporting of profits for tax evasion.

The first problem has to a large extent been avoided in this study as the relevant company accounts were available in a standardised consolidated form, adjusted for inter-company differences in accounting practices. Thus, in the case of non-financial companies, our main source of data are the various issues of the State Bank of Pakistan publication[1] which presents individual accounts of companies listed on the Karachi Stock Exchange (KSE)

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[1] Balance Sheet Analysis of Joint Stock Companies listed on the Karachi Stock Exchange, op. cit.

in a standardised tabular form after adjustments have been made, to the extent possible, to render the same mutually consistent.[1] Similar standardised information was also available for corporate financial institutions such as banks and insurance companies in the annual issues of Banking Statistics of Pakistan and Pakistan Insurance Yearbook. In the case of unlisted semi-public sector companies, the relevant accounts were available in a similar standard form in Annual Reports of the Board of Industrial Management (BIM).

As for the problems created by the intrusion of an element of subjective judgment into the process of compiling business accounts (which, for example, may take the form of a pessimistic exercise of judgment resulting in assets being written off at a relatively high rate, work in progress and other stocks valued on a conservative basis and profits underestimated relative to the level that would be estimated under a more optimistic regime), one is left with no alternative but to work on the assumption that the effects of this phenomenon are randomly distributed across companies such that the relevant totals and averages for any particular group of companies are not biased to any large extent.[2]

As regards the second problem, we have carefully examined the way the relevant concepts and variables have been defined in the aforesaid sources of data. These concepts and variables are explained and their limitations discussed in the following sub-section.

Finally, there is little that can be done to the published company accounts to correct for misreporting that results from a deliberate understatement or overstatement of parts of the accounts. This problem

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[1] 'Despite all attempts at consistency of treatment, there have been instances where paucity of information in the published accounts made it difficult to achieve this objective ... Thus while fully consistent and concurrent treatment may not have resulted, it is believed that obvious fallacies have been avoided', ibid., (1970-75 issue), p. iii.

[2] On this point, see, for example, Meeks and Whittington, op. cit., Appendix B, p. 44.

can be particularly serious in respect of profits as the practice of understating profits for tax evasion is fairly common among companies. We return to this point and its implications for our estimates of saving in the following sub-section.

It may be added that the problems noted above are common, though in varying degrees, to all studies that are based on published company accounts. While these weaknesses in the data are important, they need not completely erode the utility of these data for particular purposes, especially when some due adjustments are made. It is also worth remembering that with all their defects, company accounts are the primary, and in many respects, the best source of information for investors and managements. However, the preceding discussion and the examination of the relevant accounting concepts in the companies' profit-and-loss accounts in the following sub-section suggest that results based on data drawn from these accounts should be treated with due reservation.[1]

Some other problems encountered in drawing up our corporate savings estimates may also be noted here. Firstly, different accounting periods are followed by different companies for the compilation of their annual accounts. In the case of most companies, however, the accounting period corresponds with the July-June fiscal year that has been used in this study. In cases where the accounting period diverges from the fiscal year, the method followed here is to merge the company accounts with the year whose larger part they cover. Thus, for example, the accounts of a company for the accounting period October-September 1965/66 have been taken to pertain to the fiscal year 1965/66. In some cases where the accounting period stretches into two fiscal years in two equal segments, i.e. January-December, the accounts have been taken to coincide with the later fiscal year.

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[1] For a more detailed discussion on the various shortcomings of company accounts in the present context, see, for example, Singh and Whittington, op. cit., Appendix A, and Goldsmith (1955), op. cit., Vol. II, Chap. XVI.

Secondly, estimates relating to Pakistan (EW) had in some cases to be split up between the two former provinces on the basis of incomplete information. There was not much problem in the case of non-financial companies and co-operative institutions as the relevant accounts were separately available for the former East Pakistan- and West Pakistan-based companies and institutions. However, in the case of corporate financial institutions and some non-financial semi-public sector companies with business in both the former provinces, the Pakistan (EW) accounts had to be split up on a rough basis suggested by available indicators of the relevant orders of magnitude. The procedure employed in such cases is explained at relevant points below.

Finally, as the accounts of all companies falling in the corporate sector, as defined in this study, were not available, estimates relating to companies for which the relevant data were available had to be blown up. However, this had to be resorted to in the case of only one category of companies, namely non-financial companies in the private sector.

D.2. Saving in Non-financial Corporate Sector

The main source of data in the case of non-financial companies in the private sector are the various issues of the State Bank of Pakistan publication mentioned above. These issues cover the period 1961-1975 and present standardised balance-sheet and profit-and-loss-account data for individual non-financial companies listed on the KSE.[1, 2]

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[1] Under the rules of the Stock Exchange, a public limited company has to offer a minimum of 30% of its total share capital to the general public in order to be listed. Before the separation of former East Pakistan in 1971, two stock exchanges were functioning in the country - one in Karachi and the other in Dacca. A few years later the stock exchange in Lahore which existed before Independence (1947) was reactivated and is now functioning alongside the KSE. The former, however, is a much smaller exchange and the companies listed on it form a subset of those listed on the latter.

[2] The terms 'listed' and 'quoted' companies refer to the same set of companies and have been used interchangeably here.

We have used information drawn from the profit-and-loss accounts of these companies for the purpose of estimating their savings. Gross corporate saving is estimated by subtracting dividend payments and taxes on profit from current gross profit. Net corporate saving equals net retained earnings and is estimated by subtracting the provision made for the depreciation of capital stock from the estimate of gross saving or, what amounts to the same thing, by subtracting dividend payments and taxes on profit from net current profit. A note on these items as they appear in the source cited above follows.

The figures for annual gross profit reported in the source have been arrived at by subtracting cost of production and opening stocks from sales and closing stocks. These figures, however, include certain operating expenses such as selling costs, general administrative charges, and commission and other allowances of managing agencies, and miscellaneous financial charges such as interest payments; and do not, therefore, constitute the right measure of profit from our point of view. Figures for gross profit that we have used here have been obtained by adding together net profit and the provision for depreciation as reported in the same source. The figures for net profit exclude the aforesaid expenses and, with depreciation added to them, provide a more apppropriate measure of gross profit than do the figures for gross profit reported in the source. It should, however, be noted that in the process of excluding the aforesaid expenses, a downward bias is imparted to the profit figures as a result of the exclusion of all allowances and commission paid to the managing agencies. As in most cases the managing agents and owners of a company were the same people and the services rendered by them in their former role were minimal, the payment of such allowances and commission was widely used by owner-industrialists as a convenient way of drawing off a significant proportion of company profits.[1] Under these circumstances, a more representative

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[1] The managing agency system was abolished as part of the industrial reforms introduced in early 1972.

indicator of profits would be one that includes the managing agents' perquisites. This adjustment, however, could not be made as separate figures for such 'expenses' are not provided in the source.[1]

The social accounting concept of saving - the one being followed here - defines saving as net earned surplus which excludes all valuation changes in the form of realised or unrealised capital gains and losses. As we have estimated corporate saving from the profit-and-loss accounts rather than from the balance-sheets of companies, a large part of the valuation problem has been avoided. However, some valuation changes may still creep into our estimates of saving through their influence on the estimates of profits as reported in the former. As stated above, profits have been defined in the source as net sales plus closing stocks less cost of production and opening stocks. Sales are defined to include the sale proceeds of the produce of the company and those of assets such as bonus vouchers and securities. No further details in respect of these items are provided. However, analysing the summary information that is provided we observe that valuation changes can creep into the reported estimates of profits in three main ways. Firstly, as the sale of financial assets such as bonus vouchers and securities is included in the definition of sales, realised capital gains on such financial instruments appear to be included in the figures for profits. Secondly, although the definition of sales given in the source does not state this, it is possible that the sales figures used for calculating profits include the sale of some tangible (or fixed) assets as well; the possibility arises because detailed information on the components of total sales might not have been available

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[1] It may be noted that this problem does not have any influence on the estimates of corporate saving. It does, however, understate the profitability of corporate enterprises which, as we saw in Chap. IV, is an important variable to be studied when analysing corporate saving behaviour.

to the Bank in the case of some companies. In such cases, realised capital gains on the sale of fixed assets would also be included in the reported estimates of profits. The possibility of the inclusion of unrealised capital gains on these assets is, however, limited as the most common basis for the valuation of such assets in company accounts is historic cost rather than current market value.[1]

Intrusion of valuation changes into the estimates of profits in the aforesaid two ways may not be very serious as the sale of financial instruments cannot be very large in relation to the total sales of an industrial company and, additionally, transactions involving the sale of fixed assets would be relatively few. However, a third and more important way in which valuation changes get introduced into the estimates of profits takes the form of stock appreciation. Whereas capital profits in the form of appreciation of fixed assets are normally excluded from profits by conventional business accounting methods, such profits arising out of an increase in the prices of goods held in inventories are normally included.[2] This being so, inventory profits (or losses) arising solely out of price variations also seem to creep into the figures for profits given in the source remembering that net changes in the stocks of goods are included therein. As the requisite data on prices and stocks were not available, valuation adjustments to eliminate such capital profits from these figures could not be made. We should, however, note that the resulting upward bias[3] in the figures for profits is checked by a bias in the opposite

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[1] Cf. Singh and Whittington, op. cit., p. 220.

[2] Ibid., pp. 219-21. See also Meeks and Whittington, op. cit., p. 44. However, it may be stressed again that accounting practices followed by different firms in these matters are far from uniform.

[3] We term it a 'bias' in the present context because these capital profits/losses tend to push the figures for profits above/below the level that would be estimated using the concepts of social accounting rather than of business accounting.

direction. The latter results in large part from a deliberate understatement of profits in the company accounts. Given the large proportions of the phenomenon of tax evasion through concealment of profits and the generally conservative nature of the accounting conventions followed by companies with regard to revaluation of assets and stocks in line with changing market values, and recalling that some understatement of profits also results from the practice of siphoning off a sizable proportion of the profits in the form of various perquisites to the owner-cum-managing agents of the companies, it may not be implausible to assume that the downward bias in the published figures for profits in the source more than offsets the upward bias by a sizable amount.[1] But it must also be noted that whereas the upward bias in the figures for profits as a result of the intrusion of some valuation changes is fully passed on to our estimates of saving, which have been derived residually from them, the latter is offset by the downward bias exerted on gross profits by the concealment of profits only to the extent such profits were actually saved/reinvested. Thus, it is possible that although in the case of profits the latter source of bias (downward) more than offsets the former source of bias (upward), there remains a net upward bias in the estimates of saving.

The figures for tax provision reported in the source pertain to the amounts set aside by companies for payment of taxes on their current profits. As this amount reflects only an initial estimate of a company's tax liability, it may differ from the amount actually due from the company on its profits for the current year and is, therefore, subject to adjustment later in the light of actual tax assessment. The reported figure does, however, represent a rough approximation of the current tax liability which appears to be a more appropriate measure to use in the present context than the amount actually

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[1] Of course, the valuation bias could also be in the downward direction for companies may experience capital losses in a period of falling prices. However, as the trend in prices in recent years has been constantly upward, we may assume that the bias has almost always been upward.

paid by a company during a year; the latter is likely to exhibit much greater variation due to factors such as payment of taxes in advance, defaults and delays due to unavoidable circumstances.[1]

The figures for dividend reported in the source indicate the amount that is proposed to be distributed out of current year's profits. Clearly, it is the amount of dividend that is actually distributed which is the relevant concept when estimating corporate saving. Thus, in cases where the latter falls short of the former, current saving is underestimated to the extent of the shortfall. However, this does not appear to be a serious limitation as the magnitude of undistributed dividend has generally been small.[2]

Given the figures for gross profit, taxes on profit and dividend payments, gross corporate saving is estimated by subtracting the latter two from the first. To estimate net saving, we need, in addition, figures for the depreciation of capital stock. The figures for depreciation charges provided in the company accounts given in the source do not relate solely to the actual depreciation, i.e. wear and tear, of capital stock during an accounting period. The figure for depreciation that is entered in a company's accounts is also influenced by several other considerations, among which government tax policies regarding depreciation allowances play an important role. This has been particularly true in the case of Pakistan's industrial sector as the corporate tax laws allowed accelerated depreciation with a view to providing incentives for a faster rate of industrial capital formation. As a result, the reported figures for depreciation charged to the companies' profit-and-loss accounts appear to have been influenced

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[1] Further, a large part of the difference between the initial provision made for taxes in the accounts and the actual tax liability in the case of individual companies may cancel out on aggregation as this could be in different directions in different accounts.

[2] See Haq and Baqai, op. cit., Appendix, p. 308.

substantially by tax considerations. Since the estimation of actual depreciation of capital assets is by its very nature extremely difficult, rendered even more so by the paucity of relevant information, we have made no attempt to separate the actual depreciation component from the reported figures for depreciation. This means that the reported figures for net profit, i.e. gross profit less the provision for depreciation, are underestimated to the extent the reported figures for depreciation exceeded actual depreciation.[1] This also means that the reported figures for net saving, i.e. net retained earnings (estimated by subtracting dividend payment and taxes on profit from total net profit or by subtracting the provision for depreciation from gross saving), are underestimated to the same extent. Thus, the figures for net retained earnings presented in the tables on corporate saving below do not fully measure net corporate saving.[2]

Up to 1971 the data provided in the State Bank publication covering non-financial companies listed on the KSE also include data on companies that were registered and located in former East Pakistan but were also listed on this Exchange. The method that has been followed in this study is to exclude all such companies from our estimates of saving. A brief discussion on the question of the equity investment of 'West Pakistanis' in the companies based in former East Pakistan and on the implication (apparent) that a part of the internal savings generated by these companies should be attributed to former West Pakistan is in order here.

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1 It should be noted that from the standpoint of the social accounting method, the overstatement of actual depreciation in company accounts due to tax considerations is to some extent offset by the common business accounting practice of calculating depreciation on the original rather than replacement cost of capital assets.

2 Although the above discussion of the relevant concepts in companies' profit-and-loss accounts has been carried out with reference to one particular source of data, it also applies, mutatis mutandis, to other sources of corporate data that have been used and are mentioned at relevant points below.

Firstly, little statistical information on private capital flows between the two former wings of the country is available that can be used for making any such adjustment. Two separate panels of economists from the two wings attempted to draw up some rough estimates of the regional balance of payments in their advisory reports to the Planning Commission for the Fourth Five-Year Plan.[1] But as little data could be collected on invisible current account transactions between the regions - e.g. inter-regional flow of profit remittances, interest, etc. - and on inter-regional capital flows, such items had to be left out of these exercises. However, despite this almost complete lack of statistics on the matter, the generally held view in Pakistan has been that a substantial net flow of industrial investment from former West Pakistan to former East Pakistan took place over the years.[2]

But, secondly, a more important consideration here is the question that even if it were possible to translate this generally held view into some reasonable estimates of the value of industrial assets in companies located in former East Pakistan whose ownership was in the hands of West Pakistan-based industrialists, would it be a sufficient basis for allocating a proportional share of saving in such companies to West Pakistan? In our opinion that would be a very simplistic view to take of a matter which, in the present case, involves some important complications that may not be readily obvious. This is because in this case it would be quite arbitrary to label the investors involved in this 'transfer' of industrial capital 'East Pakistanis' or 'West Pakistanis' merely by referring to their place of residence. In the case of a flow of resources between two countries, the distinction between residents and non-residents is much clearer and more

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1 See Report of the Panel of Economists on the Fourth Five-Year Plan (1970-75), Islamabad, Pakistan Planning Commission, May 1970.

2 'There is a sizable investment in East Pakistan the ownership of which is in the hands of West Pakistan-based industrialists', ibid., p. 140. A similar view is expressed in Report on Economic Relations between East and West Pakistan, op. cit., pp. 61-2.

meaningful than that between the residents of two regions of the same country in the case of an interregional flow, particularly when the latter 'flow' takes the form of acquisition over time by a group of large industrial investors resident in one region of fairly extensive and established networks of business in both that are well integrated into the respective regional economies. The present case amply illustrates these complications. Most of the industrial assets owned by 'West Pakistanis' in companies located in former East Pakistan were held by large industrial families or groups based in Karachi (flow of equity capital between the two regions by means of interregional subscriptions by the general public can be assumed to have been relatively negligible).[1] Now, if we take a closer look at the history of the evolution of these large industrial families, we observe that most of these were initially traders who had migrated to Pakistan around the time of Partition from busy trading and industrial centres across the border, particularly from Bombay. Because Karachi was at that time the national capital and a seaport with the necessary commercial facilities and business links, these migrating traders were naturally attracted to that city.[2] In an environment created by the en masse exodus of established Hindu entrepreneurs, existence of a wide spectrum of investment opportunities in a new country and a government favourably disposed towards the promotion of industrial investment by means of various incentives coupled with the advantage these incoming traders had over potential local competitors in terms of their financial resources, experience, ability and readiness to respond to profitable investment opportunities and incentives, they soon became industrial pioneers with their business spread

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1 This is illustrated by some data on the ownership of industrial assets in two key industries in former East Pakistan, viz. jute and cotton, presented in Report on Economic Relations between East and West Pakistan, op. cit., pp. 61-2, and Annexures 12-A and 12-B.

2 'Because, at the time of Independence, Karachi, as a seaport and national capital, attracted a substantial number of wealthy businessmen from Bombay and other parts of India, it became the business capital', J.C. Eddison, 'Industrial Location and Physical Planning in Pakistan', Pakistan Development Review, 1(1961), 1-21, p. 3.

widely over both provinces of the country and growing rapidly through the ploughing back of incomes accruing from initial investments. It is clear from this brief picture that it would be quite arbitrary in the present context to label these investors 'West Pakistanis' merely for the reason that at the time of Partition they had chosen to settle down in Karachi rather than in Dacca, and regard their investments in companies based in former East Pakistan as West Pakistani investments constituting a 'flow' of capital from that province. In our view, it would be more appropriate to regard them instead as national industrial groups and the industrial units established by them as part of the region where they were located. These units were as well integrated into the industrial structure of the region of location as were other 'locally' established units and shared a set of common characteristics with the latter, e.g. the management was largely carried out by 'local' people, almost the whole of the equity subscription coming from the general public belonged to the same region, most of the profits that were channelled back into business remained in the same company/region, etc. Also, as a corollary, since most of the subsequent investments in former East Pakistan by these groups seem to have been financed largely out of incomes earned in that province, it does not appear appropriate to regard these investments as constituting an interregional flow of capital resources. Hence the complete exclusion of companies based in former East Pakistan from our estimates of corporate saving.[1]

In the case of companies under semi-public ownership, a company's saving was attributed wholly to the region of location if the business carried out by that company was wholly or largely restricted to that region. As for semi-public companies whose business was widely spread over both the former provinces of the country and for which separate regional accounts were not

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[1] For similar reasons, equity investment by 'West Pakistanis' in companies based in former East Pakistan was not included in our estimates of non-corporate saving in corporate shares.

available, the method that has been adopted here is to allocate the savings of these companies in proportion to the regional distribution of their business. The adjustment required on this account was, however, small as it was restricted to only two companies, namely the Pakistan International Airlines Corporation (PIAC) and the National Shipping Corporation (NSC).[1]

As noted earlier, the State Bank publication which constitutes the main source of data on non-financial companies covers only quoted public limited companies. This includes such companies in both the private and semi-public sub-sectors of the corporate sector. The procedure followed for deriving comparable estimates for unquoted companies is explained below.

Comparable data in the case of unquoted companies, both private and public limited, in the semi-public corporate sector were available in Annual Reports of the BIM and the West Pakistan Industrial Development Corporation (WPIDC), annual issues of Government Sponsored Corporations and a Planning Commission study of public enterprises,[2] and our estimates of saving in these companies are based on these data. It may be added that the scope of the semi-public corporate sector was greatly enlarged in the early 1970s as a result of the nationalisation of several important industries.

Private limited companies in the private sector, it will be recalled, are not included in the definition of the corporate sector employed here. Unquoted companies in the private corporate sector, therefore, include only unquoted public limited companies. As no independent data were available on this category of companies, estimates based on the State Bank data on quoted public limited companies have been blown up to include the former in our estimates of corporate saving.

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[1] On the basis of some fragmentary information regarding the business of these Corporations in former East Pakistan, Alamgir and Rahman (op. cit., p. 177) allocated 30% of their annual savings to that province. In the absence of any better information, we have used the same ratio.

[2] Economic and Financial Appraisal of Public Enterprises, op. cit.

The blowing-up of estimates relating to a sample of companies in order to encompass the universe is an almost inevitable procedure in the case of studies which seek to present an aggregative statistical picture of the corporate sector. This is because the accounts for all companies in the sector are rarely available. The major problem in this respect is how to determine a suitable blow-up factor. Different blow-up factors have been used in different studies depending upon the type of available data which allow the researcher to establish a suitable relationship between the sample and the universe.[1] In the present case, the only available source of data that permitted a rough estimation of the size of the sample in relation to the universe were the CMI's. As we saw in Section C, for some years the CMI's provide data on industrial production, value added, cost, etc. that are classified by the legal status of industrial units. For these years, we compared the total sales of quoted public limited companies engaged in manufacturing activities - estimated from the State Bank publication by deducting the sales of quoted public limited companies engaged in activities other than manufacturing, e.g. trading, transport and shipping, construction, etc., from the total sales of all quoted public limited companies - with the corresponding figures for sales by all manufacturing public limited companies, both quoted and unquoted, estimated from the CMI's by subtracting the net change in stocks of products and by-products during a year from the total output thereof during the same year.[2]

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[1] Thus, the relationship between the sample and the universe has been expressed variously in terms of paid-up capital, total fixed investment, total net assets, total capital employed, etc.

[2] The CMI's do not provide any direct figures for sales. The use of the sales variable in the estimation of the blow-up factor was dictated largely by the fact that this was the only variable on which some comparable information was available in the two sources of data. On an a priori basis, however, it may not in any way be inferior to other variables that have been used for this purpose in similar studies. Besides, although in the present case the sample is not a random one, it is of a sufficiently large size (about four-fifths of the universe) to warrant a blow-up of the results based thereon.

The ratio of the former to the latter worked out to about 80 per cent in 1964/65, 88 per cent in 1966/67, 80 per cent in 1967/68, 83 per cent in 1969/70 and 90 per cent in 1970/71. The ratios fluctuate within a narrow range which gives us a fair amount of confidence in treating the same as indicators of the relative size of the sample. As the ratios do not exhibit any discernible trend and the fluctuation in them may in large part be due to fluctuation in the coverage of public limited companies in the CMI's, we took a simple average of these ratios so that the ratio actually used as the basis for the blow-up factor was not unduly sensitive to the degree of coverage in the CMI's during any one year. This average, about 84 per cent, was adjusted downward to 80 per cent to allow for (a) the fact that the 'sales' term in the State Bank publication is somewhat more inclusive than 'current production adjusted for changes in stocks of products and by-products' estimated from the CMI's (as the former also includes the sale of assets such as bonus vouchers and securities, as was noted earlier) and (b) the undercoverage of public limited companies in the latter, i.e. average yearly undercoverage in the CMI's as distinguished from the year-to-year fluctuations in the coverage which we have sought to even out by means of a simple average. The adjustment was, however, kept small because the sale of such assets by an industrial company in relation to that of its products and by-products must be small and because the average undercoverage in the CMI's in respect of public limited companies cannot be very large as, unlike other types of companies, these are in a majority of cases fairly large enterprises maintaining elaborate accounts and are, therefore, not likely to be left out in any great number year after year. Thus, in line with these results, we have raised the estimated saving in quoted public limited companies engaged in manufacturing activities by 20 per cent. No such blow-up was required in the case of non-manufacturing companies as the coverage was fairly complete.

One other problem remains. As stated earlier, our main source of data on non-financial companies, i.e. the State Bank publication, covers the period 1960/61 - 1974/75 only. Among the years not covered by the publication, estimates of saving in the non-financial corporate sector for 1958/59 and 1959/60 have been obtained from the Haq-Baqai study[1] which made estimates of saving in non-financial companies quoted on the KSE for the years 1959-63 by drawing the relevant data directly from individual company accounts. Since these accounts were not available to us, the exclusion of quoted companies based in former East Pakistan from the total could not be made in the same manner as in the case of the State Bank data for later years. However, we observe that for the years 1961, 1962 and 1963 for which our estimates of saving in quoted non-financial companies obtained from the State Bank data overlap the Haq-Baqai estimates for the same group of companies, the share of companies based in former East Pakistan in total gross saving amounted to 16, 25 and 17 per cent respectively. (Both sources yield almost identical estimates for these overlapping years as they relate to the same set of companies.) The corresponding ratios were 25, 21 and 20 per cent in the case of sales, 24, 21 and 22 per cent in the case of paid-up capital and 22, 19 and 19 per cent in the case of fixed assets. Keeping these figures in view, we made a deduction of 20 per cent from the Haq-Baqai estimates of gross saving in quoted non-financial companies in 1958/59 and 1959/60 for former East Pakistan. The resultant estimates were blown up in the manner described above to include unquoted non-financial companies.

Since similar information on saving in the non-financial corporate sector was not available for other years not covered by the State Bank publication, our main series on corporate saving drawn from detailed

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[1] Haq and Baqai, op. cit.

information on the disposal of corporate profits had to be restricted to the period 1958/59 - 1974/75. However, some rough estimates of saving in this sector for the period up to 1957/58 have been worked out from available information on the paid-up capital of quoted non-financial companies over the period. Both paid-up capital and gross saving in this sector exhibit trends over the twelve-year period 1959-70 that bear a very close statistical relationship with each other. Fitting an equation of the form

$S_{nfc} = aK_{nfc}$ where S_{nfc} = Gross saving in non-financial corporate sector

K_{nfc} = Paid-up capital in non-financial corporate sector

to annual data for this period,[1] drawn from the State Bank publication, gave the following result:

$$S_{nfc} = \underset{(48.49)}{0.197}\ K_{nfc} \qquad R^2 = 0.99$$

The closeness of the fit indicates a remarkably orderly relationship between the growth in the size of the non-financial corporate sector and in the volume of gross savings generated by the sector over the period, treating the growth in total paid-up capital in the sector as a proxy for the former. Since government policies towards the corporate industrial sector in this period and in the years preceding this period were broadly similar in character and consistent in intent from year to year, no major

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[1] The period 1970/71 - 1974/75 for which similar data were also available in the same publication was not included in the estimation of this relationship because, as seen in Chapters II and IV, this period is separated from the earlier one by certain special events that had a fairly sharp destabilising effect on the corporate sector(and on corporate saving), viz. the political crisis of 1971/72 and the nationalisation of several industries during 1972-74 . It is precisely for the same reason that the procedure employed below for filling the gaps in the corporate savings series up to 1957/58 has not been extended to fill similar gaps in the years 1975/76 and 1976/77.

departures from the relationship estimated for the later period seem likely to have occurred in the earlier period on that score. Although this does not eliminate completely the possibility of significant departures from the estimated relationship having taken place in the earlier period, it does rule out to a large extent one major exogenous source of such departures. Other similar considerations and the very good fit obtained from the data for later years appeared to provide an encouraging basis for using the relationship estimated above to fill the gaps in our series on corporate saving in the 1950s. Thus, estimates of saving in the non-financial corporate sector (quoted companies) for the years up to 1957/58 were derived by substituting in the estimated equation the corresponding annual figures for total paid-up capital. (A deduction of 20 per cent was made for former East Pakistan; the share of that province remained within a narrow range around this figure during the period for which detailed information on these companies is available in the State Bank publication.) To include unquoted non-financial companies, the resultant savings estimates were blown up in the manner described earlier. Needless to add, the estimates so obtained are of the nature of approximations only and should be treated as such.

The complete set of estimates of saving in the non-financial corporate sector is presented in Table D.1.

D.3. Saving by Corporate Financial Institutions

State Bank of Pakistan

The relevant data have been obtained from the profit-and-loss accounts of the Bank as reported in its Annual Reports. Up to 1970/71, the reported estimates of gross saving, i.e. net retained earnings plus depreciation, relate to the Bank's gross profits arising out of its activities in the whole of Pakistan (EW). As we saw in Section B, currency in circulation in former

East Pakistan remained quite stable around 30 per cent of the total. Taking this as an index of the regional distribution of the Bank's operations, an allocation of 30 per cent was made to the former province out of the reported total gross saving by the Bank. Another basis for using this ratio for the purpose of regional allocation was that the activities of scheduled banks - whose transactions with the Bank account for a large chunk of its income - were distributed between the regions, in terms of their lending operations, in roughly the same proportion.

Net retained earnings of the Bank are disposed of in two ways: (i) addition to various reserve and credit funds, and (ii) transfer to the Federal Government. The latter is included in the figures for the Federal Government's revenue receipts as reported in the federal budgets. In order to avoid double-counting, we have treated this part of the Bank's savings as an item of government income while estimating public saving in the next section and have, therefore, made corresponding deductions from the estimated total gross saving by the Bank, thereby including only the remainders in the estimates of saving in the corporate sector.

Scheduled Banks[1]

The source of data in this case are the various issues of Banking Statistics of Pakistan. The figures reported in the source up to 1970/71 relate to the branches of these banks in Pakistan (EW). We have allocated these figures regionally in proportion to the regional distribution of scheduled bank advances over the same period, the latter having been taken as an index of the regional distribution of banking business in Pakistan (EW). Figures relating to banks incorporated abroad were excluded.

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[1] Relevant data on non-scheduled banks were not available. As we saw in Section B, however, the business carried out by these banks is relatively negligible.

Insurance Companies

Balance-sheets and revenue accounts of life and non-life insurance companies, both local and foreign, are available in the various issues of Pakistan Insurance Yearbook and in Annual Reports of State Life Insurance Corporation. As profit-and-loss accounts are not provided, estimates of saving by insurance companies have been worked out in this study from the liability side of their combined balance-sheets. Saving thus estimated equals the sum total of changes during a year in (i) the general reserve and other special reserve funds, including the investment fluctuation reserve, and (ii) the balance of profit-and-loss account as entered in the balance-sheet. Changes in the life fund have not been included as they have already been taken into account as part of non-corporate saving.

As in the case of scheduled banks, insurance companies incorporated abroad have been excluded from our estimates. Further, the estimates of saving up to 1971 as obtained from the basic data related to the insurance business in both the former provinces of the country. These have been broken down between the two on the same basis as was adopted in respect of the regional allocation of total life fund in Section B.

Other Specialised Financial Institutions

This category includes the following corporate financial institutions: Pakistan Industrial Credit and Investment Corporation (PICIC), House Building Finance Corporation (HBFC), Investment Corporation of Pakistan (ICP), Pakistan Insurance Corporation (PIC), National Development Finance Corporation (NDFC), People's Finance Corporation (PFC) and Equity Participation Fund (EPF). As the estimates of saving up to 1970/71 obtained from the annual reports of PICIC, HBFC, ICP and PIC related to their operations in both wings of Pakistan (EW), certain assumptions had to be made for allocating the same between the two. Again, the general principle

that has been followed is to make this allocation proportional to the regional distribution of the activities of the respective institutions. Thus, the allocation made is proportional to the regional distribution of loans, etc. in the case of PICIC and HBFC and to that of subscription to public issues and debentures in the case of ICP.[1] As for PIC, the basis for allocation is the same as for other insurance companies.

Co-operative Institutions

These comprise co-operative banks and other credit and non-credit societies in rural and urban areas. Detailed annual statistics on the deposits, loans, share capital, etc. of these institutions as compiled from their annual reports published by the Registrar of Co-operative Societies are available in various issues of Pakistan Statistical Yearbook and the same were used by us for estimating non-corporate savings through these institutions. Unfortunately, the balance-sheet or profit-and-loss-account data available in these Yearbooks are not complete for the purpose of estimating saving out of the profits of these institutions. However, the figures for their annual profits reported in the Yearbooks do set an upper limit on the amount of saving annually generated by these institutions. Since data on the disposal of annual profits are not reported, we have made an attempt to derive some rough estimates of saving in the co-operative institutions by applying to the reported figures for annual profits the corresponding ratio of saving to profits in the case of scheduled banks. The ratio relating to banks has been used because a large proportion of the co-operative activity in the country is accounted for by co-operative banks. Anyway, the errors that may result from this rough procedure would be small as the magnitudes involved are themselves fairly small.

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[1] The relevant regional shares have been taken from Budget in Brief, 1971/72, op. cit., p. 44.

The estimates of saving in the various types of corporate financial institutions are presented in Table D.2. Finally, in Table D.3 we have added these estimates to the estimates of saving in the non-financial corporate sector in order to arrive at a series on saving in the corporate sector as a whole.

E. SAVING IN THE GOVERNMENT SECTOR

The government sector in this study comprises the Federal and Provincial Governments (including departmental commercial enterprises), non-financial corporations and autonomous bodies that are either entirely or largely owned by the government except those under the control of the BIM and/or listed on a stock exchange (the latter have already been taken into account as part of the corporate sector), and local government institutions. Details of the method and data used in estimating saving in this sector are presented below.

E.1. Saving by Federal and Provincial Governments (including Departmental Commercial Enterprises)

Saving by the Federal and Provincial Governments, like that by other economic units, equals the excess of current income over current consumption expenditure. In their case, current income consists of current tax and non-tax revenues and consumption expenditure includes all current or non-investment government outlays. Data on current government revenues and outlays are regularly made available in annual budgets of the Federal and Provincial Governments and have been drawn from them. Net revenues accruing from the departmental commercial enterprises of the government, e.g. post office, the telephone and telegraph department, etc., are also recorded as current government revenues in the budgets.

Some Problems of Estimation

The task of estimating government saving is, however, a good deal more complicated than what the availability of apparently detailed government budget accounts would suggest. The complications arise mainly on account of the following three problems. Firstly, the distinction between current and investment outlays is not always clear in the budgets. This is despite the fact that both the Federal and Provincial Governments have always maintained separate current and capital accounts of receipts and disbursements in their annual budgets. The difficulty arises mainly because the division

of government expenditure between 'non-development' and 'development' categories employed in the budgets does not fully accord with the economic distinction between current and investment outlays. The term 'development expenditure' appears in the capital as well as the current accounts of the budgets and contains capital and current elements in both. From the statistics available in the budgets, it is not possible to separate the two elements with any reasonable degree of accuracy or consistency, and information on the relevant orders of magnitude had to be sought and pieced together from other sources.

Secondly, fiscal authority is divided between the Federal and Provincial Governments and the respective revenue and expenditure operations are carried out and recorded separately. However, several transfers take place between these fiscal units which must be excluded from the respective budgets when drawing up an integrated account of revenue and expenditure in the government sector. These take the form of (i) transfer of provincial shares in taxes collected by the Federal Government; (ii) federal loans and grants to the provinces, and (iii) provincial debt servicing payments on federal loans. Our treatment of these items has been as follows. (a) The entire collection in the case of taxes that are administered by the Federal Government but are shared with the Provincial Governments has been shown as part of federal revenue and corresponding deductions have been made from the figures for tax revenue in provincial budgets. (b) Interest received by the Federal Government on its loans to the Provincial Governments has been deducted from the non-tax revenue of the former and from the non-development expenditure of the latter. (c) 'Contributions and miscellaneous adjustments between the Federal and Provincial Governments' (mainly federal grants to the provinces) appearing on the expenditure side of the current account of federal budgets have

been excluded from federal non-development expenditure, and, correspondingly, 'grants in aid from the Federal Government' appearing on the revenue side of the current account of provincial budgets have been excluded from the non-tax revenue of the Provincial Governments. Other intergovernmental transfers on capital account, viz. federal loans and grants to the provinces and repayments thereof, are not relevant in the present context.

The third and most difficult problem was, however, posed by the task of allocating the revenues and expenditures of the Federal Government of Pakistan (EW) up to 1970/71 between former East and West Pakistan. This problem was particularly difficult in the case of federal expenditure on services of common benefit to both regions. The budget documents of the Federal Government do not provide any systematic regional breakdown of the federal accounts and the relevant information had to be collected from some other sources. Regional estimates in respect of most of the federal revenue and expenditure categories were available in some documents of the Planning Commission and the Ministry of Finance. These estimates are, however, subject to some important limitations owing to the difficulties inherent in the process of their derivation. In the case of some federal revenue and expenditure items on which even such information was either not available in these documents or was incomplete as large proportions of the magnitudes involved had been shown as regionally 'unallocable', the gaps had to be filled on the basis of certain assumptions derived from available indicators of the regional contribution to - or share in - the relevant item. These limitations and assumptions have been set out clearly at appropriate points below. Here we may only add that the estimates based on a regional breakdown of federal revenues and expenditures - especially of expenditure on federal services of common benefit to both regions - are, at best, only rough approximations of the true magnitudes and should, therefore, be treated as

provisional till such time as more accurate estimates become available that are based on more detailed information on the actual regional incidence of these items.

Estimation of Revenue Receipts

Current income of the Federal and Provincial Governments has been estimated as the sum of all tax and non-tax revenue receipts in the current account of the budget (excluding intergovernmental transfers) plus the amounts shown against 'accretions to reserve funds' in the capital account. The latter comprise annual contributions to renewal funds, depreciation funds and other deposits out of the current revenues or budget grants of the concerned departments and organisations. Insofar as these contributions come out of the annual budget grants (current account) of the concerned government bodies, which account for a sizable proportion of the total contributions, they represent an internal transaction between the current and capital accounts of the budget rather than a source of revenue additional to those covered in the former. However, as complete details of the composition of these funds were not available for some years, appropriate deductions in those years could not be made from the relevant current account expenditure categories and, following the budgetary convention, a balancing addition was made on the revenue side.

As stated above, the budget documents do not provide a breakdown of the revenue receipts of the Federal Government of Pakistan (EW) between the two former provinces. For the period up to 1960/61, a regional breakdown of federal tax and non-tax revenues was available in a Ministry of Finance document, namely Report on Economic Relations between East and West Pakistan[1] (hereinafter referred to as the Report). The Report allocates federal tax revenues between the two former provinces according to the point of collection. To the extent the location of the actual tax burden or the

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[1] Op. cit., appendices on public finance statistics.

incidence of tax differs from the point of collection, these estimates clearly diverge from the true contribution made by the two regions to the federal revenues. This divergence can be especially important in the case of indirect taxes. To our knowledge, no serious attempt has so far been made to work out the regional incidence of federal taxes in former Pakistan. Clearly, such an attempt will have to come to grips with many conceptual issues and statistical problems, some of which may prove to be particularly difficult - if not insoluble - in view of the lack of detailed statistics on the relevant regional and interregional magnitudes. This is not to deny, however, that even an incomplete exercise along these lines should yield regional estimates that are worthy of greater confidence than the ones derived exclusively with reference to the point of collection. No such attempt has been made here and we have worked on the assumption that the regional allocation of government revenues by point of collection provides a reasonable approximation to the actual contribution made by the regions to the federal exchequer.

Some of the non-tax receipts of the Federal Government have been shown as regionally 'unallocable' in the Report. These include mainly currency and mint receipts, interest on loans to government servants, local funds, etc., and defence receipts. Receipts from currency and mint consist almost entirely of the dividend income and surplus profit received by the Federal Government from the State Bank of Pakistan. The basis on which these have been allocated regionally is similar to the one employed in the last section for allocating the Bank's saving (net of the surplus profit paid to the Federal Government), i.e. 70 per cent of the total to former West Pakistan. As for the remaining two categories of unallocable federal receipts, we have allocated 70 per cent of the former and 85 per cent of the latter to this province. The former ratio is based on the consideration that a similar ratio measured the share of former West Pakistan in total federal employment and also in total federal capital expenditure (including

development loans and grants) while the latter ratio is the one that has been used below in allocating federal defence outlays between the two former provinces.

Similar data on the regional composition of federal tax and non-tax revenues for the period after 1960/61 were available in Budget in Brief, 1970/71[1] and in the Planning Commission's Draft Fifth Five-Year Plan, 1976-81[2] (hereinafter referred to as the Draft Plan).

As for federal 'accretions to reserve funds', data on the composition of annual contributions to the funds up to 1960/61 were available in the Report and the problem of the regional allocation of this item was to a large extent eliminated by making the indicated adjustments in the relevant current account expenditure entries.[3] A few small amounts that could not be accounted for in this way were allocated between the two regions in proportion to the regional distribution of total federal current expenditure in corresponding years and added to the figures for total revenue from tax and non-tax sources shown in the current account of the federal budget. As similar detailed information on reserve funds was not available for other years, the entire amounts shown against 'accretions to reserve funds' in the capital account of the budget had to be regionally allocated in this manner. Regional distribution of the federal current expenditure was used for the purpose of allocation because, as mentioned above, a large part of the contributions to reserve funds comes out of annual budget grants of the concerned government departments.

Estimation of Current (Non-investment) Expenditure

On the expenditure side, total current or non-investment expenditure of the Federal and Provincial Governments has been estimated by adding up

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1 Op. cit., pp. 68-9.

2 Op. cit., pp. 111-2 .

3 These contributions have been shown in the Report as regionally 'unallocable' outlays against the relevant current account expenditure entries.

all non-development expenditure on current account (excluding inter-governmental transfers); non-development expenditure on capital account under the heads 'defence services', 'pensions', 'direct (non-development) expenditure from reserve funds' and 'other works' in the case of the Federal Government and under the heads 'pensions', non-development expenditure on 'industrial and agricultural development' and 'civil works' in the case of the Provincial Governments, and the non-investment component of outlays shown in the budgets as 'development expenditure'. The budget documents do not provide any direct figures for the last of these non-investment expenditure categories and estimates thereof have been worked out by us on the basis of some relevant information available in the Planning Commission documents. It is reported in Final Evaluation of Second Five-Year Plan (1960-65) that the non-investment component in the total annual development expenditure in the public sector during the period 1959/60 - 1964/65 ranged between 11 to 12 per cent.[1] A ratio of 12 per cent is reported in A Draft Study on Economic Disparities between East and West Pakistan[2] for the late 1950s and early 1960s, and one of 11 per cent for the years 1974/75 and 1975/76 is reported in Annual Plan, 1975/76 and Annual Plan, 1976/77[3] respectively. Keeping these figures in view, we have applied a uniform ratio of 11.5 per cent to those years in the 1960s and 1970s for which figures for the non-investment component in the public sector development expenditure were not directly available. For the 1950s, this ratio was raised to 13 per cent in view of the change that was made at the conclusion of the First Plan (1955-60) in the budgetary definition of the term 'development expenditure' that had reduced the number of recurring expenditure

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1 Op. cit., p. 181.

2 A Draft Study on Economic Disparities between East and West Pakistan, Karachi, Pakistan Planning Commission, 1962, p. 51.

3 Op cit., pp. 14 and 11 respectively.

items included in the term.[1]

The budget documents do not provide any breakdown of the total federal non-development expenditure between the two former provinces and the relevant regional estimates have been drawn from the same sources as have been used in the case of federal revenue receipts. Thus, regional estimates for the period up to 1960/61 have been taken from the Report and for the period 1964/65 onwards from the Draft Plan. Expenditures whose benefits can be assumed to be largely localised have been regionally allocated according to the location of the expenditure. The actual incidence of benefits can, of course, be significantly different from that suggested by the location criterion even in the case of these expenditures, depending upon the regional impact of income flows and multiplier effects generated by them. As in the case of federal revenue, no systematic attempt has so far been made to work out a regional distribution of the federal non-development expenditure based on the regional incidence of benefits flowing therefrom, and for similar reasons. In the absence of any better estimates, we have used the ones available in the above cited sources on the assumption that they are workable approximations of the true magnitudes.

The problem of the regional allocation of federal expenditure is even greater in the case of outlays on federal activities with clear common benefits to the two regions. Thus, certain categories of the federal non-development expenditure have been shown as regionally 'unallocable' in the Report. These include mainly outlays on 'foreign affairs', 'currency and mint', 'debt services' and 'defence services'. We have attempted to allocate these expenditure categories regionally in the following manner. Expenditure on 'foreign affairs' has been allocated half and half between the two regions, which is roughly in proportion to the regional distribution of population

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[1] See The Second Five-Year Plan (1960-65), Karachi, Pakistan Planning Commission, June 1960, p. 10.

in Pakistan (EW). Expenditure on 'currency and mint' has been split between the regions in the same ratio as was used for the revenue accruing to the Federal Government from these activities. Outlays on the servicing of the Federal Government's foreign debt have been allocated in proportion to the regional utilisation of foreign loans received and those on the servicing of the Federal Government's internal debt have been allocated in proportion to the regional distribution of the federal capital or development expenditure (which is financed largely out of borrowed funds) over the same period. The share received by former East Pakistan out of the total foreign development aid to Pakistan (EW) up to 1960/61 was a little over 20 per cent.[1] This had risen from less than 15 per cent in the pre-Plan period, i.e. up to 1955, to about 30 per cent over the First Plan period.[2] As this increase took place mainly towards the end of the First Plan, the proporation of the total federal expenditure on foreign debt servicing attributable to that province has been taken to be 10 per cent during the pre-Plan and 15 per cent during the First Plan period , the remainder being allocated to former West Pakistan. Over the same period, i.e. up to 1960/61, about 35 per cent of the total federal development expenditure (including development loans and grants) was made in former East Pakistan.[3] We have, accordingly, attributed 65 per cent of the annual outlays on the servicing of the federal internal debt over this period to former West Pakistan. As for the expenditure on 'defence services', 85 per cent of the total has been attributed to this province.

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[1] The Report, p. 51.

[2] A Draft Study on Economic Disparities between East and West Pakistan, op. cit., p. 126.

[3] The Report, pp. 14-16 and 43.

This ratio was used in the Draft Plan[1] to allocate defence expenditure between the two former provinces over the period 1964/65 - 1970/71. Similar ratios employed in the Draft Plan for the purpose of the regional allocation, over the same period, of other items of federal non-development expenditure that are shown as regionally 'unallocable' in the Report for the period up to 1960/61 were not available separately. This is because in the former the estimated regional shares in items of federal expenditure other than defence have been added up and only the aggregate values thereof have been shown under the head 'other non-development expenditure'.

For the three-year period 1961/62 - 1963/64, which is not covered either by the Report or by the Draft Plan, 75 per cent of the total non-development expenditure on current account of the federal budget has been allocated to former West Pakistan. This was the average breakdown for a large part of the 1960s, the corresponding ratios being 71, 74, 77, 75, 76 and 78 per cent in the years 1964/65 to 1969/70 respectively.[2]

Finally, neither the Report nor the Draft Plan provides anyregional breakdown of the federal non-development expenditure on capital account under the relevant heads. We have proceeded as follows. As in the case of defence expenditure on current account, 85 per cent of the defence expenditure on capital account has been allocated to former West Pakistan.[3] The allocation made to this province in the case of expenditure under the head 'commuted value of pensions' is 70 per cent which is roughly proportional

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[1] The Draft Plan, p. 112. A somewhat higher percentage share of 88% was attributed to former West Pakistan in another Planning Commission study, namely Report of the Panel of Economists on the Fourth Five-Year Plan, op. cit., p. 6. This ratio was assumed to hold good for the entire period 1950-70. However, the ratio of 85% employed in the Draft Plan has been preferred as this source provides a much more detailed regional breakdown of the revenues and expenditures of the Federal Government of Pakistan (EW) than does the former.

[2] The Draft Plan, p. 112.

[3] Since 1963/64, all defence expenditure is recorded in the current account of the budget.

to the province's share in total federal employment. Of the rest, viz. 'direct (non-development) expenditure from reserve funds' and expenditure on 'other works', the allocation made to former West Pakistan is assumed to be proportional to its estimated share in total federal non-development expenditure on current account in corresponding years.

E.2. Saving by Corporations and Autonomous Bodies included in the Government Sector

Included under this category are all corporations which are owned either entirely or in an overwhelmingly large part by the government, except the ones placed under the BIM and/or quoted on a stock exchange.[1] Autonomous bodies including the Railways, the Water and Power Development Authority (WAPDA) and the Capital Development Authority (CDA) have also been merged with these corporations. The procedure employed for the purpose of estimating saving by these institutions is the same as the one used in the last section in the case of enterprises placed in the corporate sector, i.e. from their annual profit-and-loss accounts. The relevant data have been drawn from Economic and Financial Appraisal of Public Enterprises,[2] various issues of Government Sponsored Corporations and, in some cases, from the annual reports of the relevant corporations, except that the estimates of saving in the 1970s by the three autonomous bodies mentioned above have been drawn from the Draft Plan[3] (for the years 1970/71 - 1973/74) and from Annual Plan, 1975/76 and Annual Plan, 1976/77[4] (for the years 1974/75 - 1976/77).

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[1] Interest and dividend income accruing to the government on its capital investment in enterprises that have been placed in the corporate sector is included in the current non-tax revenues of the Federal and Provincial Governments as recorded in their budgets.

[2] Op. cit., Vols. I and II.

[3] The Draft Plan, op. cit., p. 11.

[4] Op. cit., pp. 27 and 26 respectively.

E.3. Saving by Local Government Institutions

Data on local government institutions are extremely scarce in Pakistan. The only source of information from which some estimates of saving by these institutions could be derived was a set of studies commissioned by the Planning Commission in 1976.[1] These studies contain data on the revenues and expenditures of all types of local bodies in the country including district councils, municipal and town committees, and improvement trusts. Unfortunately, the data are provided only for the five-year period 1970/71 - 1974/75. Estimates of saving, i.e. excess of current revenue over current expenditure, for these five years work out to Rs. 41, 39, 57, 46 and 57 million respectively.

Comparable estimates of saving by these institutions for other years could not be made as the relevant data were not available. In order to maintain the intertemporal comparability of our composite series on government sector saving, estimates made for the five-year period have not been included in it. (The magnitude of the estimates indicates that the omission is not very serious.) This series is presented in Table E.1.

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[1] These are listed at the bottom of Table B.4, numbered 3(i) to 3(iii).

F. A DIRECT ESTIMATE OF NATIONAL SAVING AND COMPARISON WITH AVAILABLE INDIRECT ESTIMATE

F.1. Direct Estimate of Saving

Estimates of sectoral savings obtained in the previous sections by what has been called the direct method of estimation are brought together in this section to form a composite series on saving in the economy as a whole. This national saving series is shown in Table F.1. It has been arrived at simply by adding up the three constituent sectoral series which are also reproduced in the table. The figures in the table provide for the first time a set of continuous and consistent estimates of saving in Pakistan spanning a number of years. Indeed, the estimates span almost the entire period of the country's existence.

F.2. Comparison between Direct and Indirect Estimates of Saving

These direct estimates of national saving are compared below with the available estimates derived residually from the national accounts (or by what has been called the indirect method of estimation). Since this is the first attempt at direct estimation of saving in the country, it is desirable that such a comparison be made. Broad consistency between the two sets of estimates will enhance our confidence in the extensive statistical exercise carried out in this study and also in the indirect estimates of saving that are currently available.

Two points may be noted at the outset. First, although such a comparison would act as a check on our direct estimates of saving, the check applies only in an approximate sense. As pointed out in Chapter I and as we shall see further below, the indirectly estimated series on saving suffers from several important weaknesses. It does not, therefore, supply us with a firm bench-mark in relation to which the accuracy of other differently estimated

series on saving could be judged. On the other hand, the direct estimates also have some important weaknesses owing to gaps in the statistical information. As explained in the preceding sections, such gaps have been filled on the basis of certain assumptions derived from whatever related data were available on the items in question. Nevertheless, since both the direct and indirect estimates relate to the same magnitude, i.e. national saving, we should expect some broad consistency between them. Second, the comparison between the two sets of savings estimates as a broad consistency check can be made at the aggregate (or national) level only. This is because the indirect estimates do not, by their very nature, lend themselves to any systematic sectoral disaggregation.

Derivation of the Indirect Estimate

Although the indirect method has generally been followed in Pakistan, no continuous, consistent series on saving in the country derived from this method was available for the entire period under examination. This was primarily because up to the year 1970/71, the available estimates in most cases related to Pakistan (EW). The major difficulty in allocating the indirectly estimated series for Pakistan (EW) between the two former regions lies in estimating annual net inflow of resources into these regions that takes into account both international and interregional transactions, i.e. the balance on current account of the regional balance of payments. Once estimates of the regional inflow of resources have been obtained, regional saving can be estimated indirectly by subtracting the former from the available estimates of regional investment.

Construction of the balance of payments for regions within a country is an extremely complicated task, beset with a number of conceptual and statistical difficulties. The task becomes even more complex in the case of a developing country like Pakistan where detailed statistical information on various types of interregional transactions is difficult to come by.

The only systematic attempt to date at drawing up the regional balance of payments for former East and West Pakistan was made by an advisory panel of economists in their report to the Planning Commission on the Fourth Five-Year Plan.[1] As one would expect, the panel estimates, which cover the period 1961/62 - 1969/70, have some important deficiencies arising from the limitations of available data. First, since it is extremely difficult to maintain the distinction between residents and non-residents (which is basic to the construction of the balance of payments) when preparing a regional breakdown of a country's balance of payments, a rough and far less satisfactory geographical distinction has been used instead. Thus, attention has been confined mainly to the transactions of each province with the outside world, including the other province, without attempting to identify them with the transactors classified on the basis of their regional residential status. Second, whereas the regional allocation of merchandise trade has been based on reasonably firm statistics on each province's trade with the outside world and the other province, the same in respect of inflows and outflows arising out of invisible international transactions had to be based on some rough assumptions about the relevant orders of magnitude in view of lack of requisite data. Third, invisible transactions between the two provinces have been left out of the exercise entirely as little data were available on these items.

Clearly, these are important weaknesses which can make the estimates diverge appreciably from the true magnitudes. First, since the trade data have been allocated regionally on a geographical basis, imports made into former West Pakistan by the Federal Government of Pakistan (EW) located in

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[1] Report of the Panel of Economists on the Fourth Five-Year Plan, op. cit. This is referred to below as the Panel Report and its regional balance of payments estimates as the Panel estimates.

that province have been debited entirely to the province's account even though the services produced as a result of these transactions were in many cases of common benefit to both provinces, e.g. import of defence equipment. As interprovincial flow of services has been left out of the reported estimates, the flow of such federal services to former East Pakistan goes unrecorded. Second, former West Pakistan had a surplus on private invisible account with former East Pakistan. Returns on large investments made by the West Pakistan-based industrialists in the latter and the more developed services sector in the former are generally cited in support of this. These two considerations suggest that the reported figures for the regional balance of payments overestimate the deficit in the case of former West Pakistan. On the other hand, however, there are considerations which suggest that the method employed overestimates the deficit for former East Pakistan. First, interprovincial trade has been treated in the estimates as if it were a perfect substitute for international trade. The former eastern province usually had a surplus on its international trade account and a deficit on its interprovincial trade account. As the domestic currency was overvalued at the official rate of exchange, the latter could not fully compensate the province for the much more valuable foreign exchange that it surrendered to the Federal Government on account of the former. Second, as for the interprovincial flow of services, the phenomenon of returns (i.e. interest, profit and dividend receipts) on 'West Pakistani' investments in former East Pakistan may not necessarily constitute in its entirety an invisible outflow from that province.[1] Further, some questions can also be raised regarding the quality of the services that this province received out of the Federal Government's expenditure on imports recorded in former West Pakistan's account.

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[1] See Section D, pp. 301-4.

The Panel was of the view that large parts of these elements could reasonably be assumed to cancel one another out so that the reported estimates could be used as 'broad orders of magnitude'.[1] In the absence of a better alternative, we have used these estimates in deriving an indirectly estimated series on saving in Pakistan (former West Pakistan) for comparison with our directly estimated series. The limitations inherent in these estimates should, however, caution us against using the same other than as broad orders of magnitude.[2]

As stated above, the regional balance of payments estimates prepared by the Panel cover the period 1961/62 - 1969/70 only. For the earlier period, the Panel Report provides a regional breakdown only in respect of merchandise trade. We have been able to extend backwards by two years, i.e. up to 1959/60, the Panel estimates of net external inflow into former West Pakistan by drawing the missing data on invisible transactions on international account for these years from Pakistan's Balance of Payments published annually by the State Bank of Pakistan and allocating these between the two former provinces in the same proportions as were used in the Panel Report. The estimates could not be extended further back as data on invisible transactions were not available in comparable detail for the earlier period. For the period 1970/71 onwards, the estimates of net external inflow used are the ones that have been used by the Planning Commission in its Annual Plan reports for arriving at indirect estimates of national saving over this period.

The indirectly estimated series on saving in Pakistan obtained by us is shown in Table F.2. The series begins in 1959/60 because, as just noted, estimates of external resource inflow could not be made for earlier

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1 Ibid., pp. 136-7.

2 These estimates have also been used by the Planning Commission in deriving estimates of regional saving over the Third Plan period and by Alamgir and Rahman in their study of saving in Bangladesh (cf. Evaluation of the Third Five-Year Plan, op. cit., p. 217, and Alamgir and Rahman, op. cit., p. 22).

years. The external resource inflow series is shown in column 5. Sources from which data on domestic investment have been drawn and some minor adjustments made to these data are listed at the bottom of the table.

Comparison

In Table F.3 we have brought together for comparison the direct and indirect estimates of national saving. As the latter is available only for the period 1959/60 onwards, the comparison had to be restricted to this period. It will be seen that we have two time series for the indirect estimate as against one for the direct estimate. Of the former, one excludes and the other includes stock changes in the economy. The reason for using a twin series for the indirect estimate of saving when comparing it with the direct estimate for which there is only a single series is that the latter, as derived in this study, is not fully compatible with either of the series for the former. The lack of compatibility stems from the way in which investment in stocks has been treated in compiling the direct estimate. It will be recalled that this estimate includes stock accumulation in the corporate and government sectors but does not include the same in the case of the non-corporate sector.[1] This being so, the direct estimate is clearly not compatible with the indirect estimate that excludes stock changes altogether. It is probably also not fully compatible with the indirect estimate that includes stock changes. We noted in Section C[2] that it was not clear whether the Planning Commission's estimates of stock changes, which have been used in estimating the indirect series including stock changes, included non-corporate sector enterprises or not. However, since changes in the corporate and government sector stocks may be assumed to

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[1] This asymmetrical treatment of stock changes between sectors was forced on us by the type of data available for estimating sectoral savings, see Section C, pp. 263-6.

[2] See p. 264.

constitute a large chunk of the sum total of stock changes in the economy, we should expect the direct estimate to lie closer to the indirect series that includes the Planning Commission's estimates of stock changes than to the one that excludes them. Thus we have compared the direct estimate with both these time series with the expectation that agreement between the direct and indirect estimates will be closer with the former than with the latter.

The comparison in Table F.3 shows a broad consistency between the direct estimate of saving and the twin series for the indirect estimate. As expected, the agreement between the two sets of estimates is closer with the indirect estimate that includes stock changes. In a majority of cases, the direct estimate lies closer to this indirect estimate than to the one excluding stock changes. The inclusion of stock changes in the indirect estimate narrows down considerably the large discrepancy that exists between the direct estimate and the indirect estimate excluding stock changes in the year 1974/75.

Considering the weaknesses in the basic data used in drawing up the estimates of saving and the differences in the methods underlying the two sets of estimates, the above comparison is encouraging. No doubt there are discrepancies, but some discrepancies are inevitable. Studies of saving in other developing countries have also come up against similar discrepancies between different sets of savings estimates.[1]

Apart from the general shortcomings of the data, the discussion above suggests that in the present case two specific factors may be responsible for a large part of the discrepancies between the two sets of estimates. First, the estimates of net external inflow used in deriving the indirect estimate of saving are subject to some important limitations and are, at

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[1] See, for example, Saving in India, op. cit., and Alamgir and Rahman, op.cit.

best, only rough approximations of the actual magnitudes. Second, the Planning Commission's estimates of investment in stocks are also very weak. The shortcomings of these estimates were pointed out in Section C; when comparing the direct and indirect estimates, the problem is compounded by the fact that this component of investment/saving could not be treated uniformly in the two sets of estimates.

Considerable improvement in the relevant statistical base is needed for a more consistent and accurate estimation of saving in the country. For the present, however, the broad consistency between the direct and indirect savings estimates is encouraging and gives us confidence in the estimates compiled in this study.

APPENDIX TO PART II

TABLES

TABLE B.1. Non-corporate Private Sector Saving in the form of Currency Holding in Pakistan, 1950/51 - 1976/77

(million rupees/current prices)

	1950/1	1951/2	1952/3	1953/4	1954/5	1955/6	1956/7	1957/8	1958/9	1959/60	1960/1	1961/2	1962/3
1. Currency in circulation in Pakistan (EW) at the end of the year[a]	2200.1	2369.0	2258.2	2495.6	2634.3	3120.3	3515.7	3622.8	3643.1	3811.9	3842.6	3865.4	4157.2
2. Currency in circulation in Pakistan at the end of the year	1645.6	1767.2	1680.1	1851.7	1949.4	2302.8	2587.6	2659.1	2666.0	2851.9	2712.6	2695.4	2867.2
3. Change in currency in circulation in Pakistan during the year	283.8	121.6	-87.1	171.6	97.6	353.4	284.8	71.6	6.9	185.9	-139.3	-17.2	171.8
4. Change in non-corporate currency holdings in Pakistan during the year	269.6	115.5	-82.7	163.0	92.7	335.7	270.6	68.0	6.6	176.6	-132.3	-16.3	163.2

	1963/4	1964/5	1965/6	1966/7	1967/8	1968/9	1969/70	1970/1	1971/2	1972/3	1973/4	1974/5	1975/6	1976/7
1.	4661.2	5037.3	5935.4	5681.7	5885.4	6783.4	7095.0	8156.7	5342.9	7455.7	9465.5	10442.9	12773.1	15603.5
2.	3221.2	3437.3	4145.4	3781.7	3969.4	4575.4	4803.3	5673.3	5342.9	7455.7	9465.5	10442.9	12773.1	15603.5
3.	354.0	216.1	708.1	-363.7	187.7	606.0	227.9	870.0	-330.0	2112.8	2009.8	977.4	2330.2	2830.4
4.	336.3	205.3	672.7	-345.5	178.3	575.7	216.5	826.5	-313.5	2007.2	1909.3	928.5	2213.7	2688.9

Sources: Economic Survey of East Pakistan - 1969/70, Dacca, Planning Dept., Govt. of East Pakistan, 1970; Annual Report of State Bank of Pakistan, 1970/71; Report on Currency and Finance (annual), State Bank of Pakistan, 1953/54 to 1970/71 issues; State Bank Bulletin (monthly), State Bank of Pakistan, various issues; and Pakistan Economic Survey - 1976/77, Ministry of Finance, Govt. of Pakistan, 1977.

[a] Figures in row (1) are the revised estimates of the State Bank of Pakistan, adjusted for the currency looting in former E. Pakistan in 1971 and the demonetisation operations of 1971 and 1972.

TABLE B.2. Non-corporate Private Sector Saving in Bank Deposits in Pakistan, 1950/51 - 1976/77

(million rupees/current prices)

	1950/1	1951/2	1952/3	1953/4	1954/5	1955/6	1956/7	1957/8	1958/9	1959/60	1960/1	1961/2	1962/3
1. Total deposits in scheduled banks in Pakistan (EW) at the end of the year[a]	1240.2	1393.0	1274.0	1551.9	1710.1	1874.4	1958.4	2282.5	2576.4	2918.5	3159.0	3679.0	4670.8
2. Total deposits in scheduled banks in Pakistan at the end of the year	992.2	1114.4	1019.4	1241.4	1337.3	1481.9	1531.5	1816.6	2068.9	2299.5	2470.9	2921.2	3584.6
3. Total deposits in scheduled banks in Pakistan held by the non-corporate sector at the end of the year	668.7	747.8	680.9	825.5	885.3	976.6	1004.6	1186.3	1344.8	1494.7	1626.0	1738.9	2172.0
4. Change in (3) during the year	44.3	79.0	-42.9	144.6	59.8	91.3	28.1	181.6	158.5	149.9	131.3	112.9	433.1
5. Change in total deposits of non-scheduled banks in Pakistan during the year	5.39	0.59	- 0.95	- 1.49	-2.63	-3.24	0.34	-2.64	-0.25	2.68	4.27	-1.47	-3.09
6. Change in total NDFC deposits in Pakistan during the year	-	-	-	-	-	-	-	-	-	-	-	-	-
7. Change in non-corporate deposits with NDFC during the year	-	-	-	-	-	-	-	-	-	-	-	-	-
8. Total non-corporate saving in bank deposits in Pakistan (4+5+7)	49.7	79.59	-43.8	143.1	57.2	88.1	28.4	179.0	158.2	152.6	135.6	111.4	430.0

	1963/4	1964/5	1965/6	1966/7	1967/8	1968/9	1969/70	1970/1	1971/2	1972/3	1973/4	1974/5	1975/6	1976/7
1.	5760.8	6902.9	8149.6	9629.7	10890.2	11411.3	13237.3	13878.5	16652.2	20619.5	22613.4	24655.4[b]	32177.5[b]	38182.4[b]
2.	4318.3	5229.7	6102.4	7147.5	8080.4	8676.5	10093.6	10608.7	13317.0	17284.3	19278.3	24655.4	32177.5	38182.4
3.	2700.4	3369.2	4111.1	4802.0	5481.8	6054.0	7216.0	7585.9	9969.8	12913.2	14353.2	19205.7	25212.5	30083.2
4.	528.4	668.8	741.9	690.9	679.8	572.2	1162.0	369.9	2383.9	2943.4	1440.0	4852.5	6006.8	4870.7
5.	- 0.32	- 0.10	0.34	- 1.15	1.69	3.07	- 2.75	1.82	4.27	0.62	- 3.73	- 5.74[c]	..[d]	..
6.	-	-	-	-	-	-	-	-	-	-	110.95	166.85	255.40	314.40
7.	-	-	-	-	-	-	-	-	-	-	27.74	41.71	63.85	78.60
8.	528.1	668.7	742.2	689.8	681.5	575.3	1159.2	371.7	2388.2	2944.0	1464.0	4888.5	6070.6	4949.3

Sources: Banking Statistics of Pakistan (annual), State Bank of Pakistan, various issues; State Bank Bulletin, op. cit., various issues; Regional Statistics of Scheduled Banks, 1961-66, State Bank of Pakistan; Regional Statistics of Scheduled Banks, 1969-70, State Bank of Pakistan; Economic Survey of East Pakistan, 1969-70, op. cit.; Budget in Brief, 1971-72, Ministry of Finance, Govt. of Pakistan; Annual Report of National Development Finance Corporation (NDFC), 1974 to 1978 (also unpublished data supplied by the Corporation); and Meenai (1966), op. cit.

[a] Including both demand and time deposits, but excluding inter-bank deposits.

[b] Figures for total deposits of scheduled banks in row (1) relate to Pakistan only from 1974/75 as the assets and liabilities of scheduled banks pertaining to their branches in former E. Pakistan were netted out as from July 1974.

[c] Relates to first six months only.

[d] Throughout the following tables, the symbol '..' means 'data not available' & the symbol '-' means 'nil'.

TABLE 8.3. Non-corporate Private Sector Saving in Life Insurance in Pakistan, 1950/51 - 1976/77

(million rupees/current prices)

	1950/1	1951/2	1952/3	1953/4	1954/5	1955/6	1956/7	1957/8	1958/9	1959/60	1960/1	1961/2
1. Life fund of insurance companies at the end of calendar year - Pakistan (EW)	40.49	39.69	51.44	61.50	76.43	103.89	95.59	124.72	136.67	162.77	187.12	262.04
2. Life fund of insurance companies at the beginning of calendar year - Pakistan (EW)[a]	33.88	34.68	43.34	50.68	62.42	85.54	77.86	100.93	109.80	133.99	151.53	216.97
3. Net change in life fund of insurance companies during calendar year - Pakistan (EW)	6.61	5.01	8.10	10.82	14.01	18.35	17.73	23.79	26.87	28.78	35.59	45.07
4. Net change in life fund of insurance companies during calendar year - Pakistan	4.95	3.74	6.10	7.99	10.28	13.39	12.87	17.17	19.30	20.55	25.27	31.82
5. (4) converted to fiscal year	4.65	4.33	6.57	8.56	11.06	13.26	13.95	17.70	24.75	22.91	28.55	35.88
6. Life fund of Postal Life Insurance (PLI) at the end of the year - Pakistan (EW)	1.71	2.52	14.47	15.33	15.21	16.99	19.88	23.90	29.81	36.20	43.31	51.83
7. Net change in life fund of PLI during the year - Pakistan (EW)	0.85	0.81	11.94	0.86	-0.12	1.78	2.89	4.02	5.92	6.39	7.11	8.52
8. Net change in life fund of PLI during the year attributable to Pakistan	0.60	0.57	8.36	0.60	-0.08	1.17	1.91	2.65	3.90	4.21	5.12	6.14
9. Total non-corporate saving in life insurance in Pakistan during the year (5 + 8)	5.25	4.90	14.93	9.16	10.98	14.43	15.86	20.35	28.65	27.12	33.67	42.02

	1962/3	1963/4	1964/5	1965/6	1966/7	1967/8	1968/9	1969/70	1970/1	1971/2	1972/3	1973/4	1974/5	1975/6	1976/7
1.	319.37	371.53	450.94	538.62	644.39	771.82	899.02	1061.85	1219.64	1065.10[b]	1252.60	1351.30	1534.20	1734.70	1942.60
2.	262.47	297.36	371.27	450.84	538.58	643.75	770.79	899.08	1061.95	939.10[b]	1065.10	1252.60	1351.30	1534.20	1734.70
3.	56.90	74.17	79.67	87.78	105.81	128.07	128.23	162.77	157.69	126.00[b]	187.50	98.70	182.90	200.50	207.90
4.	39.94	51.77	55.29	60.57	72.58	87.34	86.94	109.71	105.65	126.00	187.50	98.70	182.90	200.50	207.90
5.	45.86	53.53	57.93	66.58	79.96	87.14	98.33	107.68	115.83	156.75	143.10	140.80	191.70	204.20	246.00
6.	61.41	71.22	83.10	95.42	108.96	123.46	138.72	155.70	171.82	184.60	201.52	224.19	246.75	..	..
7.	9.58	9.81	11.88	12.32	13.53	14.51	15.26	16.98	16.12	12.78	16.92	22.67	22.56	..	..
8.	6.90	7.06	8.55	8.13	8.93	9.58	10.07	11.21	10.64	12.78	16.92	22.67	22.56	25.00	31.02
9.	52.76	60.59	66.48	74.71	88.89	96.72	108.40	118.89	126.47	169.53	160.02	163.47	214.26	229.20	277.02

Sources: Pakistan Insurance Yearbook (annual), Karachi, Controller of Insurance, 1948 to 1976 issues; Annual Report of State Life Insurance Corporation (SLIC), 1974 to 1977; Budgets of the Federal Govt. of Pakistan, 1976/77 to 1978/79; and Budget in Brief, 1971/72, op. cit.

[a] Net annual changes in life fund have been estimated by taking the difference between the values of the life fund at the beginning and the end of the same year rather than between the end-year values of two successive years. This has been done to minimise the effect on our estimates of the failure on the part of some companies to send the relevant data in time for incorporation in that year's Insurance Yearbook (our main source of data).

[b] Figures in rows 1 to 3 [marked Pakistan (EW)] relate to Pakistan only as from 1971/72.

TABLE 3.4. Non-corporate Private Sector Saving in Provident Funds in Pakistan, 1950/51 - 1976/77

(million rupees/current prices)

	1950/1	1951/2	1952/3	1953/4	1954/5	1955/6	1956/7	1957/8	1958/9
1. Federal Government Employees									
(a) Pakistan (EW)[a]									
(i) Total contribution	18.99	20.03	25.41	31.00	33.18	35.55	38.97	48.64	90.23
(ii) Interest	4.97	3.95	4.84	5.61	5.15	5.21	5.32	6.44	9.73
(iii) Disbursements	16.94	17.17	16.65	20.95	19.88	25.20	24.45	27.62	45.17
(iv) Net contribution [(i)+(ii)-(iii)]	7.02	6.81	13.60	15.66	18.45	15.56	19.83	27.46	54.80
(b) Net contribution in Pakistan	4.91	4.77	9.52	10.96	12.92	10.89	13.88	19.22	38.36
2. Provincial Government Employees in Pakistan									
(i) Net contribution excl. interest	1.38	1.48	1.30	0.90	2.90	6.10	7.16	6.42	14.92
(ii) Interest	0.91	0.91	0.92	1.06	1.03	1.33	1.31	1.69	2.38
(iii) Total net contribution [(i)+(ii)]	2.28	2.40	2.22	1.96	3.92	7.43	8.47	8.10	17.30
3. Employees of local bodies in Pakistan									
(i) Net contribution	0.17	0.18	0.17	0.15	0.29	0.56	0.64	0.61	1.34
4. Employees of public enterprises in Pakistan									
(i) Net contribution	-	-	0.04	0.06	0.07	0.40	0.51	0.77	2.68
5. Employees of financial institutions in Pakistan									
(i) Scheduled banks (total gross contribution)	1.02	1.10	1.22	1.35	1.48	1.62	1.77	1.98	2.75
(ii) Insurancecompanies (total gross contribution)	0.40	0.54	0.52	0.58	0.62	0.70	0.78	0.91	0.92
(iii) State Bank of Pakistan (total gross contribution)	0.29	0.30	0.35	0.36	0.40	0.44	0.53	0.56	0.62
(iv) All financial institutions (total gross contribution) [(i)+(ii)+(iii)]	1.70	1.95	2.09	2.29	2.50	2.76	3.08	3.45	4.28
(v) All financial institutions (total net contribution)	0.18	0.27	0.72	0.74	1.00	0.80	1.14	1.48	2.14
6. Employees in large-scale manufacturing in Pakistan									
(i) Net contribution to provident funds	0.71	1.10	3.43	3.92	4.01	3.06	5.60	6.77	8.34
(ii) Workers' savings in participation funds	-	-	-	-	-	-	-	-	-
7. Total non-corporate saving in provident funds, etc. in Pakistan [1(b)+2(iii)+3(i)+4(i)+5(v)+6(i)+6(ii)]	8.26	8.72	16.09	17.78	22.22	23.13	30.24	36.95	70.66

	1959/60	1960/1	1961/2	1962/3	1963/4	1964/5	1965/6	1966/7	1967/8
1. (a)									
(i)	51.56	69.62	75.85	46.21	88.86	131.31	133.29	211.09	144.16
(ii)	10.73	11.21	5.80	12.86	15.12	17.56	26.06	31.96	37.93
(iii)	42.26	38.15	37.10	25.64	39.65	57.86	71.39	98.13	111.61
(iv)	20.02	42.67	44.55	33.43	64.33	91.01	87.96	144.92	70.49
(b)	14.01	29.87	31.18	23.40	45.03	63.71	61.57	101.44	49.34
2. (i)	11.32	14.38	17.30	20.01	22.81	24.71	33.10	26.21	29.31
(ii)	2.59	3.04	1.98	4.72	5.52	6.58	9.65	11.52	15.11
(iii)	13.92	17.42	19.28	24.73	28.33	31.29	42.76	37.73	44.42
3. (i)	1.04	1.31	1.45	1.86	2.12	2.35	3.21	2.83	3.33
4. (i)	0.98	2.09	2.18	1.64	3.66	4.70	4.74	6.74	3.60
5. (i)	2.52	2.97	3.59	4.56	6.13	8.04	9.94	11.69	13.56
(ii)	0.98	1.13	1.38	1.65	1.99	2.34	2.72	3.19	3.70
(iii)	0.70	0.81	0.94	1.08	1.21	1.69	1.66	1.87	2.16
(iv)	4.20	4.92	5.91	7.30	9.33	12.07	14.32	16.75	19.41
(v)	0.75	2.22	3.02	3.24	5.16	6.75	6.64	8.96	4.37
6. (i)	3.73	10.75	12.03	11.68	17.60	21.10	20.20	26.13	14.22
(ii)	-	-	-	-	-	-	-	-	-
7.	34.44	63.66	69.14	66.55	101.89	129.89	139.12	183.84	119.28

	1968/9	1969/70	1970/1	1971/2	1972/3	1973/4	1974/5	1975/6	1976/7
1. (a)									
(i)	156.86	140.75	130.93	110.67	128.72	186.92	171.63	393.61	305.58
(ii)	38.41	40.31	43.94	44.06	41.85	46.57	50.26	56.65	105.01
(iii)	110.49	92.42	93.37	66.07	83.10	138.59	143.06	146.62	153.77
(iv)	84.77	88.63	81.50	88.66	87.47	94.90	78.83	303.64	256.81
(b)	59.34	62.04	57.05	72.26	87.47	94.90	78.83	303.64	256.81
2. (i)	33.51	38.31	34.50	39.81	54.71	69.81	56.08	78.50	85.26
(ii)	13.09	13.91	18.77	20.52	23.83	30.28	31.90	52.69	58.61
(iii)	48.60	52.22	53.27	60.33	78.54	100.08	87.98	131.19	143.87
3. (i)	3.65	3.92	3.86	5.76	6.04	5.22	6.60	9.84	10.79
4. (i)	5.54	7.87	7.67	12.50	15.10	17.08	14.19	54.66	46.23
5. (i)	15.81	18.47	21.09	24.58	30.80	41.72	56.28	63.86	71.45
(ii)	4.23	4.76	5.76	6.80	7.84	9.04	9.53	9.64	9.61
(iii)	2.57	2.92	3.18	3.36	3.86	4.57	4.88	5.79	6.17
(iv)	22.61	26.15	30.04	34.74	42.51	55.33	70.68	79.30	87.24
(v)	6.67	8.94	8.59	13.96	15.09	14.27	11.73	27.75	30.53
6. (i)	19.97	24.96	21.51	40.37	40.95	41.37	30.41	75.23	84.78
(ii)	27.00	55.08	66.00	72.05	-	-	-	-	-
7.	170.77	215.03	219.94	277.24	243.20	272.93	229.74	602.31	573.02

TABLE B.4. (cont'd)

Sources: For 1: (i) Budgets of the Federal Government of Pakistan, 1947/48 to 1978/79.
For 2: (i) Budgets of the Government of West Pakistan, 1956/57- 1969/70; (ii) Budgets of the Governments of the provinces of Punjab, Sind, NWFP and Baluchistan, 1970/71 to 1978/79; (iii) Public Finance Statistics (annual) Ministry of Finance, Govt. of Pakistan, various issues.
For 3: (i) Financial Position of Local Bodies in the Punjab, Lahore, The Punjab Board of Economic Enquiry, 1976; (ii) Financial Position of Local Bodies in NWFP and Baluchistan, Peshawar, The Board of Economic Enquiry, NWFP, 1976; (iii) A Study of the Finances of Local Bodies in Sind, Karachi, Office of the Director of Local Fund Audit, Sind, 1976.
For 4: (i) Economic and Financial Appraisal of Public Enterprises, op. cit.; (ii) Government Sponsored Corporations (annual), Ministry of Finance, Govt. of Pakistan, various issues; (iii) Annual Reports of public sector enterprises.
For 5: (i) Banking Statistics of Pakistan, op. cit., various issues; (ii) Annual Report of State Bank of Pakistan, various years; (iii) Pakistan Insurance Yearbook, op. cit., various issues; (iv) Annual Report of State Life Insurance Corporation, 1974 to 1977.
For 6: (i) Annual Enquiry on Labour Welfare, Statistics Division, Govt. of Pakistan, 1969, 1970 and 1971; (ii) Census of Manufacturing Industries, Statistics Division, Govt. of Pakistan, 1955 to 1975/76; (iii) Kemal, op. cit.; (iv) Annual Consolidated Report on the Working of Labour Laws in Pakistan, Islamabad, Ministry of Labour and Social Welfare, Govt. of Pakistan, various issues; (v) Provincial Censuses of Manufacturing Industries, Provincial Bureaux of Statistics, 1971/72 to 1975/76; (vi) Balance Sheet Analysis of Joint Stock Companies Listed on the Karachi Stock Exchange, 1968-73, State Bank of Pakistan; (vii) Swati, op. cit.

[a] Figures in rows marked Pakistan (EW) relate to Pakistan only from 1972/73.

TABLE 8.5. Non-corporate Private Sector Saving in Small Saving Schemes in Pakistan, 1950/51 - 1976/77

(lac rupees/current prices)

	1950/1	1951/2	1952/3	1953/4	1954/5	1955/6	1956/7	1957/8	1958/9	1959/60	1960/1	1961/2	1962/3
1. Savings Bank Deposits													
(i) Deposits	..	..	1024.49	1144.99	1306.97	1663.87	1792.20	2065.81	1844.85	2036.87	2145.80	2162.97	2459.30
(ii) Withdrawals	..	..	952.34	1031.48	1102.66	1304.48	1498.40	1745.57	1842.33	1963.85	2209.71	2171.08	2255.17
2. Defence Savings Bank													
(i) Withdrawals	..	..	0.03	0.05	0.03	0.04	0.01	0.09	0.45	0.0	0.0	0.93	0.11
3. Cash Certificates													
(i) Discharges	..	..	5.55	4.16	4.45	2.47	2.25	1.69	1.55	0.87	0.52	0.68	0.31
4. National Savings Certs.													
(i) Discharges	..	..	23.0	18.0	20.92	17.20	40.92	32.12	29.72	20.24	41.08	30.00	3.27
5. Pakistan Savings Certs.													
(i) Issues	..	..	120.18	154.56	218.00	247.54	283.26	229.34	-	-	-	-	-
(ii) Discharges	..	..	15.57	23.16	32.47	45.14	49.66	84.14	124.21	116.50	123.43	118.20	122.99
6. National Development Savings Certs.													
(i) Issues	-	-	-	-	-	-	-	-	699.06	697.97	741.63	745.61	786.71
(ii) Discharges	-	-	-	-	-	-	-	-	8.62	69.23	158.69	188.06	241.00
7. Pakistan Defence Savings Certs.													
(i) Issues	..	..	31.09	41.70	9.59	-	-	-	-	-	-	-	-
(ii) Discharges	..	..	9.21	13.04	16.33	25.33	18.73	25.91	20.42	23.32	12.21	4.42	1.69
8. Defence Saving Certs.													
(i) Issues	-	-	-	-	-	-	-	-	-	-	-	-	-
(ii) Discharges	..	..	4.32	3.43	0.64	0.43	0.48	0.24	0.29	0.09	0.06	0.07	0.03
9. Khas (Special) Deposit Certs. and Accounts													
(i) Issues/Deposits	-	-	-	-	-	-	-	-	-	-	-	-	-
(ii) Discharges/Withdrawals	-	-	-	-	-	-	-	-	-	-	-	-	-
10. National Deposit Certs. and Accounts													
(i) Issues/Deposits	-	-	-	-	-	-	-	-	-	-	-	-	-
(ii) Discharges/Withdrawals	-	-	-	-	-	-	-	-	-	-	-	-	-
11. Interest payment on small saving schemes	..	..	60.93	53.49	55.63	64.59	62.65	73.84	86.53	86.83	123.64	158.89	170.43
12. Change in small savings certs. held by banks and insurance companies	..	..	..	..	..	..	..	..	..	..	..	..	..
13. Net non-corporate saving in small saving schemes in Pakistan (Deposits + Issues + Interest received - Withdrawals - Discharges - Change in the holdings of banks, etc.)	211.37 [a]	255.69 [a]	226.88	301.43	412.69	581.0	527.76	479.24	602.82	527.57	465.35	554.02	791.86

	1963/4	1964/5	1965/6	1966/7	1967/8	1968/9	1969/70	1970/1	1971/2	1972/3	1973/4	1974/5	1975/6	1976/7
1. (i)	2751.22	2634.23	2565.62	3000.43	2795.48	2952.84	3809.52	5022.28	5459.54	5020.00	5321.00	5298.00	6093.00	5925.66
(ii)	2456.09	2515.23	2503.24	2732.06	2722.61	2858.63	3160.56	3488.18	3441.64	3394.00	4967.00	5488.00	6037.00	6105.54
2. (i)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3. (i)	0.17	0.59	0.09	0.10	0.01	0.01	0.05	-	-	-	-	-	-	-
4. (i)	2.08	1.42	0.65	0.40	0.26	0.13	0.19	0.09	0.07	0.18	0.05	-	-	-
5. (i)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(ii)	92.58	107.66	171.86	122.88	88.35	10.02	5.59	1.99	1.87	1.73	0.52	-	-	-
6. (i)	872.98	855.16	930.69	204.71	-	-	-	-	-	-	-	-	-	-
(ii)	242.50	314.21	436.02	609.40	562.03	746.71	559.20	558.65	368.73	400.07	306.76	-	-	-
7. (i)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(ii)	0.75	0.70	0.45	0.11	0.07	0.11	0.19	0.18	0.15	0.03	-	-	-	-
8. (i)	-	-	-	807.83	975.18	1616.41	1568.86	1793.46	1831.83	2880.00	2428.00	3734.00	4976.00	5151.78
(ii)	0.02	0.07	0.03	4.06	135.75	174.52	280.12	531.41	399.88	1855.00	2326.00	3384.00	3065.00	2925.66
9. (i)	-	-	-	-	-	-	-	-	-	319.00	3448.00	4679.00	5809.00	7551.99
(ii)	-	-	-	-	-	-	-	-	-	2.00	381.00	1916.00	2979.00	4509.94
10.(i)	-	-	-	-	-	-	-	-	-	1852.00	5716.00	4886.00	3678.00	3088.75
(ii)	-	-	-	-	-	-	-	-	-	289.00	1141.00	1066.00	1900.00	2093.50
11.	190.66	160.07	218.89	235.12	274.53	330.35	349.92	430.76	469.00	711.11	881.12	905.63	1109.00	997.53
12.	5.30	2.60	- 3.34	25.67	8.19	10.48	13.60	21.94	41.32	51.68	26.90	..	59.38	- 40.16
13.	1015.37	706.98	606.21	753.39	527.20	1099.00	1708.78	2634.05	3506.70	4788.42	8644.88	7648.63	7624.62	7121.23

Sources: Pakistan Statistical Yearbook (annual), Statistics Division, Govt. of Pakistan, various issues; Monthly Statistical Bulletin, Statistics Division, Govt. of Pakistan, various issues; Annual Report of the National Savings Organisation, 1976/77; Banking Statistics of Pakistan, op. cit., various issues; Pakistan Insurance Yearbook, op. cit., various issues; Annual Report of State Life Insurance Corporation, 1974-77; Budgets of the Federal Govt. of Pakistan, 1947/48-1978/79; and Lewis and Khan, op. cit.

[a] Item-wise savings figures were not available for these years. The reported total savings figures have been estimated by (a) converting the corresponding figures in Lewis and Khan (op. cit) from calendar to fiscal year basis, and (b) apportioning 70 per cent of the estimates thus obtained to former W. Pakistan (the share of this province in the relevant totals hovered around this figure in the 1950s).

TABLE B.6. Non-corporate Private Sector Saving in National Prize Bonds and National Investment Trust (NIT) Units in Pakistan, 1960/61 - 1976/77

(million rupees/current prices)

	1960/1	1961/2	1962/3	1963/4	1964/5	1965/6	1966/7	1967/8
1. Net sale of prize bonds in Pakistan (EW)[a]	48.10	26.70	16.30	39.20	27.80	-5.40	16.30	17.18
(i.e. sale-encashment)	41.13	22.83	13.94	33.42	23.77	-5.04	15.20	16.02
2. Net sale of prize bonds in Pakistan	8.83	4.90	3.00	-13.43	2.29	1.00	-1.14	1.37
3. Net change in banks' holdings of prize bonds in Pakistan	32.30	17.93	10.94	46.95	21.48	-6.04	16.34	14.65
4. Non-corporate saving in prize bonds in Pakistan	-	-	20.40	35.00	20.97	13.02	18.06	55.65
5. Net sale of NIT units in Pakistan (EW) (i.e. (2-3) sale - repurchase)	-	-	18.36	31.50	18.87	11.72	16.25	50.08
6. Net sale of NIT units in Pakistan	-	-	2.40	4.11	2.46	-0.55	10.42	1.46
7. Net change in NIT units held by banks and insurance companies in Pakistan	-	-	15.96	27.39	16.41	12.27	5.83	48.62
8. Non-corporate saving in NIT units in Pakistan (6-7)								

	1968/9	1969/70	1970/1	1971/2	1972/3	1973/4	1974/5	1975/6	1976/7
1.	13.30	35.40	-10.20	10.31	57.44	130.34	146.51	195.50	25.00
2.	12.40	33.01	- 9.18	10.31	57.44	130.34	146.51	195.50	25.00
3.	0.84	3.62	7.44	0.52	-0.56	15.68	18.69	40.14	-29.76
4.	11.56	29.39	-16.62	9.79	58.00	114.66	127.82	155.36	54.76
5.	139.22	149.87	85.85	-9.70	48.11	14.29	60.70	87.74	78.36
6.	125.30	134.88	77.26	-4.00	48.11	14.29	60.70	87.74	78.36
7.	1.06	21.08	13.65	-1.57	14.54	1.56	9.30	27.99	-34.10
8.	124.24	113.80	63.61	-2.43	33.57	12.73	51.40	59.75	112.46

Sources: (1) Prize Bonds: Annual Report of State Bank of Pakistan, 1960/61-1976/77; Annual Budget Statement of Federal Govt. of Pakistan, 1960/61-1978/79; Budget in Brief, 1971/72, op. cit. (2) NIT Units: Annual Report of National Investment Trust of Pakistan, various years. (3) Holdings of Banks and Insurance Companies: Banking Statistics of Pakistan, op. cit., various issues; Pakistan Insurance Yearbook, op. cit., various issues: Annual Report of State Life Insurance Corporation, 1974-1977.

[a] Figures in rows marked Pakistan (EW) relate to Pakistan only from 1972/73.

TABLE 8.7. Non-corporate Private Sector Saving in Corporate Shares[a] in Pakistan, 1950/51 - 1976/77

(million rupees/current prices)

	1950/1	1951/2	1952/3	1953/4	1954/5	1955/6	1956/7	1957/8	1958/9
1. Total issue of share capital (paid-up) in Pakistan (EW)[b]	42.39	94.79	216.06	181.95	193.08	183.22	204.33	286.33	242.11
2. Contributions by agencies and institutions outside the non-corporate sector:									
(i) Banks	1.49	0.59	2.29	-0.32	-0.49	-0.41	-1.47	0.82	1.48
(ii) Insurance companies	2.43	2.30	2.56	1.90	1.36	0.13	-0.46	1.69	3.61
(iii) Other financial institutions	-	-	-	0.81	1.00	0.52	0.34	1.00	2.90
(iv) Non-financial public limited companies	2.25	4.73	3.18	12.33	9.47	1.59	12.03	2.24	5.82
(v) Government (incl. PIDC and BIM Corporations)	2.25	4.50	112.90	8.00	11.00	14.60	30.10	91.70	15.80
(vi) Foreigners[c]	-	-	2.45	-	-	-	-	7.90	-
(vii) Change in shares held abroad by Pakistani companies	..	..	..	..	..	..	..	..	..
(viii) Total net contribution by agencies and institutions outside the non-corporate sector (i+ii+iii+iv+v+vi-vii)	8.42	12.12	123.38	22.72	22.34	16.43	40.54	105.36	29.61
3. Contribution by the non-corporate sector to total issue of share capital in Pakistan (EW) (1-2)	33.97	82.67	92.68	159.23	170.74	166.79	163.79	180.97	212.50
4. Contribution by the non-corporate sector in Pakistan	29.18	60.00	67.06	132.64	139.97	140.09	140.45	138.68	148.88
5. Bonus shares received by the non-corporate sector in Pakistan	0.83	2.02	1.13	5.27	5.50	5.40	5.68	4.16	21.95
6. Issue of share capital (paid-up) in Pakistan below the CCI exemption limit	..	..	..	..	..	3.05	3.45	3.56	3.17
7. Reduction in share capital (paid up) in Pakistan due to liquidation of companies	..	..	..	..	..	1.04	1.15	1.88	2.20
8. Change in foreign shares held by Pakistani nationals	..	..	..	..	..	..	..	..	..
9. Non-corporate saving in corporate shares in Pakistan (4-5+6-7+8)	28.35	57.98	65.93	127.37	134.47	136.70	137.07	136.20	127.90

	1959/60	1960/1	1961/2	1962/3	1963/4	1964/5	1965/6	1966/7	1967/8
1.	382.50	360.96	460.79	310.88	329.80	555.02	505.10	682.64	758.01
2. (i)	-0.20	0.48	7.96	4.48	13.49	25.38	35.37	26.39	18.17
(ii)	4.74	7.28	21.33	36.29	23.47	11.92	17.89	19.83	29.26
(iii)	4.09	4.04	3.83	23.31	38.01	29.54	23.90	62.21	43.49
(iv)	5.97	4.76	12.79	15.09	29.38	25.20	-2.00	14.75	34.25
(v)	70.80	119.80	96.90	39.00	19.20	2.30	7.50	51.70	21.10
(vi)	14.53	23.26	18.00	14.34	22.02	28.43	16.16	12.23	29.65
(vii)	2.50	2.50	-5.25	3.30	2.05	-4.85	-0.60	-1.40	-1.65
(viii)	97.43	157.12	166.06	129.20	143.52	127.62	99.42	188.51	177.57
3.	285.07	203.84	294.73	181.68	186.28	427.40	405.68	494.13	580.44
4.	222.67	142.64	249.43	142.38	135.99	309.95	264.91	344.39	408.17
5.	43.03	16.86	28.91	15.05	13.80	43.78	59.00	67.28	116.36
6.	5.21	7.55	11.21	9.85	7.10	9.34	9.38	8.00	7.05
7.	1.18	0.73	1.15	0.98	1.46	2.31	1.95	3.02	2.99
8.	0.72	2.35	4.63	2.20	-	-	-	-	-1.69
9.	184.39	134.95	235.21	138.40	127.83	273.20	213.34	282.69	294.18

	1968/9	1969/70	1970/1	1971/2	1972/3	1973/4	1974/5	1975/6	1976/7
1.	862.89	794.60	610.00	187.63	489.23	421.38	922.84	1734.73	2781.55
2. (i)	30.44	34.62	13.72	-13.21	138.49	31.49	76.90	143.56	193.91
(ii)	54.64	69.79	67.79	11.21	4.77	-10.05	-6.63	12.95	15.17
(iii)	116.54	147.39	138.19	37.55	51.64	-5.84	51.75	62.02	94.84
(iv)	25.50	25.50	46.75	13.08	-17.00	18.32	26.86	22.54	20.39
(v)	46.30	57.00	49.80	34.30	132.00	239.90	626.60	1178.80	..
(vi)	35.67	24.88	11.30	0.20	1.10	98.50	42.90	179.50	..
(vii)	-0.10	-0.85	-0.55	..	..	..	..	..	..
(viii)	309.19	360.03	328.10	83.13	311.00	372.32	818.38	1599.37	..
3.	553.70	434.57	281.90	104.50	178.23	49.06	104.46	135.36	..
4.	398.94	304.59	225.52	104.50	178.23	49.06	104.46	135.36	..
5.	92.15	86.13	45.59	15.45	26.73	7.36	9.11	3.62	..
6.	7.06	6.89	6.49	5.79	6.59	7.53	..	..	..
7.	1.08	0.82	1.12	1.40	1.22	0.90	..	..	..
8.	-1.39	-0.08	-	..	..	..	..	..	..
9.	311.38	224.45	185.30	93.44	156.87	48.33	95.35	131.74	194.71[d]

Sources: Report on Currency and Finance, op. cit., 1953/54-1970/71; Pakistan Statistical Yearbook, op. cit., 1977; Pakistan Economic Survey, op. cit., various issues; Office of the Controller of Capital Issues, Govt. of Pakistan, unpublished data; Banking Statistics of Pakistan, op. cit., various issues; Statistics on Co-operative Banks in Pakistan, State Bank of Pakistan, various issues; Pakistan Insurance Yearbook, op. cit., various issues; Annual Reports of SLIC, ICP, NIT, PICIC, NDFC and PIDC, various years; Balance Sheet Analysis of Joint Stock Companies listed on the Karachi Stock Exchange, op. cit., 1961-1975; Annual Report of the Karachi Stock Exchange, various years; Government Sponsored Corporations, op. cit., various issues; Economic and Financial Appraisal of Public Enterprises, op. cit.; Annual Review/Report of BIM, 1972/73-1975/76; Share Capital of Joint Stock Companies Registered in Pakistan, Statistics Division, Govt. of Pakistan, various issues; and Foreign Liabilities and Assets and Foreign Investments in Pakistan, State Bank of Pakistan, 1959-62 to 1968-70 issues.

[a] These comprise paid-up shares of all corporate enterprises in the public and semi-public sectors and all public limited companies in the private sector.

[b] Figures in rows marked Pakistan (EW) relate to Pakistan only from 1971/72.

[c] Figures in row 2 (vi) do not include investment by foreigners in the shares of public limited companies in the private sector for the years up to 1958/59 and after 1970/71.

[d] Provisional estimate.

TABLE B.8. Non-corporate Private Sector Saving in Government Securities[a] in Pakistan, 1950/51 - 1976/77

(lac rupees/current prices)

	1950/1	1951/2	1952/3	1953/4	1954/5	1955/6	1956/7	1957/8	1958/9	1959/60	1960/1	1961/2	1962/3
1. Federal government securities outstanding at the end of the year-Pakistan (EW)	9520.0	9520.0	11020.5	13507.2	15077.2	16636.0	18329.3	19980.8	21041.3	23065.2	22800.7	24431.3	25517.2
2. Change in (1) during the year - Pakistan (EW)[b]	929.0	-	1500.5	2486.7	1570.2	1558.8	1693.3	1651.5	1060.5	2023.9	-264.5	1630.6	1085.9
3. Non-corporate contribution to (2) - Pakistan (EW)[b]	9.29	-	15.0	24.87	15.70	15.59	16.93	16.52	10.60	20.24	-2.04	7.01	2.56
4. Non-corporate contribution to (2) - Pakistan	8.36	-	13.5	22.37	14.13	14.03	15.24	14.87	9.54	18.22	-1.84	6.31	2.30
5. Provincial Government securities outstanding at the end of the year - Pakistan	1598.0	1978.0	2156.0	2451.4	2451.7	2561.3	2675.4	2655.2	3007.5	3464.3	3628.5	3789.2	3924.8
6. Change in (5) during the year - Pakistan	-85.0	380.0	178.0	295.4	0.3	109.6	114.1	-20.2	352.3	456.8	164.2	160.7	135.6
7. Non-corporatecontribution to (6) - Pakistan	-0.85	3.80	1.78	2.95	0.0	1.10	1.14	-0.20	3.52	4.57	1.05	0.81	1.19
8. Total non-corporate saving in government securities in Pakistan (4+7)	7.51	3.80	15.28	25.33	14.13	15.13	16.38	11.67	13.06	22.79	-0.79	7.12	3.49

	1963/4	1964/5	1965/6	1966/7	1967/8	1968/9	1969/70	1970/1	1971/2	1972/3	1973/4	1974/5	1975/6	1976/7
1.	30969.3	32571.6	35568.4	36510.0	39910.0	41810.0	44071.0	74114.0	76225.0	76952.0	77871.0	79398.0	79833.0	79372.0
2.	5452.1	1602.3	2996.8	941.6	3400.0	1900.0	2261.0	30043.0	2111.0	727.0	919.0	1527.0	435.0	-461.0
3.	25.35	28.44	57.68	7.91	21.08	19.00	22.61	300.43	21.11	7.27	9.19	15.27	4.35	-4.61
4.	22.82	25.60	51.91	7.12	18.97	17.82	20.35	270.39	21.11	7.27	9.19	15.27	4.35	-4.61
5.	3993.5	4375.7	5131.4	6543.0	6553.0	6900.0	7801.0	7456.0	8636.0	9535.0	9924.0	11038.0	11043.0	11297.0
6.	68.7	382.2	755.7	1411.6	10.0	347.0	901.0	-345.0	1180.0	899.0	389.0	1114.0	5.0	254.0
7.	1.08	3.94	4.23	13.97	0.08	1.91	9.01	-3.45	11.80	8.99	3.89	11.14	0.05	2.54
8.	23.90	29.54	56.14	21.09	19.05	19.73	29.36	266.94	32.91	16.26	13.08	26.41	4.40	-2.07

Sources: State Bank Bulletin, op. cit., various issues; Report on Currency and Finance, op. cit., various issues; Annual Report of State Bank of Pakistan, 1976/77; Budget in Brief, 1971/72, op. cit.; and unpublished data from State Bank of Pakistan.

[a] Figures in the table do not include short-term treasury bills.

[b] Figures relate to Pakistan only from 1971/72.

TABLE 8.9. Non-corporate Private Sector Saving through Co-operative Societies in Pakistan, 1950/51 - 1975/76
(million rupees/current prices)

	1950/1	1951/2	1952/3	1953/4	1954/5	1955/6	1956/7	1957/8	1958/9	1959/60	1960/1	1961/2	1962/3
1. Share capital of co-operative societies	30.52	32.09	31.12	39.24	41.26	44.40	47.05	49.80	57.00	68.87	77.51	83.33	92.47
2. Loans and deposits held	251.20	270.94	279.13	317.80	310.63	373.42	407.86	449.67	467.49	537.54	639.74	734.83	876.11
3. Change in (1+2)	5.48	21.30	7.23	46.79	-5.16	65.93	37.09	44.56	25.02	81.92	110.84	100.91	150.42
4. Loans advanced to individuals	269.94	298.14	218.87	273.97	260.68	315.24	344.97	456.54	332.46	420.44	410.71	362.86	393.85
5. Loans advanced to societies	425.08	664.29	441.31	482.95	458.63	456.99	506.84	473.60	316.38	418.33	430.14	249.18	519.14
6. Loans repaid by individuals	244.83	282.39	217.48	265.66	256.56	314.58	336.97	440.95	348.17	285.50	372.41	362.14	362.51
7. Loans repaid by societies	426.56	652.85	391.41	471.86	456.31	435.19	493.51	463.35	310.20	409.07	410.39	310.30	441.44
8. Non-corporate saving through co-operative societies (3+6+7-4-5)	-18.14	-5.90	-44.07	27.39	-11.60	43.47	15.76	18.72	34.55	-62.28	52.79	161.32	41.38

	1963/4	1964/5	1965/6	1966/7	1967/8	1968/9	1969/70	1970/1	1971/2	1972/3	1973/4	1974/5	1975/6
1.	103.81	114.52	118.86	121.93	112.21	97.93	75.88	134.06	137.90	162.79	167.45	173.77	..
2.	958.20	960.62	872.12	976.77	678.81	328.65	493.90	805.91	767.81	1055.14	991.40	1009.45	..
3.	93.43	13.13	-84.15	107.73	-307.69	-364.44	143.21	370.18	-34.26	312.22	-59.07	24.36	..
4.	374.22	340.28	355.35	337.04	797.67	484.60	272.85	561.91	603.56	312.91	298.23	332.86	..
5.	540.31	545.32	429.21	581.74	228.43	351.95	527.60	651.16	1203.03	644.64	240.72	304.53	..
6.	341.30	324.25	414.90	355.63	801.02	524.45	217.14	999.28	583.10	370.37	235.21	284.50	..
7.	522.52	527.32	436.14	561.87	224.73	300.64	542.37	421.78	518.84	667.00	175.24	287.55	..
8.	42.71	-20.90	-17.67	106.44	-308.04	-375.90	102.26	578.17	-738.91	392.04	-187.57	-40.98	24.04[a]

Sources: Twenty-Five Years of Pakistan in Statistics, Statistics Division, Govt. of Pakistan, 1972; Pakistan Statistical Yearbook op. cit., 1974 to 1977; and Banking Statistics of Pakistan, op. cit., 1975/76.

[a] Includes only co-operative banking institutions; these account for about two-thirds of the deposits and one-third of the share capital of all co-operative institutions in the country.

TABLE 5.10. Annual Change in Non-corporate Private Sector Financial Liabilities[a] in Pakistan, 1950/51 -1976/77

(million rupees/current prices)

	1950/1	1951/2	1952/3	1953/4	1954/5	1955/6	1956/7	1957/8	1958/9	1959/60	1960/1	1961/2	1962/3
1. Net loans to government servants by the Federal Government	..	..	..	1.27	2.30	0.50	1.48	3.39	3.73	1.03	1.84	1.87	0.31
2. Net loans to government servants by Provincial Governments	..	..	..	..	..	0.87	1.52	0.76	1.40	0.43	0.30	0.90	2.05
3. Net loans to cultivators by Provincial Governments	4.50	-1.70	4.40	2.88	2.28	0.34	7.66	10.12	21.15	15.76	3.70	4.47	0.06
4. Net advances to the non-corporate sector by scheduled banks	111.35	34.44	-100.42	70.99	94.17	31.59	-1.82	20.53	-64.02	175.80	209.70	457.25	226.40
5. Net advances to the non-corporate sector by non-scheduled banks	1.00	-4.85	-3.04	-2.63	-2.42	-0.97	-0.99	0.38	-5.23	-0.97	1.36	-0.29	-1.58
6. Net loans to the non-corporate sector by insurance companies	0.29	1.21	1.55	1.42	1.38	2.00	2.12	-0.24	2.62	3.38	8.41	9.60	9.50
7. Net change in non-corporate liabilities to HBFC	-	-	-	0.92	7.09	11.11	9.20	9.61	8.93	6.55	8.49	13.32	17.12
8. Net change in non-corporate liabilities to PRRFC	-	3.19	9.55	-0.22	-0.73	0.08	0.65	-1.31	-0.87	1.78	0.64	0.58	0.06
9. Net change in non-corporate liabilities to PICIC	-	-	-	-	-	-	-	-	5.82	9.75	10.92	10.89	23.06
10. Net change in non-corporate liabilities to PFC	-	-	-	-	-	-	-	-	-	-	-	-	-
11. Net change in non-corporate liabilities to EPF	-	-	-	-	-	-	-	-	-	-	-	-	-
12. Total net increase in non-corporate financial liabilities (1+2+...+11)	117.24	32.29	-87.96	74.64	104.07	45.52	19.82	43.22	-26.48	213.52	245.36	498.59	276.98

	1963/4	1964/5	1965/6	1966/7	1967/8	1968/9	1969/70	1970/1	1971/2	1972/3	1973/4	1974/5	1975/6	1976/7
1.	3.15	3.11	1.20	2.29	1.25	1.78	2.08	1.96	-0.82	-0.95	5.13	12.62	26.33	25.26
2.	5.14	4.96	1.82	0.73	1.82	1.74	1.74	2.14	1.92	1.63	3.91	7.41	9.77	14.12
3.	4.33	13.54	3.58	1.65	2.57	2.66	2.86	1.79	1.22	5.85	59.25	-0.39	10.31	8.89
4.	415.94	773.94	57.28	802.13	551.64	-10.15	482.46	177.29	517.49	1344.16	2953.29	2626.22	2041.51	2586.55
5.	0.11	-0.22	-0.98	-0.29	0.25	1.61	-0.27	0.79	2.03	-0.29	-2.37	-2.58[b]	..	..
6.	11.23	16.54	20.46	19.18	22.40	21.63	17.94	24.13	41.66	41.59	24.36	21.48	23.62	37.52
7.	18.08	18.12	31.56	20.39	15.35	11.79	11.79	5.96	-8.40	0.50	155.30	104.57	178.12	421.53
8.	0.20	-1.08	-0.40	-0.30	-0.30	-0.30	-0.20	-0.40	-	-	-	-	-	-
9.	25.71	25.15	25.03	21.73	27.51	31.96	34.12	40.16	52.30	15.06	10.06	33.57	59.34	30.70
10.	-	-	-	-	-	-	-	-	-	9.67	15.33	11.54	9.87	7.99
11.	-	-	-	-	-	-	-	-	-	-	14.00	13.50	5.33	2.15
12.	483.88	854.86	139.55	867.52	622.67	62.72	552.52	253.82	607.40	1417.22	3238.26	2828.00	2364.20	3134.72

Sources: Rows 1 to 3: Sources 1(i) and 2(i-ii) at the bottom of Table B.4 plus Report on Economic Relations between East and West Pakistan, op. cit. Rows 4 and 5: Sources listed at the bottom of Table B.2. Row 6: Sources listed at the bottom of Table B.3. Rows 7 to 11: Banking Statistics of Pakistan, op. cit., various issues; Government Sponsored Corporations, op. cit., various issues; Pakistan Economic Survey, op. cit., 1976/77 and 1977/78; Pakistan Statistical Yearbook, op.cit., 1976 and 1977; Annual Report of PICIC, various years; and Annual Report of the State Bank of Pakistan, 1976/77.

[a] Do not include non-corporate liabilities to co-operative societies as they have already been taken into account in Table B.9.

[b] Relates to first six months only.

TABLE B.11. Non-corporate Private Sector Saving in Financial Assets in Pakistan, 1950/51 - 1976/77

(million rupees/current prices)

	1950/1	1951/2	1952/3	1953/4	1954/5	1955/6	1956/7	1957/8	1958/9	1959/60	1960/1	1961/2	1962/3
1. Currency holdings	269.6	115.5	-82.7	163.0	92.7	335.7	270.6	68.0	6.6	176.6	-132.3	- 16.3	163.2
2. Bank deposits	49.7	79.59	-43.8	143.1	57.2	88.1	28.4	179.0	158.2	152.6	135.58	111.43	429.97
3. Life insurance	5.25	4.90	14.93	9.16	10.98	14.43	15.86	20.35	28.65	27.12	33.65	42.02	52.76
4. Provident funds	8.26	8.72	16.09	17.78	22.22	23.13	30.24	36.95	70.66	34.44	63.66	69.14	66.55
5. Small saving schemes	21.14	25.57	22.67	30.14	41.27	58.10	52.78	47.92	60.28	62.76	46.53	55.40	79.19
6. NIT units	-	-	-	-	-	-	-	-	-	-	-	-	15.96
7. National prize bonds	-	-	-	-	-	-	-	-	-	-	32.30	17.93	10.94
8. Corporate shares	28.35	57.98	65.93	127.37	134.47	136.70	137.07	136.20	127.90	184.39	134.95	235.21	138.40
9. Government securities	0.75	0.38	1.53	2.53	1.41	1.51	1.64	1.17	1.31	2.28	-0.08	0.71	0.35
10.Shares and deposits of co-operative societies	-18.14	-5.90	-44.07	27.39	-11.60	43.47	15.76	18.72	34.55	-62.28	52.79	161.32	41.38
11.Gross financial asset accumulation (1+2+...10)	364.94	286.74	-49.44	520.47	348.65	701.14	552.35	508.31	488.15	577.91	367.10	676.86	998.70
12.Increase in financial liabilities	117.14	32.29	-87.96	74.64	104.07	45.52	19.82	43.22	-26.48	213.52	245.36	498.59	276.98
13.Net financial asset accumulation	247.80	254.55	38.54	445.83	244.58	655.62	532.53	465.09	514.63	364.39	121.74	178.27	721.72

	1963/4	1964/5	1965/6	1966/7	1967/8	1968/9	1969/70	1970/1	1971/2	1972/3	1973/4	1974/5	1975/6	1976/7
1.	336.3	205.3	672.7	-345.5	178.3	575.7	216.5	826.5	-313.5	2007.2	1909.3	928.5	2213.7	2688.9
2.	528.17	668.67	742.17	689.78	681.46	575.26	1159.23	371.72	2388.23	2943.95	1464.01	4888.48	6070.68	4949.22
3.	60.59	66.48	74.71	88.89	96.72	108.40	118.89	126.47	169.53	160.02	163.47	214.26	229.20	277.02
4.	101.89	129.89	139.12	183.84	119.28	170.77	215.03	219.14	277.24	243.20	272.93	229.74	602.31	573.02
5.	101.54	70.70	60.62	75.34	52.72	109.90	170.88	263.40	350.67	478.84	864.49	764.86	762.46	712.12
6.	27.39	16.41	12.27	5.83	48.62	124.24	113.80	63.61	-2.43	33.57	12.73	51.40	59.75	112.46
7.	46.95	21.48	-6.04	16.34	14.65	11.56	29.39	-16.62	9.79	58.00	114.66	127.82	155.36	54.76
8.	127.83	273.20	213.34	282.69	294.18	311.38	224.45	185.30	93.44	156.87	48.33	95.35	131.74	194.71
9.	2.39	2.95	5.61	2.11	1.91	1.97	2.94	26.69	3.29	1.63	1.31	2.64	0.44	-0.21
10.	42.71	-20.90	-17.67	106.44	-308.04	-375.90	102.26	578.17	-738.91	392.04	-187.54	-40.98	24.04	..
11.	1375.76	1434.18	1897.83	1105.76	1179.80	1613.28	2353.37	2645.18	2237.35	6475.32	4663.66	7262.17	10249.68	9562.0
12.	483.88	854.86	139.55	867.52	622.67	62.72	552.52	253.82	607.40	1417.22	3238.26	2828.00	2364.20	3134.72
13.	891.88	579.32	1758.28	238.24	557.13	1550.56	1800.85	2391.36	1629.95	5058.10	1425.40	4437.17	7885.48	6427.28

Source: Tables B.1 to B.10.

TABLE C.1. Available Series on Gross Private Fixed Investment in Pakistan, 1949/50 - 1976/77

(million rupees/current prices)

	1949/50	1950/1	1951/2	1952/3	1953/4	1954/5	1955/6	1956/7	1957/8	1958/9	1959/60	1960/1	1961/2	1962/3
1. Haq:														
(i) Fixed investment [monetised-Pakistan (EW)]	480.0	520.0	630.0	590.0	640.0	650.0	690.0	790.0	820.0	810.0	850.0			
(ii) Fixed investment (monetised-Pakistan)	350.0	385.0	457.5	425.0	465.0	475.0	497.5	557.5	567.5	562.5	553.0			
2. Papanek:														
(i) Fixed investment [monetised-Pakistan (EW)]	335.0					675.0					1255.0			
(ii) Fixed investment [non-monetised-Pakistan (EW)]	190.0					320.0					480.0			
(iii) Fixed investment [i+ii-Pakistan (EW)]	525.0					995.0					1735.0			
3. Tims/Harvard Advisory Group:														
(i) Fixed investment [monetised-Pakistan (EW)]											1205.0	1895.0	2385.0	2115.0
(ii) Fixed investment (monetised-Pakistan)											880.0	1485.0	1385.0	1380.0
4. Planning Commission:														
(i) Fixed investment [monetised-Pakistan (EW)]	334.8[a]					650.0[a]					950.0	2095.0	2555.0	2620.0
(ii) Fixed investment [non-monetised-Pakistan (EW)]	273.0[a]					220.0[a]					480.0	530.0	580.0	560.0
(iii) Fixed investment [i+ii-Pakistan (EW)]	607.8[a]					870.0[a]					1430.0	2625.0	3135.0	3180.0
(iv) Fixed investment (monetised-Pakistan)											789.7	1683.4	1855.9	2207.2
(v) Fixed investment (non-monetised-Pakistan)											254.8	279.8	305.8	295.8
(vi) Fixed investment (iv+v-Pakistan)											1044.5	1963.2	2161.7	2503.0
5. Statistics Division:														
(i) Fixed investment [monetised and non-monetised-Pakistan (EW)]														
(ii) Fixed investment (monetised and non-monetised-Pakistan)														

	1963/4	1964/5	1965/6	1966/7	1967/8	1968/9	1969/70	1970/1	1971/2	1972/3	1973/4	1974/5	1975/6	1976/7
1. (i)														
(ii)														
2. (i)		2806.0												
(ii)		580.0												
(iii)		3386.0												
3. (i)	2765.0	3025.0												
(ii)	1765.0	1925.0												
4. (i)	2879.0	3440.0	3523.0	3687.0	4322.0	4279.0								
(ii)	580.0	580.0	560.0	580.0	600.0	620.0								
(iii)	3440.0	4020.0	4083.0	4267.0	4922.0	4899.0	4575.0							
(iv)	2403.3	2638.2												
(v)	305.8	305.8												
(vi)	2709.1	2944.0												
5. (i)	3662.0	4198.0	3979.0	4203.0	4292.0	4206.0	4654.3							
(ii)	2873.0	3237.0	3024.0	3150.0	3170.0	3042.0	3493.3	3531.4	3545.9	3752.1	3930.5	5344.7	6676.5	7887.6

TABLE C.1. (cont'd)

Sources: For 1: Haq, op. cit.
For 2: Papanek (1967), op. cit.
For 3: Harvard Advisory Group (1965), op. cit., and Tims, op. cit.
For 4: Final Evaluation of the Second Five-Year Plan, op. cit.; The Third Five-Year Plan, op. cit.; Memorandum for Pakistan Consortium, Planning Commission, Govt. of Pakistan, 1969-70 and 1970-71; and Annual Plan, 1971-72 Planning Commission, Govt. of Pakistan.
For 5: National Accounts, op. cit., 1973-74 to 1976-77; Evaluation of the Third Five-Year Plan, op. cit; Pakistan: Recent Trends and Development Prospects, South Asia Dept., IBRD, March 1976; and Pakistan Economic Survey, op. cit., 1977-78.

[a] Converted into current prices from constant-price figures given in The Third Five-Year Plan, op. cit., p.5. The price index used for conversion is the one employed by Haq (op. cit.) for deflating his investment series over the same period.

TABLE C.1(a). Available Estimates[a] of Stock Changes (or Inventory Investment) in Pakistan, 1949/50 - 1977/78

(million rupees/current prices)

Year	Planning Commission [Pakistan (EW)]	Planning Commission [Pakistan][c]	Papanek [Pakistan (EW)]	Haq [Pakistan (EW)]	Baqai [Pakistan (EW)]
1949/50	30[b]	..	180 (237)[b]	40	-
1950/1				60	
1951/2				70	
1952/3				100	
1953/4				180	
1954/5	120[b]	..	355 (444)[b]	100	-57
1955/6				190	
1956/7				150	
1957/8				70	
1958/9				90	
1959/60	800	630	740	290	341
1960/1	290	222			437
1961/2	360	271			353
1962/3	380	284			445
1963/4	240	172			240
1964/5	558	416	1500		920
1965/6	575	428			-710
1966/7	1335	963			180
1967/8	518	339			1500
1968/9	915	586			
1969/70	1000	706			900
1970/1		847			
1971/2		850			
1972/3		1000			
1973/4		1000			
1974/5		2000			
1975/6		-			
1976/7		1000			
1977/8		1000			

Sources: The Planning Commission's estimates: The Third Five-Year Plan, op. cit.; Final Evaluation of the Second Five-Year Plan, op. cit.; Evaluation of the Third Five-Year Plan, op. cit., and Pakistan Economic Survey, 1977-78, op. cit. Papanek's estimates: Papanek (1967), op. cit. Haq's estimates: Haq, op. cit. Baqai's estimates: Baqai and Brecher, op. cit., Appendix II.

[a] For differences in the coverage of these estimates, see text.

[b] In terms of constant prices of 1959/60.

[c] Values up to 1969/70 have been obtained on the assumption that the share of Pakistan in the corresponding Pakistan (EW) values was proportional to that in the case of fixed investment (a similar basis of allocation has been employed by Alamgir and Rahman, op. cit., p. 24, and in Evaluation of the Third Five-Year Plan, op. cit., p. 217).

TABLE C.2. A Composite Series on Gross Private Fixed Investment in Pakistan by Sectors, 1949/50 - 1976/77

(million rupees/current prices)

	1949/50	1950/1	1951/2	1952/3	1953/4	1954/5	1955/6	1956/7	1957/8	1958/9	1959/60
Monetised Investment											
1. Agriculture (excl. irrigation)	11.20	16.63	19.08	17.04	17.95	17.58	20.20	24.64	27.13	26.91	50.40
2. Irrigation	3.75	5.78	6.86	6.38	6.98	7.12	7.96	9.48	10.22	10.69	18.33
3. Adjustment for monetised investment in land development and non-mechanised irrigation in agriculture	1.87	2.80	3.24	2.93	3.12	3.09	3.52	4.26	4.67	4.95	8.59
4. Large-scale manufacturing industry	79.75	152.84	188.72	189.08	223.57	263.34	278.15	250.76	230.74	232.64	413.48
5. Small-scale manufacturing industry	16.50	26.10	26.26	21.00	19.30	16.91	16.82	14.16	12.14	11.31	18.33
6. Road transport	27.58	42.27	41.04	31.49	27.39	22.14	27.36	28.43	29.79	33.92	67.26
7. Shipping	2.42	4.47	5.08	4.46	4.42	3.99	4.43	4.07	3.69	3.60	6.05
8. Housing	108.80	136.91	170.46	155.60	165.40	143.92	142.58	225.95	253.79	241.26	342.55
9. Total monetised fixed investment (1+2+..8)	251.87	387.80	460.74	427.93	468.12	478.09	501.02	561.76	572.17	567.45	924.99
10. Non-monetised fixed investment (all sectors)	136.00	122.00	153.00	145.00	129.00	110.00	122.00	133.00	189.00	187.00	255.00
11. Total fixed investment (monetised and non-monetised = 9+10)	387.87	509.80	613.74	572.93	597.12	588.09	623.02	694.76	761.17	754.45	1179.99

	1960/1	1961/2	1962/3	1963/4	1964/5	1965/6	1966/7	1967/8
Monetised and Non-monetised								
1. Agriculture (incl. irrigation)	265.03	281.02	312.88	342.00	361.00	320.00	338.00	323.00
(i) Non-monetised component in (1)	..	..	..	(98.0)	(102.2)	(109.8)	(101.3)	(97.4)
2. Adjustment for monetised investment in land development and non-mechanised irrigation in agriculture	23.19	24.59	27.38	30.5	32.35	26.28	29.59	28.20
3. Large-scale manufacturing industry	697.92	768.48	889.82	1014.0	1148.0	1029.0	983.0	1035.0
4. Small-scale manufacturing industry	84.42	92.95	107.63	124.0	135.0	146.0	163.0	167.0
5. Dwellings	284.66	313.45	362.94	407.0	478.0	536.0	548.0	574.0
6. Construction	29.45	43.23	62.58	101.0	38.0	48.0	64.0	40.0
7. Electricity and gas	112.88	124.30	143.92	153.0	205.0	149.0	196.0	231.0
8. Mining and quarrying	5.89	6.48	7.5	9.0	15.0	10.0	8.0	8.0
9. Banking, insurance and other financial institutions	16.69	18.37	21.28	28.0	37.0	39.0	17.0	33.0
10. Services	171.78	189.15	219.01	256.0	273.0	307.0	335.0	342.0
11. Transport and communication	294.48	324.26	375.45	438.0	546.0	439.0	498.0	417.0
12. Total fixed investment (1+2+..+11)	1986.39	2186.29	2530.38	2903.5	3269.35	3050.28	3179.59	3198.2

	1968/9	1969/70	1970/1	1971/2	1972/3	1973/4	1974/5	1975/6	1976/7
1.	341.0	476.1	463.4	535.2	612.1	737.9	845.7	1348.5	1618.6
(i)	(98.6)	(139.5)	(142.2)	(149.3)	(166.7)	(179.6)	(211.0)	(247.9)	(200.0)
2.	30.30	42.08	40.15	48.24	55.68	69.79	79.34	137.58	177.32
3.	989.0	1208.2	1224.0	1016.3	788.9[a]	732.7[a]	1069.0[a]	1409.7[a]	1209.7[a]
4.	174.0	187.7	201.7	219.1	255.9	325.5	446.5	509.5	585.3
5.	562.0	502.3	555.6	603.9	493.8	500.3	1136.4	1341.2	1709.0
6.	59.0	61.0	4.4	28.1	23.7	26.7	62.3	49.9	67.4
7.	171.0	108.3	107.7	71.3	111.8	0.9	1.0	1.5	1.6
8.	8.0	17.5	18.8	18.0	19.0	22.7	30.2	33.2	36.5
9.	61.0	51.5	52.0	33.2	34.5	64.9[b]	63.9[b]	99.1[b]	113.8[b]
10.	348.0	366.0	385.5	413.9	444.4	519.3	673.3	813.2	1020.9
11.	329.0	514.7	518.3	606.9	968.0	999.6	1016.4	1070.7	1524.7
12.	3072.3	3535.38	3571.55	3594.14	3807.78	4000.29	5424.04	6814.08	8064.93

Sources: Same as for Table C.1.

a, b Figures marked with 'a' and 'b' include respectively investment in industries and banks nationalised in the 1970s. These components were excluded from the private sector investment series when estimating the non-corporate investment share in Table C.3. They have been included here in order to maintain the intertemporal comparability of the series over its entire length, i.e. both before and after nationalisation.

TABLE C.3. Non-corporate Private Sector Saving in Pakistan in the form of Direct Investment in Real Assets,[a] 1949/50 - 1976/77

(million rupees/current prices)

Sector of investment[b]	1949/50	1950/1	1951/2	1952/3	1953/4	1954/5	1955/6	1956/7	1957/8	1958/9	1959/60
Monetised investment											
1. Agriculture (excl. irrigation)	13.07	19.43	22.32	19.97	21.07	20.67	23.72	28.90	31.80	33.86	58.99
2. Irrigation	3.75	5.78	6.86	6.38	6.98	7.12	7.96	9.48	10.22	10.69	18.33
3. Large-scale manufacturing industry	39.88	74.89	90.58	88.87	102.84	118.50	122.39	107.83	96.91	95.46	165.39
4. Small-scale manufacturing industry	16.50	26.10	26.26	21.00	19.30	16.91	16.82	14.16	12.14	11.31	18.33
5. Road transport	23.44	35.93	34.88	26.77	23.28	18.82	23.26	24.17	25.32	28.83	57.17
6. Housing	97.92	123.22	153.41	140.04	148.86	129.53	128.32	203.36	228.41	217.13	308.30
7. Total non-corporate monetised investment in real assets (1+2+...6)	194.56	285.35	334.31	303.03	322.33	311.55	322.47	387.90	404.80	397.28	626.51
8. Non-monetised investment in real assets (all sectors)	136.0	122.0	153.0	145.0	129.0	110.0	122.0	133.0	189.0	187.0	255.0
9. Total non-corporate investment in real assets (monetised and non-monetised = 7+8)	330.56	407.35	487.31	448.03	451.33	421.55	444.47	520.90	593.80	584.28	881.51

Monetised and Non-monetised	1960/1	1961/2	1962/3	1963/4	1964/5	1965/6	1966/7	1967/8	1968/9
1. Agriculture (incl. irrigation)	288.22	305.61	340.26	372.50	393.35	346.28	367.59	351.20	371.30
2. Large-scale manufacturing industry	272.91	292.02	329.23	365.04	401.80	339.57	324.39	331.20	306.59
3. Small-scale manufacturing industry	84.42	92.95	107.63	124.0	135.0	146.0	163.0	167.0	174.0
4. Dwellings	263.3	289.9	335.7	376.5	442.2	495.8	506.9	531.0	519.8
5. Construction	25.77	37.83	54.76	88.38	33.25	42.0	56.0	35.0	51.62
6. Services	146.01	160.78	186.16	217.60	232.05	260.95	284.75	290.70	295.80
7. Transport and communication	233.31	258.62	305.19	365.33	458.11	364.99	414.38	345.18	266.22
8. Total non-corporate investment in real assets (1+2+...7)	1313.22	1437.71	1658.93	1909.35	2095.76	1995.59	2117.01	2051.28	1985.33

	1969/70	1970/1	1971/2	1972/3	1973/4	1974/5	1975/6	1976/7
1.	518.18	503.55	583.44	667.68	807.69	925.04	1486.08	1795.93
2.	362.46	354.96	284.56	206.04	181.30	247.60	327.25	275.00
3.	187.7	201.7	219.1	255.9	325.5	446.5	509.5	585.3
4.	464.6	513.9	558.6	456.8	462.8	1051.2	1240.6	1580.3
5.	55.38	3.85	24.59	20.74	23.36	54.51	43.66	58.98
6.	311.10	327.68	351.82	377.74	441.40	572.30	691.22	867.76
7.	413.27	405.70	438.09	765.13	849.66	861.99	867.60	1253.50
8.	2310.69	2311.34	2460.20	2750.13	3091.71	4159.14	5165.91	6417.27

Sources: Estimates derived from Table C.2; for sources from which information has been drawn for the purpose of the derivation, see text.

[a] Gross of depreciation.

[b] For the types of assets included in different sectoral categories, see text.

TABLE C.4. Non-corporate Private Sector Saving in Pakistan: Financial & Real Assets, 1950/51 - 1976/77
(million rupees/current prices)

	1950/1	1951/2	1952/3	1953/4	1954/5	1955/6	1956/7	1957/8	1958/9	1959/60	1960/1	1961/2	1962/3
1. Non-corporate saving in financial assets	247.80	254.45	38.54	445.83	244.58	655.62	532.53	465.09	514.63	364.39	121.74	178.27	721.72
2. Non-corporate saving in real assets[a]	407.35	487.31	448.03	451.33	421.55	444.47	520.90	593.80	584.28	881.51	1313.22	1437.71	1658.93
3. Total non-corporate saving (1+2)	655.15	741.76	486.57	897.16	666.13	1100.09	1053.43	1058.89	1098.91	1245.90	1434.96	1615.98	2380.65

	1963/4	1964/5	1965/6	1966/7	1967/8	1968/9	1969/70	1970/1	1971/2	1972/3	1973/4	1974/5	1975/6	1976/7
1.	891.88	579.32	1758.28	238.24	557.13	1550.56	1800.85	2391.36	1629.95	5058.10	1425.40	4437.17	7885.48	6427.28
2.	1909.35	2095.76	1995.59	2117.01	2051.28	1985.33	2310.69	2311.34	2460.20	2750.13	3091.71	4159.14	5165.91	6417.27
3.	2801.23	2675.08	3753.87	2355.25	2608.41	3535.89	4111.54	4702.70	4090.15	7808.23	4517.11	8596.31	13051.39	12844.55

Source: Tables B.11 and C.3.

[a] Gross of depreciation.

TABLE D.1 Disposal of Profit and Saving in Non-financial Corporate Sector in Pakistan, 1950/51 - 1974/75

(million rupees/current prices)

	1950/1	1951/2	1952/3	1953/4	1954/5	1955/6	1956/7	1957/8	1958/9	1959/60	1960/1	1961/2	1962/3
I. Non-financial public limited companies in the private sector													
1. Gross profit									261.6[a]	333.2[a]	219.7	224.4	307.8
2. Disposal of gross profit													
(i) Depreciation									82.9[a]	86.0[a]	45.7	52.5	58.2
(ii) Provision for taxes									77.6[a]	101.2[a]	71.2	75.4	98.7
(iii) Dividend									53.7[a]	71.5[a]	45.8	48.5	61.0
(iv) Retained earnings									47.4[a]	74.5[a]	57.0	48.0	89.9
3. Gross saving by companies covered [2(i)+2(iv)]									130.3[a] (104.2)[b]	160.5[a] (128.4)[b]	102.7	100.5	148.1
4. Gross saving adjusted for undercoverage	13.32[b]	26.05[b]	33.61[b]	63.51[b]	67.92[b]	89.58[b]	117.50[b]	121.78[b]	119.88[b]	146.37[b]	121.76	120.72	177.52
II. Non-financial public and private limited companies in the semi-public sector[c]													
1. Gross profit											60.9	72.7	80.3
2. Disposal of gross profit													
(i) Depreciation											30.9	39.4	49.3
(ii) Provision for taxes											5.3	9.1	7.7
(iii) Dividend											11.4	12.7	12.7
(iv) Retained earnings											13.3	11.5	10.6
3. Gross saving [2(i)+2(iv)]											44.2	50.9	59.9
4. Gross saving after (i) deducting the share of former E.Pakistan in some national companies[d] without separate regional accounts, and (ii) adding saving by WPIDC out of its profit income											38.05	44.3	50.78
III. Gross saving in the non-financial corporate sector [I(4)+II(4)]	13.32	26.05	33.61	63.51	67.92	89.58	117.50	121.78	119.88	146.37	159.81	165.02	228.3

	1963/4	1964/5	1965/6	1966/7	1967/8	1968/9	1969/70	1970/1	1971/2	1972/3	1973/4	1974/5
I.												
1.	357.7	343.4	397.4	413.7	541.0	658.9	715.1	643.4	598.8	974.6	756.4	995.0
2.(i)	68.7	77.3	90.1	114.7	130.8	184.8	227.4	308.9	400.4	383.8	392.5	447.6
(ii)	104.2	91.7	100.4	81.1	103.8	149.8	180.9	189.0	136.3	235.8	293.9	364.8
(iii)	64.9	75.6	103.9	118.3	141.2	173.8	174.5	180.1	162.2	331.1	300.9	295.8
(iv)	119.9	98.8	103.0	99.6	165.2	150.5	132.3	-34.6	-100.1	23.9	-230.9	-113.2
3.	188.6	176.1	193.1	214.3	296.0	335.3	359.7	274.3	300.3	407.7	161.6	334.4
4.	228.84	211.76	232.2	251.68	351.54	396.8	429.52	326.18	364.48	497.10	220.66	431.26
II.												
1.	139.8	185.4	199.4	205.2	246.1	277.4	296.6	297.7	183.3	328.06	765.61	1175.5
2.(i)	60.0	68.0	76.6	94.1	107.4	121.5	132.0	150.7	178.2	367.5	423.27	523.05
(ii)	17.9	23.6	25.1	16.0	14.0	20.7	29.1	19.0	9.6	52.64	134.56	168.51
(iii)	7.4	19.8	33.4	34.6	47.1	55.3	62.0	54.8	22.9	45.7	82.19	146.36
(iv)	54.5	74.0	64.3	60.5	77.6	79.9	73.5	73.2	-27.4	-137.78	125.59	337.58
3.	114.5	142.0	140.9	154.6	185.0	201.4	205.5	223.9	150.8	229.72	548.86	860.63
4.	99.99	118.28	123.6	143.94	173.58	175.43	192.09	184.17	133.9	229.72	548.86	860.63
III.	328.83	330.04	355.8	395.62	525.12	572.23	621.61	510.35	498.38	726.82	769.52	1291.89

Sources: Balance Sheet Analysis of Joint Stock Companies listed on the Karachi Stock Exchange, op. cit., various issues; Corporate Companies at a Glance: Balance Sheet Analyses and Comparative Appraisal of Companies listed on the Karachi Stock Exchange, op. cit., 1969, 1970, 1971 and 1972 issues; Annual Report of the KSE, various years; Annual Report/Review of the BIM, years 1972/3 to 1975/6; Annual Statistics of the BIM, 1974/5, Annual Report of WPIDC, various years; Government Sponsored Corporations, op. cit., various issues; Economic and Financial Appraisal of Public Enterprises, op. cit.; and Haq and Baqai, op. cit.

[a] Inclusive of semi-public sector companies and former E. Pakistan-based companies listed on the KSE.

[b] Inclusive of semi-public sector companies.

[c] Industrial units nationalised in 1972 and placed under the BIM are included in the semi-public sector from 1972/73 while the vegetable oil manufacturing companies nationalised in Sept. 1973 and the shipping and petroleum marketing companies nationalised in Jan. 1974 are included in this sector from 1973/74.

[d] These include PIAC and NSC.

TABLE D.2. Disposal of Profit and Saving by Corporate Financial Institutions in Pakistan, 1950/51 - 1975/76

(million rupees/current prices)

	1950/1	1951/2	1952/3	1953/4	1954/5	1955/6	1956/7	1957/8	1958/9	1959/60	1960/1	1961/2	1962/3
I. State Bank of Pakistan[a]													
1. Gross profit	7.21	8.51	19.77	21.38	19.83	22.13	35.22	35.28	46.98	65.87	71.59	74.91	70.58
2. Disposal of gross profit													
(i) Depreciation	0.15	0.26	0.26	0.41	0.58	0.78	0.86	0.80	0.96	1.28	1.25	3.10	3.75
(ii) Dividend	1.20	1.20	1.20	1.20	1.20	1.35	1.50	1.50	1.50	1.50	1.80	1.80	1.80
(iii) Retained earnings	5.86	7.05	18.31	19.77	18.05	20.00	32.86	32.98	44.52	63.19	68.54	70.01	65.03
3. Gross saving [Pakistan (EW) - 2(i)+2(iii)]	6.01	7.31	18.57	20.18	18.63	20.78	33.72	33.76	45.48	64.47	69.79	73.11	68.78
4. Gross saving (Pakistan)	4.21	5.11	13.00	14.13	13.04	14.55	23.61	23.64	31.84	45.13	48.85	51.18	48.14
II. Scheduled Banks													
1. Gross Profit	..	..	..	12.60	13.92	18.90	21.90	25.40	29.40	32.24	38.30	51.57	51.75
2. Disposal of gross profit													
(i) Depreciation	..	..	..	0.75	1.14	1.64	1.96	1.24	1.40	1.94	3.50	3.84	3.72
(ii) Provision for taxes	..	..	..	0.58	3.73	12.18	10.67	11.80	19.87	13.86	16.50	21.11	28.50
(iii) Dividend	..	..	..	3.00	3.30	3.70	5.90	5.30	4.30	8.50	8.50	10.80	13.70
(iv) Retained earnings	..	..	..	3.05	5.75	1.38	3.37	7.06	3.63	7.94	9.50	15.82	15.83
3. Gross saving [Pakistan (EW) - 2(i)+ 2(iv)]	..	..	..	3.75	6.89	3.02	5.33	8.30	5.03	9.88	13.30	19.66	19.55
4. Gross saving (Pakistan)	1.61[b]	1.89[b]	2.23[b]	2.62	4.82	2.30	4.05	5.81	3.52	6.97	9.51	14.02	14.07
III. Other Specialised Financial Institutions													
1. Gross profit	-	-	-0.10	-0.12	0.26	1.40	1.20	1.46	3.13	4.64	5.92	7.96	9.58
2. Disposal of gross profit													
(i) Depreciation	-	-	-	-	-	0.01	0.01	0.01	0.06	0.07	0.12	0.13	0.13
(ii) Provision for taxes	-	-	-	-	0.05	0.50	0.37	0.47	0.93	1.47	1.66	2.46	3.44
(iii) Dividend	-	-	-	-	-	0.01	0.01	0.01	0.10	0.75	1.20	1.77	2.00
(iv) Retained earnings	-	-	-0.10	-0.12	0.21	0.88	0.81	0.97	2.04	2.35	2.94	3.60	4.01
3. Gross saving [Pakistan (EW)-2(i)+2(iv)]	-	-	-0.10	-0.12	0.21	0.89	0.82	0.98	2.10	2.42	3.06	3.73	4.14
4. Gross saving (Pakistan)	-	-	-0.08	-0.10	0.16	0.64	0.58	0.70	1.57	1.80	2.04	2.46	2.68
IV. Insurance Companies													
1. Gross saving [Pakistan (EW)]	0.70	-0.02	-	0.07	0.17	-0.09	0.65	-0.53	0.94	0.72	0.27	2.03	3.82
2. Gross saving (Pakistan)	0.52	-0.01	-	0.05	0.12	-0.06	0.47	-0.38	0.68	0.52	0.19	1.44	2.68
V. Co-operative Institutions													
1. Gross saving (Pakistan)	1.39	0.13	0.88	0.42	1.18	1.03	1.24	2.47	1.50	3.86	3.84	3.68	6.43
VI. Total gross saving by corporate financial institutions in Pakistan [I(4)+II(4)+ III(4)+IV(2)+V(1)]	7.73	7.12	16.03	17.12	19.32	18.46	29.95	32.24	39.11	58.28	64.43	72.78	74.0

	1963/4	1964/5	1965/6	1966/7	1967/8	1968/9	1969/70	1970/1	1971/2	1972/3	1973/4	1974/5	1975/6
I.													
1.	79.30	83.24	107.93	128.22	125.60	130.85	146.57	156.45	196.82	328.87	448.59	642.02	606.64
2. (i)	3.96	3.84	3.61	3.91	3.80	3.90	6.97	9.34	7.14	6.74	5.90	6.67	6.58
(ii)	1.80	1.80	1.80	1.80	1.80	1.95	2.10	2.10	2.10	2.10	2.10	2.85	10.00
(iii)	73.54	77.60	102.52	122.57	120.00	125.00	137.50	145.01	187.58	320.03	440.59	632.50	590.06
3.	77.50	81.44	106.13	126.42	123.80	128.90	144.47	154.35	194.72	326.77	446.49	639.17	596.64
4.	54.25	57.01	74.29	88.49	86.66	90.23	101.13	108.04	165.51	326.77	446.49	639.17	596.64
II.													
1.	72.50	92.45	107.00	123.90	127.70	145.10	144.72	177.50	151.60	278.50	298.80	490.30	621.30
2. (i)	4.70	6.71	10.30	14.15	16.80	24.50	19.42	34.80	35.30	48.70	67.60	61.40	97.30
(ii)	33.34	38.80	39.60	47.90	43.60	48.90	44.10	62.20	57.20	120.68	181.62	288.20	328.70
(iii)	14.60	15.60	21.10	24.60	32.20	37.20	40.70	43.20	30.30	39.70	38.80	29.70	68.00
(iv)	19.86	31.34	36.00	37.25	35.10	34.50	40.50	37.30	28.80	69.42	10.78	111.00	127.30
3.	24.56	38.05	46.30	51.40	51.90	59.00	59.92	72.10	64.10	118.12	78.36	172.40	224.60
4.	17.36	25.61	31.85	35.36	35.81	40.71	40.33	50.83	50.70	118.12	78.38	172.40	224.60
III.													
1.	13.69	18.40	20.46	30.32	34.27	40.25	69.95	64.88	27.94	75.52	102.71	128.63	114.87
2. (i)	0.13	0.16	0.17	0.26	0.26	0.28	0.30	0.27	0.23	0.23	0.35	0.54	0.90
(ii)	5.97	7.50	7.12	11.68	11.19	12.30	22.24	19.68	12.00	33.86	37.11	36.47	27.00
(iii)	2.70	3.22	3.50	3.70	4.50	7.30	8.80	9.70	6.80	6.50	7.58	11.18	16.30
(iv)	4.89	7.52	9.67	14.68	18.32	20.37	38.61	35.23	8.91	34.93	57.67	90.44	70.67
3.	5.02	7.68	9.84	14.94	18.58	20.65	38.91	35.50	9.14	35.16	58.02	80.98	71.57
4.	3.23	5.04	6.54	9.87	12.25	14.17	25.79	23.74	8.46	35.16	58.02	80.98	71.57
IV.													
1.	3.20	8.78	6.48	8.04	7.89	11.23	11.30	21.96	..	4.71	2.88	20.92	19.17
2.	2.23	6.09	4.47	5.52	5.38	7.61	7.62	14.71	..	4.71	2.88	20.92	19.17
V.													
1.	3.76	4.64	7.02	4.52	3.82	0.98	2.14	2.92	4.64	4.82	-1.37	0.16	..
VI.	80.83	98.39	124.17	143.76	143.92	153.70	177.01	200.24	236.31	489.58	584.40	913.63	911.98

Sources: For I : Annual Report of the State Bank of Pakistan, various years. For II: Banking Statistics of Pakistan, op. cit., various issues. For III: Annual Reports of PICIC, HBFC, ICP and NDFC, various years; Pakistan Insurance Yearbook, op. cit., various issues (for PIC); Government Sponsored Corporations, op. cit., various issues (for EPF and PFC); and Economic and Financial Appraisal of Public Enterprises, op. cit. For IV: Pakistan Insurance Yearbook, op. cit., various issues; and Annual Report of SLIC, 1974 to 1977. For V: Pakistan Statistical Yearbook, op. cit., various issues.

[a] Figures for the Bank's gross saving are inclusive of the Bank's surplus profit transferred to the Federal Government.

[b] Rough estimates derived by applying to the 1953/54 figure the average annual rate of growth over the remaining years in the 1950s.

TABLE D.3. Corporate Sector Saving in Pakistan, 1950/51 - 1975/76

(million rupees/current prices)

	1950/1	1951/2	1952/3	1953/4	1954/5	1955/6	1956/7	1957/8	1958/9	1959/60	1960/1	1961/2	1962/3
I. Gross saving in non-financial corporate sector	13.32	26.05	33.61	63.51	67.92	89.58	117.50	121.78	119.88	146.37	159.81	165.02	228.30
1. Private sector companies											121.76	120.72	177.52
2. Semi-public sector companies:											38.05	44.30	50.78
(i) Companies nationalised in 1972 and placed under the BIM (a) listed companies; (b) unlisted companies; (c) Total (a+b)											-	-	-
											-	-	-
											-	-	-
(ii) Hydrogenated vegetable oil manufacturing companies nationalised in Sept. 1973											-	-	-
(iii) Shipping and petroleum marketing companies nationalised in Jan. 1974											-	-	-
(iv) Other semi-public sector companies											38.05	44.30	50.78
II. Gross saving by financial institutions	3.62	2.19	3.21	3.27	6.69	4.45	6.94	9.16	15.99	21.04	26.95	34.27	38.99
1. State Bank of Pakistan[a]	0.10	0.10	0.18	0.28	0.41	0.54	0.60	0.56	8.72	7.89	11.37	12.67	13.13
2. Scheduled banks	1.61	1.89	2.23	2.62	4.82	2.30	4.05	5.81	3.52	6.97	9.51	14.02	14.07
3. Other specialised financial institutions	-	-	-0.08	-0.10	0.16	0.64	0.58	0.70	1.57	1.80	2.04	2.46	2.68
(i) PICIC	-	-	-	-	-	-	-	-	0.46	0.23	0.67	1.07	1.00
(ii) HBFC	-	-	-0.08	-0.11	-	0.41	0.29	0.38	0.48	0.58	0.44	0.60	0.81
(iii) PIC	-	-	-	0.01	0.16	0.23	0.29	0.32	0.63	0.99	0.93	0.79	0.87
(iv) ICP	-	-	-	-	-	-	-	-	-	-	-	-	-
(v) NDFC	-	-	-	-	-	-	-	-	-	-	-	-	-
(vi) PFC	-	-	-	-	-	-	-	-	-	-	-	-	-
(vii) EPF	-	-	-	-	-	-	-	-	-	-	-	-	-
4. Insurance companies	0.52	-0.01	-	0.05	0.12	-0.06	0.47	-0.38	0.68	0.52	0.19	1.44	2.68
5. Co-operative institutions	1.39	0.13	0.88	0.42	1.18	1.03	1.24	2.47	1.50	3.86	3.84	3.68	6.43
III. Total gross saving in the corporate sector (I+II)	16.94	28.24	36.82	66.78	74.61	94.03	124.44	130.94	135.87	167.41	186.76	199.29	267.29

	1963/4	1964/5	1965/6	1966/7	1967/8	1968/9	1969/70	1970/1	1971/2	1972/3	1973/4	1974/5	1975/6
I.	328.83	330.04	355.80	395.62	525.12	572.23	621.61	510.35	498.38	726.82	769.52	1291.89	..
1.	228.84	211.76	232.20	251.68	351.54	396.80	429.52	326.18	364.48	497.10	220.65	431.26	..
2.	99.99	118.28	123.60	143.94	173.58	175.43	192.09	184.17	133.90	229.72	548.86	860.63	..
(i) (a)	-	-	-	-	-	-	-	-	-	41.0	129.70	165.0	..
(b)	-	-	-	-	-	-	-	-	-	0.52	75.46	101.43	..
(c)	-	-	-	-	-	-	-	-	-	41.52	205.16	266.43	..
(ii)	-	-	-	-	-	-	-	-	-	-	19.60	4.0	..
(iii)	-	-	-	-	-	-	-	-	-	-	9.80	78.90	..
(iv)	99.99	118.28	123.60	143.94	173.58	175.43	192.09	184.17	133.90	188.20	314.30	511.30	..
II.	40.55	58.07	78.65	94.76	91.42	97.70	112.26	130.24	151.31	339.58	384.31	563.63	561.91
1.	13.97	16.69	28.77	39.49	34.16	34.23	36.38	38.04	80.51	176.77	246.40	289.17	246.58
2.	17.36	25.61	31.85	35.36	35.81	40.71	40.33	50.83	57.70	118.12	78.38	172.40	224.60
3.	3.23	5.04	6.54	9.87	12.25	14.17	25.79	23.74	8.46	35.16	58.02	80.98	71.57
(i)	1.44	2.81	4.21	6.40	6.91	8.26	14.77	14.63	1.98	28.00	25.90	27.23	19.72
(ii)	1.01	1.19	1.20	1.80	2.17	0.09	3.93	2.91	-3.77	-4.47	1.53	2.25	2.25
(iii)	0.78	1.04	1.13	0.62	1.45	4.07	4.47	5.13	6.07	5.29	10.35	22.42	17.87
(iv)	-	-	-	1.05	1.72	1.79	2.62	1.07	4.18	5.71	5.20	12.31	10.70
(v)	-	-	-	-	-	-	-	-	-	-	11.71	12.00	18.03
(vi)	-	-	-	-	-	-	-	-	-	-	2.03	3.28	1.49
(vii)	-	-	-	-	-	-	-	-	-	0.63	1.30	1.49	1.50
4.	2.23	6.09	4.47	5.52	5.38	7.61	7.62	14.71	..	4.71	2.88	20.92	19.17
5.	3.76	4.64	7.02	4.52	3.82	0.98	2.14	2.92	4.64	4.82	-1.37	0.16	..
III.	369.38	388.11	434.45	490.38	616.54	669.93	733.87	640.59	649.69	1066.40	1153.83	1855.52	..

Sources: Tables D.1 and D.2, and the sources listed thereunder.

[a] Figures for the Bank's gross saving are net of the Bank's surplus profit transferred to the Federal Government.

TABLE E.1. Government Sector Saving (Public Saving) in Pakistan, 1950/51 - 1976/77

(million rupees/current prices)

	1950/1	1951/2	1952/3	1953/4	1954/5	1955/6	1956/7	1957/8	1958/9	1959/60	1960/1	1961/2	1962/3
I. Revenue Receipts[a]	1388.7	1589.7	1412.0	1361.2	1466.8	1759.9	1678.6	1797.9	2593.1	2376.1	2560.8	2840.7	2840.3
1. Federal Government	1093.8	1253.8	1117.0	1021.4	1092.5	1375.3	1268.9	1359.5	1954.7	1755.9	1959.6	2238.0	2012.5
(i) Tax Receipts	913.6	1009.4	906.8	753.1	814.7	1026.5	936.9	974.7	1304.9	1293.7	1453.9	1617.8	1765.3
Customs	636.6	622.6	498.7	280.4	304.7	448.6	351.3	307.1	336.3	426.6	417.5	527.2	542.3
Central Excise	40.8	49.6	70.0	125.3	116.1	131.9	136.9	179.7	248.9	241.8	287.9	297.3	366.6
Taxes on income (incl. corporate income)	100.3	132.6	146.2	167.5	183.5	205.8	194.8	227.8	396.2	319.4	317.8	379.6	429.7
Sales tax	101.3	149.3	135.0	118.1	147.3	185.2	205.3	213.4	261.9	247.6	362.4	377.7	399.1
Other taxes	34.6	55.3	56.9	61.8	63.1	55.3	48.1	46.7	61.6	58.3	68.3	36.0	7.6
(ii) Non-tax receipts[b]	180.2	244.4	210.2	268.3	277.9	348.5	332.0	384.8	649.8	462.2	505.7	620.2	246.7
2. Provincial Governments	294.9	335.9	295.0	339.8	374.2	384.6	409.7	438.4	638.4	620.2	601.2	602.7	828.1
(i) Tax receipts	87.2	114.8	105.0	113.9	110.8	151.1	199.9	215.4	320.2	262.6	270.0	130.0	312.1
Land revenue	32.8	56.2	49.4	53.0	44.0	75.5	117.5	119.5	178.5	138.6	132.4	-13.4	144.9
Stamps	6.4	7.0	7.6	9.2	10.3	13.9	15.4	15.5	21.7	20.7	25.9	35.3	44.6
Provincial excise	..[c]	..[c]	..[c]	..[c]	..[c]	..[c]	14.4	17.3	22.4	21.3	23.6	31.3	35.5
Other taxes	48.0	51.6	48.0	51.7	56.5	61.7	52.6	63.1	97.6	82.0	88.1	76.8	87.1
(ii) Non-tax receipts[b]	207.7	221.1	190.0	225.9	263.4	233.5	209.8	223.0	318.2	357.6	331.2	472.7	516.0
II. Current (non-investment) Expenditure[a]	1156.9	1446.3	1638.4	1480.0	1413.9	1588.3	1643.2	1828.7	2531.6	2191.1	2195.5	2399.0	2573.4
1. Federal Government	813.0	1039.2	1182.1	992.5	920.6	1023.3	1014.9	1082.1	1514.8	1393.9	1428.3	1484.2	1377.5
Defence	552.4	662.2	665.9	555.1	539.8	780.0	680.6	726.1	847.1	887.0	945.5	942.3	811.2
Other non-development expenditure on current account	214.9	271.8	335.7	309.3	312.7	328.9	352.2	447.4	622.0	534.3	529.1	609.3	557.4
Non-development expenditure on capital account	45.7	105.2	180.5	128.1	68.1	-85.6	-17.9	-91.4	45.7	-27.4	-46.3	-67.4	8.9
2. Provincial Governments	316.6	362.9	399.1	427.7	415.3	477.9	549.0	616.6	881.6	657.2	617.2	701.2	918.1
Non-development expenditure on current account	316.4	362.8	398.9	427.5	415.5	477.3	548.1	614.7	878.3	654.3	615.4	700.6	917.3
Non-development expenditure on capital account	0.2	0.1	0.2	0.2	0.8	0.6	0.9	1.9	3.3	2.9	1.8	0.6	0.8
3. Non-investment component in development expenditure (both federal and provincial)	27.3	44.2	57.2	59.8	78.0	87.1	79.3	130.0	135.2	140.0	150.0	213.6	277.8
III. Gross saving by corporations and autonomous bodies included in govt. sector	-	-	0.3	0.5	-	0.4	0.4	0.8	0.6	5.4	10.3	15.3	22.2
IV. Gross saving in government sector (I-II+III)	231.8	143.4	-226.1	-118.3	52.9	172.0	35.8	-30.0	62.1	190.4	375.6	457.0	289.4

	1963/4	1964/5	1965/6	1966/7	1967/8	1968/9	1969/70	1970/1	1971/2	1972/3	1973/4	1974/5	1975/6	1976/77[d]
I. Revenue Receipts	3486.6	4226.9	4654.3	5108.6	5278.0	6154.3	7094.6	7275.1	8663.4	10052.4	14624.9	18274.6	21486.4	24226.1
1. Federal Govt.	2468.8	3024.9	3520.3	3984.2	4053.1	4925.2	5843.7	6335.9	7574.8	8731.3	12827.4	15934.2	18701.8	21444.4
(i) Tax receipts	1999.1	2514.8	2827.0	3425.0	3311.0	4030.0	4765.0	5111.0	5493.5	6767.1	9419.0	11403.6	13889.8	16086.9
Customs	482.2	709.3	700.0	810.0	790.0	1150.0	1230.0	1406.0	1312.0	2644.0	4169.0	4917.7	5164.0	6138.8
Central excise	559.2	636.1	790.0	1190.0	1380.0	1520.0	1890.0	2022.0	2119.0	2265.0	2742.0	3457.9	4323.0	4831.6
Taxes on income	465.0	516.8	570.0	600.0	630.0	720.0	930.0	915.0	1236.0	1121.0	1163.0	1351.3	2136.0	2617.7
Sales tax	490.9	512.6	610.0	680.0	410.0	490.0	520.0	607.0	482.0	460.0	692.0	1074.5	1200.0	1362.6
Other taxes	1.8	140.0	157.0	145.0	101.0	150.0	195.0	161.0	344.5	277.1	653.0	602.2	1066.8	1136.2
(ii) Non-tax receipts	469.7	510.1	693.3	559.2	742.1	895.2	1078.7	1224.9	2081.3	1964.2	3408.4	4530.6	4812.0	5357.5
2. Prov. Govts.	1017.8	1202.0	1134.0	1124.4	1224.9	1229.1	1250.9	939.2	1088.6	1321.1	1797.5	2340.4	2784.6	2781.7
(i) Tax receipts	314.9	294.4	366.1	410.4	444.8	508.6	531.3	534.0	627.0	729.0	1042.0	1409.0	1682.8	1647.6
Land revenue	114.1	73.0	113.9	150.8	163.2	166.8	178.0	134.0	151.0	166.0	191.0	188.0	187.0	141.0
Stamps	48.3	51.4	55.0	65.5	76.6	74.4	77.0	115.0	92.0	139.0	178.0	266.0	271.0	323.0
Prov. excise	36.9	40.0	39.9	41.9	40.2	43.9	46.0	54.0	58.0	61.0	93.0	121.0	132.0	138.0
Other taxes	115.6	130.0	157.3	152.2	164.8	223.5	230.9	231.0	326.0	363.0	580.0	834.0	1092.8	1045.6
(ii) Non-tax receipts	702.9	907.6	767.9	714.0	780.1	720.5	719.0	405.2	461.6	592.1	755.5	931.4	1101.0	1134.1
II. Current (non-inv) Expenditure	3145.7	3438.3	5104.5	4453.1	4672.5	4985.4	5826.4	6793.7	8194.3	10031.6	14417.6	19995.2	22286.4	23732.6
1. Fed. Govt.	1811.2	2003.1	3720.7	3011.1	3036.0	3391.0	3972.4	4092.2	6251.8	7472.1	11139.2	14858.4	15940.5	16122.5
Defence	983.0	1070.0	2640.0	1950.0	1860.0	2075.0	2395.0	3000.0	3726.0	4439.6	4948.6	6914.2	8103.4	8120.6
Other non-dev. exp. on current a/c.	772.2	880.6	973.5	987.4	1107.2	1266.5	1552.6	1879.0	2440.4	2633.7	5851.2	7239.2	7053.6	7192.5
Non-dev. exp. on capital a/c	56.0	52.5	107.2	73.7	68.8	49.5	24.8	23.2	85.4	398.8	339.4	704.6	783.5	809.4
2. Prov. Govts.	998.5	1057.8	1145.6	1179.9	1288.9	1217.9	1468.7	1552.4	1637.2	2114.6	2540.6	3666.8	4945.9	5706.4
Non-dev. exp. on current a/c	997.9	1057.0	1141.4	1172.9	1268.5	1198.3	1452.9	1522.8	1596.9	2102.4	2528.4	3860.8	4945.1	5660.6
Non-dev. exp. on capital a/c	0.6	0.8	4.2	7.0	20.4	19.6	15.8	29.6	40.3	12.2	12.1	6.0	0.8	45.8
3. Non-inv. component in dev. exp. (fed. and prov.)	336.0	377.4	238.2	262.1	347.6	376.5	385.3	339.1	305.3	444.9	737.9	1270.0	1400.0	1903.7
III. Gross saving by corps. and autonomous bodies incl. in govt. sector	41.4	28.9	13.5	-14.6	21.2	2.3	53.6	160.5	242.1	79.1	80.6	61.4	246.3	365.0
IV. Gross saving in govt. sector (I-II+III)	382.3	817.5	-436.7	640.9	626.7	1171.2	1321.8	641.9	711.2	99.9	287.9	-1659.2	-553.7	858.5

TABLE E.1. (cont'd)

Sources: Budgets of the Federal Govt. of Pakistan, 1949/50-1978/79; Budgets of the Govt. of West Pakistan, up to 1969/70; Budgets of the Governments of Punjab, Sind, NWFP and Baluchistan, 1970/71 - 1978/79; Budget in Brief, 1971-72, op. cit.; Final Evaluation of the Second Five-Year Plan, op. cit.; Evaluation of the Third Five-Year Plan. op. cit.; Annual Plan, 1975-76 and 1976-77, op. cit.; Draft Fifth Five-Year Plan, op. cit.; Pakistan Economic Survey, op. cit., 1976-77 and 1977-78; Government Sponsored Corporations, op. cit., various issues; A Draft Study on Economic Disparities between East and West Pakistan, op. cit.; Report on Economic Relations between East and West Pakistan, op. cit.; Economic and Financial Appraisal of Public Enterprises, op. cit.; and Haq, op. cit.

[a] Federal and provincial revenue and expenditure figures exclude intergovernmental transfers.

[b] Include 'accretions to reserve funds'.

[c] Though separate estimates are not available for these years, the relevant magnitudes are included in the figures for total provincial tax receipts.

[d] Some of the figures are based on provisional budget estimates for the year.

TABLE F.1. A Direct Estimate of Gross National Saving in Pakistan, 1950/51 - 1976/77

(million rupees/current prices)

Year	Gross saving in non-corporate private sector	Gross saving in corporate sector	Gross saving in government sector	Gross national saving (2+3+4)
1	2	3	4	5
1950/51	655.15	16.94	231.80	903.89
1951/52	741.76	28.24	143.40	913.40
1952/53	486.57	36.82	-226.10	297.29
1953/54	897.16	66.78	-118.30	845.64
1954/55	666.13	74.61	52.90	793.64
1955/56	1100.09	94.03	172.00	1366.12
1956/57	1053.43	124.44	35.80	1213.67
1957/58	1058.89	130.94	- 30.00	1159.83
1958/59	1098.91	135.87	62.10	1296.88
1959/60	1245.90	167.41	190.40	1603.71
1960/61	1434.96	186.76	375.60	1997.32
1961/62	1615.98	199.29	457.00	2272.27
1962/63	2380.65	267.29	289.40	2937.34
1963/64	2801.23	369.38	382.30	3552.91
1964/65	2675.08	388.11	817.50	3880.69
1965/66	3753.87	434.45	-436.70	3751.62
1966/67	2355.25	490.38	640.90	3486.53
1967/68	2608.41	616.54	626.70	3851.65
1968/69	3535.89	669.93	1171.20	5377.02
1969/70	4111.54	733.87	1321.80	6167.21
1970/71	4702.70	640.59	641.90	5985.19
1971/72	4090.15	649.69	711.20	5451.04
1972/73	7808.23	1066.40	99.90	8974.53
1973/74	4517.11	1153.83	287.90	5958.84
1974/75	8596.31	1855.52	-1659.20	8792.61
1975/76	13051.39	..	- 553.70	..
1976/77	12844.55	..	858.50	..

Source: Tables C.4, D.3 and E.1.

TABLE F.2. An Indirect Estimate of Gross National Saving in Pakistan, 1959/60 - 1976/77

(million rupees/current prices)

Year	Total fixed investment	Change in stocks	Total investment (2+3)	Net inflow of external resources	Gross national saving (excl. change in stocks)-(2-5)	Gross national saving (incl. change in stocks)-(6+3) or (4-5)
1	2	3	4	5	6	7
1959/60	2187.58	630.0	2817.58	1086.0	1101.58	1731.58
1960/61	3075.89	222.0	3297.89	1450.0	1625.89	1847.89
1961/62	3614.69	271.0	3885.69	1681.0	1933.69	2204.69
1962/63	4522.78	284.0	4806.78	1607.0	2915.78	3199.78
1963/64	5009.10	172.0	5181.10	1864.0	3145.10	3317.10
1964/65	6019.85	416.0	6435.85	2531.0	3488.85	3904.85
1965/66	5393.48	428.0	5821.48	1653.0	3740.48	4168.48
1966/67	5757.89	963.0	6720.89	2088.0	3669.89	4632.89
1967/68	5712.50	339.0	6051.50	2103.0	3609.50	3948.50
1968/69	5636.20	586.0	6222.20	1218.0	4418.20	5004.20
1969/70	6876.08	706.0	7582.08	1305.0	5571.08	6277.98
1970/71	7085.55	847.0	7932.55	1401.0	5684.55	6531.55
1971/72	6861.54	850.0	7711.54	804.0	6057.54	6907.54
1972/73	7702.18	1000.0	8702.18	-376.0	8078.18	9078.18
1973/74	10683.69	1000.0	11683.69	5465.0	5218.69	6218.69
1974/75	17529.34	2000.0	19529.34	11563.0	5966.34	7966.34
1975/76	22907.98	-	22907.98	9373.0	13534.98	13534.98
1976/77	26854.33	1000.0	27854.33	10404.0	16450.33	17450.33

Sources: Col. 2.(i) Private sector fixed investment: Table C.2. (ii) Public sector fixed investment: Estimates prepared by the Statistics Division have been used for the period 1963/64 onwards, drawn from the same sources from which the Division's estimates of private fixed investment were drawn (listed at the bottom of Table C.1). For earlier years not covered by the Statistics Division's data, i.e. 1959/60 - 1962/63, the Planning Commission's estimates as reported in Final Evaluation of the Second Five-Year Plan, op. cit., have been used. The Commission's estimate has also been used for the year 1974/75 as the corresponding estimate of the Statistics Division (which gave a total fixed investment of Rs. 16297.2 million) indicated a much larger discrepancy with the direct estimate of saving for the year (the direct and indirect savings estimates are compared below in Table F.3). For other years, the estimates of public investment reported by both sources are fairly close to each other.
Col. 3. Table C.1(a), col. 3.
Col. 5.(i) Up to 1969/70: Report of the Panel of Economists on the Fourth Five-Year Plan, op. cit., and Evaluation of the Third Five-Year Plan, op. cit. (ii) From 1970/71 to 1976/77: Preliminary Evaluation of the Fourth Five-Year Plan, Planning Commission, Govt. of Pakistan, Jan. 1974; Annual Plan, 1973/74 - 1976/77, op. cit., and Pakistan: Economic Developments and Fifth Plan Review, South Asia Regional Office, IBRD, April 1979.

TABLE F.3. Comparison of Direct and Indirect Estimates of Gross National Saving in Pakistan, 1959/60 - 1976/77 (million rupees/current prices)

Year	Direct estimate of gross national saving	Indirect estimate of gross national saving (excl. change in stocks)	Indirect estimate of gross national saving (incl. change in stocks)
1	2	3	4
1959/60	1603.71	1101.58	1731.58
1960/61	1997.32	1625.89	1847.89
1961/62	2272.27	1933.69	2204.69
1962/63	2937.34	2915.78	3199.78
1963/64	3552.91	3145.10	3317.10
1964/65	3880.69	3488.85	3904.85
1965/66	3751.62	3740.48	4168.48
1966/67	3486.53	3669.89	4632.89
1967/68	3851.65	3609.50	3948.50
1968/69	5377.02	4418.20	5004.20
1969/70	6167.21	5571.08	6277.98
1970/71	5985.19	5684.55	6531.55
1971/72	5451.04	6057.54	6907.54
1972/73	8974.53	8078.18	9078.18
1973/74	5958.84	5218.69	6218.69
1974/75	8792.61	5966.34	7966.34
1975/76	.. [a]	13534.98	13534.98
1976/77	.. [a]	16450.33	17450.33

Source: Tables F.1 and F.2.

[a] Direct estimates of saving excluding corporate saving are Rs. 12497.69 million and Rs. 13703.05 million respectively for these two years. Although estimates of corporate saving in these years could not be made because of non-availability of relevant data, it should be clear that if an allowance was made for this omission at the levels suggested by the values of corporate saving in the immediate preceding years, the resultant direct estimates of national saving would be broadly consistent with the corresponding indirect estimates.

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