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Domestic Resource Mobilisation for Development: An Analysis of the Past Trends and Future Options

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**Pakistan
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Economics**

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CONTENTS

	<i>Page</i>
1. Introduction	1
2. East Asian Development Experience	2
2.1. High Saving and Investment Rates	2
2.2. the Impact of Saving and Investment on Growth: The Causal Connection	3
2.3. Determinants of High Saving Rates	4
2.4. Determinants of High Rates of Investment	5
3. Methodology of Saving Estimation and Measurement Biases in Official Data on Savings in Pakistan	6
4. Composition and Trends in Saving Rates	7
5. Determinants of Savings in Pakistan	13
5.1. Review of Literature	13
5.2. Determinants of Private, Domestic and Household Savings	14
6. Role of Long-term Saving Instruments in Increasing Savings and Improving Their Efficient Allocation	16
6.1. Pension and Provident Fund	18
6.2. Life Insurance	20
6.3. Mutual Funds	21
7. Strategy and Policy Options for Increasing Savings	23
7.1. Policy Options	25
8. Concluding Remarks	26
Appendix I	27
References	29
Abstract	31

List of Tables

	<i>Page</i>
Table 2.1. Gross Domestic Savings as a Percent of GDP	2
Table 2.2. Gross Domestic Investment as a Percent of GDP	3
Table 4.1. Investment and Saving Rates: 1976–1995	8
Table 4.2. Trends in Savings in Pakistan	10
Table 4.3. Trends in Fiscal Deficit, Government Expenditure and Revenue	11
Table 4.4. Net Financial Balances of Private and Public Sectors in Pakistan	12
Table 5.1. Determinants of Private, Domestic and Household Savings (1961–1996)	15
Table 6.1. Rate of Interest Allowed by the Government on General Provident Fund Accumulations	19
Table 7.1. Increased Capital Output Ratio (ICOR) Measures for Pakistan India and East Asian Countries	24

1. INTRODUCTION

The task of poverty alleviation and catching up with the fast-growing Asian countries requires Pakistan to target and achieve at least a 7 percent annual growth over the next 15 years. The key question in this context is whether Pakistan can position itself in a policy and institutional sense to finance the needed investment through increased domestic savings without undue recourse to foreign savings which introduces an element of unsustainability. The analysis of Pakistan's savings potential and how best it may be drawn on is a central issue at this time, since any optimistic scenario of future growth depends on a considerable increase in the national savings rate from its current low level. The average saving rate over 1990-91 to 1995-96 has been only 14.7 percent of GDP. It is essential to get this rate up to 20 percent and desirable to get it to 25 percent as soon as possible. How may this be achieved is an issue that we address in this paper.

A strategy to improve Pakistan's saving rate needs to examine carefully the record of successful Asian Tigers in this regards and benefit from the recent insights in the saving, investment and growth literature. Tax and interest rate instruments are important policy tools but need to be a part of an overall policy package aimed at fostering growth through improved productivity and financial liberalisation. The financial instruments requiring particular attention are a well functioning stock market, fully-paid compulsory pension and provident fund schemes with wide coverage and postal and national savings schemes which lower the transaction cost for savers emerging largely from geographical spread of post offices in rural areas whose savings need to be mobilised.

In Section 2, we review East Asian experience that suggests that higher growth is correlated with high saving and investment rates and that higher growth precedes both savings and investments. Section 3 provides a discussion of the methodology of savings estimation and points out the weaknesses in savings data in Pakistan. The measurement problem should be kept in view while reviewing trends in Pakistan's savings rates as well as Pakistan's savings performance relative to other countries. Section 4 presents information on trends in savings, structure of savings and the saving performance of Pakistan relative to other countries. Section 5 presents an analysis of the determinants of savings. Section 6 describes the structure and evolution of the long-term savings instruments in Pakistan and

assesses their role in increasing savings. Section 7 outlines elements of a strategy for obtaining higher savings in Pakistan. The final section summarises main conclusions.

2. EAST ASIAN DEVELOPMENT EXPERIENCE

High and rising saving and investment rates in East and South-East Asia experienced during their transformation phase of the economy poses a fundamental question regarding the determinants of savings and investment as well as the precise links of savings and investment to the growth process. The theoretical and empirical literature in this field has grown fast. Only a selective review is provided to isolate the policy issues relevant for Pakistan. Evidence is provided on three broad issues of (1) stylised facts about high saving and investment rates; (2) the impact of high saving and investment rates on growth; and (3) the determinants of savings and investment rates.

2.1. High Saving and Investment Rates

The East Asian economies have experienced high rates of saving as is evident from Table 2.1. Two points are worth noting, however. First, saving rates vary substantially across the successful East Asian economies. Second, although current saving rates in all countries are high, yet this was not always the case. Saving rates in the NIEs in the region were low in the early 1960s and rose dramatically afterwards. Indonesia's savings rates rose dramatically during the 1970s and Thailand's during the 1980s.

Table 2.1

Gross Domestic Savings as a Percent of GDP

	1960	1965	1970	1980	1990	1995
Japan	34	28	40	31	34	31
Korea	1	8	15	25	37	36
Singapore	-3	10	18	38	45	-
Hong Kong	6	29	25	28	33	24
Thailand	14	19	21	23	34	36
Malaysia	27	24	27	33	33	37
Indonesia	8	8	14	37	37	36

Source: World Bank, *World Development Reports* (various issues).

savings and investment. The importance of domestic saving notwithstanding, some countries have benefited from foreign capital flows. In the 1950s, foreign savings, mainly aid from the United States, financed a high proportion of investment in Taiwan and Korea. US aid declined in the 1960s, but Korea continued to rely on foreign capital. Taiwan, on the other hand, stopped relying on foreign savings and became a net international investor. Singapore relied heavily on foreign capital, mainly in the form of direct investment. Japan did not rely on foreign capital. Its current account has remained in balance until the 1980s when it achieved the status of a capital exporter country [Krueger (1995)].

The most widely held view of East Asian growth is that high rates of investment were the principal engine of growth and that high rates of investments were financed by high rates of domestic savings. A debate over the role of investment in growth has arisen, however. The critical issue is that of causality. Perkins (1994) argues that Asian savings and investment rates were not especially high in the early years of high growth, although they became so later. He concludes that high savings may be more an outcome of high growth than a cause. In fact, some of the recent studies have challenged the view that investment generates growth and have argued that growth often Granger-causes savings and investment [See Schmidt-Hebbel *et al.* (1996) and King and Levine (1994)]. The observed correlation between saving and growth and between investment and growth may be based in part on a reverse causation from growth to saving and to investment.

Stiglitz and Uy (1996) have examined whether high growth has caused the high saving rates in East Asia, i.e. whether growth has preceded savings or it has been the other way around. Granger causality tests suggest that income growth is a better predictor of saving in Indonesia, Japan, Korea, Taiwan, and Thailand while for Hong Kong and Malaysia, no conclusive direction of causation has been found. In Singapore, income growth was not a predictor of the increases in the saving rates. Their results support the notion of a "virtuous cycle" in which high growth leads to high saving and high savings leads to high growth.

The causality studies raise important questions, however. It seems clear that capital accumulation has been critical to East Asian growth. The connections between saving, investment and growth are complex. The causality runs in several directions. That investment is a necessary condition for growth is accepted by all schools of thought. It is difficult to find any country which was able to grow at high rates for a long period without experiencing high rates of capital formation and/or high rates of savings.

2.3. Determinants of High Saving Rates

A long list of factors have been proposed in the literature to explain the sharp rise in East Asian saving rates. Notwithstanding the fact that interest rates have, in theory, little effect on savings having positive real interest rates from macro policy-

induced low inflation rates has been important for raising savings [World Bank (1993) and Stiglitz and Uy (1996)]. Some East Asian economies had kept real interest rates below their equilibrium levels. Financial repression in East Asia was, however, moderate compared to most other developing countries.

Governments in East Asia have promoted saving by ensuring the security of banking systems and improving access by small savers [World Bank (1993)]. Stiglitz and Uy (1996) argue that the postal saving systems in Japan, Malaysia, Singapore, and Taiwan were the most important of the institutions that their governments had created to promote savings.

High rates of public savings have contributed substantially to aggregate savings in East Asia. In Taiwan, saving by the government and public enterprises has accounted for 30 percent of total savings. Public saving was achieved largely through expenditure restraint as evidenced by low public consumption to GDP ratios. Public savings in East Asia does not appear to have fully crowded-out private saving in these economies [Stiglitz and Uy (1996) and World Bank (1993)].

Stiglitz and Uy (1996) have shown that most of the East Asian governments had also imposed restrictions on consumer credit. They discouraged consumption by preventing the rise of mortgage markets and other consumer credit instruments. Forced saving schemes (provident funds and other mandatory pension schemes) do not appear to have been an important factor in general. Japan, Malaysia and Singapore had instituted such schemes. However, their impact on savings is not clear [World Bank (1993)].

High corporate saving based on retained earnings have also been significant in East Asia. Fiscal measures encouraged corporate retentions. Secondly, the structure of share ownership insulated corporations from the pressure for greater dividend distributions [UNCTAD (1994) and Akyuz and Gore (1994)]. In Taiwan, savings by private enterprises account for almost a quarter of total savings on average [Dessus *et al.* (1995)]. Fiscal policy seems to have had a large influence on corporate saving in Taiwan. Tax policies in particular encouraged private enterprises to accumulate their own savings. Rapid demographic transition with resultant low dependency burden in East Asia has also been a major force for increasing saving rates to high levels.

2.4. Determinants of High Rates of Investment

Provision of good infrastructure, creation of a favourable investment climate by adopting stable macroeconomic policies and by providing political stability, secure property rights, and good industrial relations have been important factors for raising rate of investment. East Asian governments have also employed a variety of tax policies to encourage investment by raising the retained earnings of companies. They have also used tax, tariff and exchange rate policies to keep the relative price of capital goods low relative to other low and middle-income countries [World Bank (1993)].

The role played by financial repression is, however, controversial. Some have argued that by keeping interest rates below market-clearing levels, governments were able to promote investment by lowering the costs of borrowing. The World Bank study, however, tends to play down the role of financial repression in East Asia. It claims that whereas most of the East Asian governments have controlled interest rates, repression has not been used as a deliberate policy. It does not seem to have played a major positive or negative role in the region, although it may have contributed to rapid growth in Japan, Korea and Taiwan [World Bank (1993)]. The potential problem with keeping interest rates artificially low, is that the need to ration credit raises the potential for misallocation of capital.

East Asian governments created development banks in order to help provide long-term credit for industrialisation. Development banks were major lenders in Indonesia, Japan, Korea, and Taiwan, but not in the other successful East Asian economies [World Bank (1993)]. Stiglitz and Uy (1996) argue that development banks have some advantages over markets, particularly at early stages of development when money and capital markets are thin. The newly created development banks had developed the institutional capacity to monitor borrowers and repayment rates remained high. The financial sustainability of development banks was always high.

In sum, the success that East Asia had in achieving high saving and investment rates and the translation of these high rates in high rates of growth is attributable to the phenomenon of virtuous circles of high savings, investment and high growth. Physical investment has been a necessary condition but it is not a sufficient condition for growth. Human capital investment, technical change and appropriate policies and institutions that had resulted in an efficient allocation of resources were also necessary conditions for sustained rapid growth in East Asia.

3. METHODOLOGY OF SAVING ESTIMATION AND MEASUREMENT BIASES IN OFFICIAL DATA ON SAVINGS IN PAKISTAN

In the existing official methodology of national income accounting in Pakistan, national saving is estimated indirectly as a residual. The residual is computed at two stages. At the first stage, the difference between aggregate imports of goods and services (A_f) and aggregate exports of goods and services (X) yields estimates of foreign saving (F). At the second stage, national saving (S) is estimated as the difference between total investment (I) and foreign saving.

National saving consists of public and private savings. Private saving (S_p) is estimated as the difference between national saving and public saving (S_g). Public saving is derived from budgetary accounts, which contain elements both from revenue and capital accounts of the budget and self-financing by public corporations, local bodies, and banking/insurance companies.

Corporate saving (S_c) is derived simply by a factor income payments approach based on balance sheets of joint stock companies, i.e. the sum of depreciation and retained earnings. The difference between private saving and corporate saving yields household sector saving (S_h) in Pakistan.

The above estimation of various forms of savings indicates that the estimates of national saving, in general, and household saving in particular, are susceptible to all the errors that occur in the figures of total investment and foreign savings, i.e. an underestimation of investment results in an underestimation of saving.

In Pakistan, at present there are two official series of data on saving. National saving estimates prepared by Planning Commission (used also in the State Bank of Pakistan, Annual Report) and those by the Federal Bureau of Statistics (FBS) differ mainly because of the different sources of foreign trade data used in the estimation of foreign saving. The trade figures used by Planning Commission are derived directly from the balance of payments data compiled by the State Bank of Pakistan (SBP), while the FBS series are based on their own compilation of foreign trade figures on customs data on physical movement of goods and services. Both measures are legitimate in the sense that payments data by the SBP capture the movement of funds which finance trade, while customs data by the FBS reflect more accurately the actual movement of goods and services in international trade. In principle, national accounts estimates should measure physical movements of goods and services, and therefore, national saving should be based on FBS data. But the main limitation of the FBS data is that it does not include public sector imports in its import figures. We use saving data compiled by the State Bank of Pakistan as the coverage of imports from this source is wider than that of Federal Bureau of Statistics saving series. The magnitude of domestic savings, being a residual, is subject to the accuracy of the gross investment figures and the balance of payments statistics. The exclusion of smuggling from balance of payments statistics introduces an element of error. The less than satisfactory coverage of investment in the informal sector adds another element of error in the investment figures. Whether unrecorded investment in the informal sector equals the unrecorded savings in this sector is an open question on which no hard evidence is available. A recent study on savings in Pakistan [Hook (1997)] maintained that savings in the informal sector have been under-estimated by about 4 percent of gross domestic product.

4. COMPOSITION AND TRENDS IN SAVING RATES

Pakistan's saving performance is evaluated in two ways. We provide information on relative saving and investment rates in Pakistan and a few other selected Asian countries. We trace the trends in different measures of savings over time. The sources of savings and how these have changed over time is also an important issue.

Table 4.1 presenting investment and saving as percent of GNP for the period 1976 to 1995 shows that Pakistan in both savings and investment is not well placed relative to most countries. Pakistan has been investing a significantly lower percent of GNP than all countries except Bangladesh. On the savings side, gross domestic saving rate of Pakistan at 11 percent of GNP is lower than all other countries except Bangladesh.

Table 4.1

Investment and Saving Rates: 1976-1995

Country	Gross Investment	Gross National Saving	Gross Domestic Saving	Net Factor Income	Foreign Saving	Gap: Dom: Saving Gross Investment
Bangladesh	12.6	5.6	TO	2.6	7.0	-9.6
China	36.5	37.0	36.9	0.1	-0.5	0.5
India	22.9	22.0	22.7	-0.8	I I	-0.2
Indonesia	29.5	27.4	31.7	-4.3	N.A.	2.2
Korea	32.9	30.3	32.4	-2.0	2.3	-0.6
Malaysia	32.7	30.1	35.6	5.5	N.A.	2.9
Pakistan	17.9	15.9	11.0	4.9	2.1	-6.9
Philippines	24.6	21.5	21.7	-0.3	3.4	-2.8
Sri Lanka	24.9	12.3	14.1	-1.8	12.6	-10.8
Taipei, China	24.9	31.8	30.7	1.0	-6.8	5.8
Thailand	32.9	27.6	29.0	-1.4	N.A.	-3.9

Source: Andrew T. Hook (1997) *Savings in Pakistan: Practice and Policy*. State Bank of Pakistan, Karachi.

Note: N.A. denotes 'not available'.

Pakistan has not only under-saved and under-invested relative to successful countries in the region who had experienced sustained high growth, its saving performance has also not improved much over time. Table 4.2 presents data on saving rates on an annual basis for the period 1960-61 to 1995-96.¹

For the period 1960-61 to 1995-96, domestic saving rates of 9.66 percent is low. A much more disturbing feature of the savings performance is that the saving rate has fallen over time from 13.54 percent during 1960s to 8.44 percent during 1970s. The savings improved slightly during 1980s and 1990s and was slightly higher than 1960s. There have also been large fluctuations in the saving rates. Another disturbing feature is that national saving has been able to finance, on average, 3/4th of gross total investment in Pakistan during the last 25 years. In other words, 1/4th of total investment has been financed by foreign resources. Considering the fact that the era of concessionary loan Hows is over, if this trend is

¹Data on saving rates from 1947-48 to 1959-60 separately for West Pakistan (present Pakistan) are sketchy. A recent careful analysis of savings rates shows it to be rising from 2.0 percent in 1949/50 to 6.5 percent in 1959/60 [Pervez Hasan (1997)].

allowed to continue, it will raise the already high outstanding debt and debt servicing liability.

Private saving consists of household and corporate savings. Private saving as percentage of GDP (private saving rate) has also remained low and stagnant at around 12 percent during the last 25 years. Household saving as percentage of GDP (household saving rate) reported in Table 4.2 presents a dismal picture. It remained abysmally low and stagnant around less than 11 percent during the last 25 years. The performance of the corporate sector saving has been very poor. It has averaged at 1.31 percent of GDP during the last 25 years. Interestingly, it has registered some improvement in the 1990s as compared with the earlier years.

Public savings as percentage of GDP (public savings rate) presents a dismal picture as it averaged 1.99 percent and 2.31 percent respectively during the 1960/1996 and 1991/1996 period. One of the prime reasons for the low and stagnant domestic saving rate in Pakistan has been the abysmally poor performance of public saving rate. Unless serious efforts are made to raise public saving rate in the neighbourhood of 6 to 7 percent and private saving rate in the neighbourhood of 16 to 17 percent of GNP, Pakistan's desire to raise saving rate closer to the average of developing countries (23 percent) will remain a distant dream. For Pakistan to join the rank of the "Asian Tiger", a saving rate of more than 35 percent is needed. Given the current low rate of saving it is highly improbable that Pakistan will come even closer to attain the rank of the "Asian Tiger" in the distant future unless serious efforts are made to raise both public and private saving rates.

Table 4.3 presents data on revenue and expenditure. A quick look reveals the factors behind the low and deteriorating public savings in Pakistan. While the development expenditure as a percent of GNP has been restrained, the current expenditure has increased sharply. There has been no significant increase in the proportion of tax and non-tax revenue in GNP. The failure to institute a serious tax reform programme and to exercise fiscal restraint in Pakistan have jointly been responsible for the dismal performance of public savings.

Table 4.4 summarises net financial balances of the private sector, the public sector, and the overall economy in Pakistan. It shows that public savings followed an upward trend during 1970-96. They reveal that annual average public savings were 0.8 percent of GDP in 1970s, which increased to 1.8 percent in 1980s and 2.3 percent of GDP in 1990s. Conversely, public investment had declined from annual average 9.3 percent of GDP in 1970s to 9.2 percent in 1980s and 8.5 percent of GDP in 1990s. An upward trend in public savings and a downward trend in public investment had limited the worsening in the government net financial balance during the period 1970-96. Table 4.4 also shows that annual average net balance of the public sector improved from 8.5 percent of GDP in 1970s to 7.4 percent in 1980s and 6.2 percent of GDP in 1990s. It should be noted, however, that public sector had always been getting an inflow of funds from the private sector.

Table 4.2

Trends in Savings in Pakistan

(Percent of GDP)

Years	Public Savings	Private Savings	Household Savings	Corporate Savings	Domestic Savings
1960-61	2.11	7.01	3.91	0.95	9.25
1961-62	2.20	5.84	4.42	0.97	8.27
1962-63	1.81	10.90	8.19	1.21	12.93
1963-64	2.23	14.62	9.63	1.49	16.99
1964-65	2.28	16.69	6.71	1.37	19.16
1965-66	2.37	10.61	13.75	1.39	13.14
1966-67	2.58	13.66	9.27	1.38	16.38
1967-68	2.92	9.48	11.09	1.59	12.45
1968-69	3.15	8.79	8.49	1.62	12.01
1969-70	0.95	8.02	0.65	1.54	13.06
1960-61 to 1969-70	2.26	10.53	7.57	1.41	13.54
1970-71	0.74	7.74	6.47	1.26	12.95
1971-72	-0.33	9.67	8.48	1.19	12.32
1972-73	-0.47	11.18	9.60	1.58	10.00
1973-74	-0.15	7.16	5.85	1.31	6.31
1974-75	0.60	6.56	5.08	1.48	4.95
1975-76	0.81	10.45	9.21	1.24	8.96
1976-77	2.45	9.87	0.87	1.17	8.66
1977-78	1.81	12.67	11.49	1.18	7.59
1978-79	1.06	11.17	10.02	1.15	5.81
1979-80	2.20	11.49	10.01	1.48	6.87
1970-71 to 1979-80	0.87	9.80	7.71	1.30	8.44
1980-81	4.17	9.25	7.78	1.46	6.34
1981-82	3.35	9.18	7.58	1.60	8.13
1982-83	1.27	14.72	13.05	1.67	8.38
1983-84	2.02	11.70	10.06	1.64	7.65
1984-85	0.38	12.55	12.15	0.40	6.71
1985-86	1.71	13.18	12.62	0.56	8.78
1986-87	0.49	16.48	15.44	1.05	12.28
1987-88	1.33	12.30	11.35	0.95	10.56
1988-89	0.19	13.89	13.03	0.86	10.44
1989-90	2.84	11.35	10.15	1.20	11.75
1980-81 to 1989-90	1.60	12.71	11.64	1.07	9.65
1990-91	0.70	13.48	12.03	1.46	12.67
1991-92	4.27	12.80	11.39	1.41	16.66
1992-93	1.50	12.06	10.68	1.39	13.44
1993-94	2.56	13.09	11.55	1.54	15.95
1994-95	2.05	12.70	11.20	1.50	14.52
1995-96	2.49	11.24	9.91	1.33	14.46
1990-91 to 1995-96	2.31	12.43	10.99	1.43	14.67
1960-61 to 1995-96	1.99	12.39	10.98	1.31	9.66

Source: State Bank of Pakistan. *Annual Report* (various Issues). Karachi.

Table 4.3

Trends in Fiscal Deficit, Government Expenditure and Revenue

Years	As Percentage of GNP						As a Percentage of Overall Deficit			Overall Deficit as a Percentage of GDP
	Total Revenue	Tax Revenue	Non-tax Revenue	Total Expenditure	Current Expenditure	Development Expenditure	Borrowing from External Sources	Borrowing from Domestic Sources	Borrowings from Banks	
1971-72	12.67	10.05	2.62	24.53	11.32	12.67	N.R.	N.R.	N.R.	N.R.
1972-73	12.46	10.03	2.43	23.01	10.55	12.46	N.R.	N.R.	N.R.	N.R.
1973-74	13.57	10.72	2.85	26.12	12.55	13.57	N.R.	N.R.	N.R.	N.R.
1974-75	12.86	10.22	2.43	25.96	13.09	12.86	N.R.	N.R.	N.R.	N.R.
1975-76	14.77	11.92	2.85	24.80	15.31	9.49	N.R.	N.R.	N.R.	N.R.
1976-77	14.63	11.85	2.77	23.48	13.44	10.04	N.R.	N.R.	N.R.	N.R.
1977-78	15.00	12.20	2.78	23.20	14.49	8.71	N.R.	N.R.	N.R.	N.R.
1978-79	15.70	12.90	2.88	25.10	15.65	9.48	38.7	12.2	49.1	9.7
1979-80	16.40	13.90	2.56	23.20	15.18	8.15	47.4	9.6	43.0	6.2
1980-81	16.90	14.00	2.94	22.90	14.53	8.41	47.7	36.2	16.1	5.2
1981-82	16.10	13.40	2.77	22.10	13.84	8.23	31.1	36.8	32.1	5.3
1982-83	16.30	13.50	2.79	24.10	15.87	8.07	20.1	56.0	23.9	7.0
1983-84	17.30	12.80	4.44	23.90	17.14	6.68	19.9	48.8	31.3	6.0
1984-85	16.40	13.00	3.43	24.70	17.74	7.00	14.1	35.0	50.9	7.8
1985-86	17.50	14.10	3.39	26.10	18.40	7.73	20.6	64.7	14.6	8.1
1986-87	18.10	14.50	3.66	26.60	20.31	6.32	18.0	58.6	23.4	8.2
1987-88	17.30	13.80	3.49	26.70	19.89	6.92	22.0	53.7	24.2	8.5
1988-89	18.00	14.30	3.70	26.10	19.90	6.30	32.0	66.6	1.4	7.4
1989-90	18.60	14.00	4.60	25.90	19.30	6.50	40.9	52.8	6.3	6.5
1990-91	16.10	12.70	3.40	25.60	19.20	6.40	24.8	26.6	48.6	8.7
1991-92	17.90	13.60	4.30	26.50	19.00	7.50	38.1	50.9	11.0	5.0
1992-93	17.90	13.30	4.60	26.00	20.30	5.70	22.6	18.6	58.8	8.0
1993-94	17.30	13.30	4.00	23.20	18.80	4.60	26.7	59.7	13.6	5.9
1994-95	16.90	13.70	3.20	22.80	18.40	4.40	27.8	47.4	24.8	5.6
1995-96	17.50	14.10	2.90	23.90	19.50	4.30	19.6	42.5	37.9	6.3
Average										
1971-72 to										
1995-96	16.17	12.88	3.27	24.66	16.55	8.10	17.6	62.6	19.8	4.0

- Notes & Sources: 1. State Bank of Pakistan, *Annual Report* (various issues). Karachi.
2. Government of Pakistan, *Pakistan Economic Survey* (various Issues). Economic Advisor's Wing, Finance Division, Islamabad.
3. NR means 'Not Reported'.

Table 4.4

Net Financial Balances of Private and Public Sectors in Pakistan.

(Percent of GDP)

Years	National			Public			Private		
	Saving	Investment	Net Financial Balance	Saving	Investment	Net Financial Balance	Saving	Investment	Net Financial Balance
1970	9.0	15.8	-6.8	0.9 ^a	7.0	-6.1	8.0	8.8	-0.8
1971	8.5	15.5	-7.1	0.7	6.9	-6.2	7.7	8.6	-0.9
1972	9.3	14.0	-4.7	-0.3	6.0	-6.3	9.7	8.0	1.6
1973	10.8	12.8	-2.0	-0.5	5.8	-6.3	11.3	7.0	4.3
1974	7.0	13.2	-6.2	-0.1	7.7	-7.8	7.2	5.5	1.7
1975	6.0	16.4	-10.4	-0.6	9.9	-10.5	6.6	6.5	0.1
1976	11.3	18.5	-7.2	0.8	12.5	-11.7	10.4	6.0	4.5
1977	12.3	19.3	-6.9	2.5	12.4	-10.0	9.9 ^a	6.8	3.1
1978	14.5	17.9	-3.4	1.8	11.5	-9.7	12.7	6.4	6.3
1979	12.2	17.9	-5.7	1.1	11.2	-10.1	11.2	6.7	4.5
1980	13.7	18.5	-4.8	2.2	11.3	-9.1	11.5	7.2	4.3
Avg.	10.4	16.3	-5.9	0.8	9.3	-8.5	9.6	7.0	2.6
1981	13.4	18.8	-5.4	4.2	9.4	-5.2	9.2	9.4	-0.2
1982	12.4	19.3	-6.8	3.3	9.6	-6.3	9.1	9.6	-0.5
1983	16.2	18.8	-2.5	1.3	9.6	-8.3	15.0	9.2	5.8
1984	13.7	18.3	-4.6	2.0	9.0	-7.0	11.7	9.3	2.4
1985	12.9	18.3	-5.4	0.4	8.9	-8.5	12.5	9.4	3.1
1986	14.9	18.8	-3.9	1.7	9.2	-7.5	13.2	9.5	3.7
1987	17.0	19.1	-2.2	0.5	9.7	-9.2	16.5	9.4	7.1
1988	13.6	18.0	-4.4	1.3	8.8	-7.5	12.3	9.2	3.1
1989	14.1	18.9	-4.8	0.2	9.0	-8.8	13.9 ^a	9.9	3.9
1990	14.2	18.9	-4.7	2.8	8.4	-5.5	11.4	10.6	0.8
Avg.	14.2	18.7	-4.5	1.8	9.2	-7.4	12.5	9.6	2.9
1991	14.2	19.0	-4.8	0.7	8.5	-7.8	13.5	10.5	3.0
1992	17.1	20.1	-3.1	4.3	8.8	-4.5	12.8	11.4	1.4
1993	13.6	20.7	-7.1	1.5	9.1	-7.6	12.1	11.6	0.4
1994	15.7	19.4	-3.8	2.6	8.3	-5.7	13.1	11.1	2.0
1995	14.7	18.6	-3.8	2.0	8.3	-6.3	12.7	10.3	2.4
1996	13.7	18.6	-4.9	2.5	8.1	-5.6	11.2	10.5	0.7
Avg.	14.8	19.4	-4.6	2.3	8.5	-6.2	12.6	10.9	1.7

Source: Annual Report, State Bank of Pakistan (various issues).

In Pakistan, private savings have been substantially higher than public savings throughout the period under consideration. They increased from an average of 9.6 percent of GDP in 1970s to almost 12.5 percent of GDP in 1980s and 1990s. On the other hand, private investment expanded from the average of 7.0 percent of GDP in 1970s to 9.6 percent in 1980s and 10.9 of GDP in 1990s. Consequently, the net financial balance of the private sector deteriorated from 2.6 percent of GDP in 1970s to 2.9 percent of GDP in 1980s. It improved somewhat in 1990s. The surpluses of the private sector were transferred to the public sector to meet its budgetary requirements.

Table 4.4 also shows the evolution of overall net balance of Pakistan's economy, which is identical to the current account deficit of the balance of payments. It shows that the overall net balance improved from an annual average of 5.9 percent of GDP in 1970s to almost 4.5 percent of GDP during 1980s and 1990s.

5. DETERMINANTS OF SAVINGS IN PAKISTAN

In second section, evidence on main determinants of savings in East Asia was presented. In this section, we first provide a review of empirical literature drawing largely on previous studies in the context of Pakistan. We find that results are broadly consistent with standard economic theory. However, the statistical significance of some of the variables has been found to be weak. Also the directions of relationship between growth and saving need to be examined. Due largely to this omission in previous literature, we provide further analysis on determinants of savings. We explicitly discuss the Ricardian Equivalence proposition in terms of the impact of changes in public savings on private savings and household savings. The specific issue addressed in this context is how much private savings would be displaced due to increase in public savings.

5.1. Review of Literature

This section presents a brief review of the empirical literature on the behaviour of savings in the context of Pakistan's economy. Qureshi (1981) investigated the relative explanatory power of permanent vs current income in explaining variation in the rate of household saving in Pakistan. The study showed that the permanent income model that emphasises short term adjustment lags between income and expenditure provided a much better explanation of the variation in household saving. The study also examined the effect of real interest rate on household saving and found a strong and positive relationship between these two variables. The study showed a negative impact of inflation on the rate of household saving in Pakistan.

Khan (1988) and Khan, Hasan and Malik (1994) analysed the behaviour of savings in the context of McKinnon-Shaw model of financial repression. According to the McKinnon-Shaw thesis, it is not the cost of capital but rather the availability of

financial resources that constrain investment in financially repressed economies. Contrary to the conventional view, the McKinnon-Shaw model emphasises a positive relationship between investment and the real rate of interest. This is because an increase in the real rate of interest induces more savings which in turn raises the level of investment by relaxing the financial constraints. Both the studies found strong support for the McKinnon-Shaw hypothesis.

Khan, Hassan and Malik (1994) examined the determinants of national saving rate in Pakistan in terms of a variety of factors that include income, real interest rate, dependency ratio, foreign capital inflow, foreign aid, changes in the term of trade, and openness of the economy. The study found a strong and positive effect of per capita GNP on national savings. However, the study reported an insignificant impact of the growth rate of real income on national savings. The study showed that real interest rate, change in the term of trade, and openness of the economy positively influence national saving. Both debt to GNP ratio and dependence rate were found to have an adverse impact on national saving. The study showed that foreign capital inflow discouraged national saving in the current period. However foreign capital inflow was found to have a positive influence on national saving with lags of one and two periods.

Finally, Hussain (1996) explored the determinants of private saving in terms of demographics, growth, and financial deepening. The study estimated a long run equilibrium relationship for the period 1970–1993. This relationship indicated that the private saving rate cointegrates with the financial deepening variable and the time trend. Hence, long run movement in the rate of private saving in Pakistan may be explained by long run movements in financial deepening and the time trend. To the extent that the variables not included in the estimation, such as net wealth and net government debt, are correlated with the time trend, the results appear to suggest that these variables also influenced long run movements in the rate of private saving. Finally, the study found that demographics did not influence private saving rate in Pakistan.

5.2. Determinants of Private, Domestic and Household Savings

This section provides an empirical assessment of the role of income, public saving, real interest rate, financial deepening, foreign capital inflows, and other demographic and structural factors in the determination of private, domestic, and household savings in Pakistan. Regression equations have been estimated by ordinary least squares (OLS) for private saving, domestic saving, and household saving for the period 1961–1996. The estimated equations are reported in Table 5.1. Equation 1 explains private saving in terms of public saving, GNP, Financial Deepening (measured as a ratio of M1 to GNP), ratio of value added in agriculture to GDP (VAGDP), foreign capital inflows, and real interest rate. In this equation, GNP, financial deepening, and real interest rate positively influence the dependent

Table 5.1

Determinants of Private, Domestic and Household Savings (1961-1996)

Dependent Variable	Explanatory Variables								R ²	D.W.	F
	Constant	Public Saving	GNP	Ratio of MI to GNP	VAGDP	Real Interest Rate	Dependency Ratio	Foreign Capital Inflow			
PS	-767.18 (-0.09)	-0.4813 (-2.90)*	0.1460 (24.72)*	5318.59 (0.19)	-1061.35 (-0.39)	318.39 (1.36)	-	-03275 (-3.45)*	0.99	1.84	674.98
DS	-31727.0 (-2.09)		0.1775 (26.66)*	81505.20 (1.65)	2588.99 (0.55)	-53.27 (-0.13)		-0.7586 (-4.68)*	0.98	1.61	383.48
HS	-38627.31 (-1.10)	-0.5119 (-2.79)*	0.1275 (16.50)*			510.24 (2.08)*	17496.52 (1.10)	-0.2840 (-2.95)*	0.95	1.85	561.34

Note: (1) Figures in parentheses are t-statistics.

(2) indicates significance at 5 percent level.

(3) PS, DS and HS denote respectively private, domestic and household savings.

(4) VAGDP denotes the ratio of value added in agriculture to gross domestic product.

variable, while public saving, foreign capital inflows, and ratio of value added in agriculture to GDP have a negative impact on private saving. Equation 2 explains domestic saving in terms of GNP, financial deepening, ratio of value added in agriculture to GDP, foreign capital inflow and real interest rate. In this equation, GNP, financial deepening, and ratio of value added in agriculture to GDP positively influence the dependent variable. Both GNP and foreign capital inflow are statistically significant while ratio of value added in agriculture to GDP and financial deepening are statistically insignificant. Real interest rate has a negative but statistically insignificant co-efficient. Equation 3 explains household saving in terms of public saving, GNP, real interest rate, foreign capital inflows and dependency ratio. In this equation, both public saving and foreign capital inflows negatively influence the dependent variable while GNP, real interest rate and dependency ratio have a positive impact on household saving. All the variables except dependency ratio are statistically significant in this equation.

Public saving is included as an explanatory variable in the equations for private and household savings to test Ricardian Equivalence. The co-efficient of public saving has a negative sign in the equations for private and household savings, confirming that public savings do crowd out private and household savings. However, the low magnitude of this co-efficient indicates that public savings have not fully crowded out private savings.² For example in equation 1 of Table 5.1, an increase of one rupee in public savings leads to a reduction of 48 paisa in private savings. Thus the Ricardian Equivalence proposition does not appear to hold fully in the context of Pakistan's economy.

We have also tested for the direction of causation between GNP and private saving, domestic saving, and public saving in turn. Appendix I reports the results of Engle-Granger Causality tests. The results show that GNP causes both domestic and public savings. However, the causality test is inconclusive in the case of causation between GNP and private saving. This finding has important policy implication in the sense that once a virtuous cycle succeeds in accelerating growth, savings would catch up with a lag. In this sense, financing of investment is not a major constraint. It would get relaxed with time as has been the case of many East Asian countries.

6. ROLE OF LONG-TERM SAVING INSTRUMENTS IN INCREASING SAVINGS AND IMPROVING THEIR EFFICIENT ALLOCATION

Low levels of corporate savings and inadequate mobilisation of resources for firms through the equity market in Pakistan increases the role of long-term saving instruments such as pension and provident funds, life insurance and mutual funds. The existence of such instruments not only provides incentives to individual savers it can also ensure that funds are used productively. However, this outcome is possible only

²Notice that the negative coefficient may be upward biased due to errors of observation in the savings data.

when such instruments are used judiciously and the government is not tempted to finance their deficit and unproductive projects from the funds accumulated in the name of long-term saving instruments. This section reviews the existing situation in this area.

The financial services industry is in a period of rapid change. One can hardly open the financial section of a national newspaper today without reading about rapidly changing financial market. The deregulation, globalisation, volatile interest rate and currency exchange rate, and heightened competition in the financial market are some of the reasons for the wide coverage of such issues in the media.

Financial assets exist in a economy because the savings of various individuals, corporations, and governments during a period of time differ from investment by the respective agents. The purpose of financial market in an economy is to allocate savings efficiently to the ultimate users of funds. The economic units mostly responsible for capital formation—the non-financial businesses—use more than their total savings for investment. Households, on the other hand, have savings in excess of investment. The ultimate investor in real assets and ultimate saver need to be brought together at the least possible cost and with not much inconvenience.

Financial intermediaries include institutions such as banks, life insurance companies, and pension and provident funds and mutual funds. The financial intermediaries transform funds in such a way as to make them more attractive. Financial intermediaries provide a variety of services by making transformation of claims attractive. The allocation of funds occurs primarily on the basis of price expressed in terms of expected return. Businesses in need of funds must outbid others for their use. Although allocation process is affected by capital rationing, government restrictions and institutional constraints, expected return remains the primary mechanism for the deal between supplier and user of funds.

It should be recognised that the expected return of an investment has an element of risk. Therefore, allocation of savings must be influenced by the extent of risks and rate of return both. Finally, the expected return on a financial asset also depends upon the inflation rate. Accordingly, the rate of return embodies in it a premium for expected inflation. In summary, returns to be entailed in the capital market are determined by continuous trade off between risk and return.

In Pakistan, to-date the performance of long-term savings instruments has not been satisfactory. This bleak performance may be attributable to the public sector domination in the saving instruments market. Life insurance, provident funds and mutual funds have until recently been a public sector monopoly with no possibility of competition from the private sector. Employees provident fund balances have been totally sucked by the government owned instruments such as Defence Saving Certificates, and Federal Investment Bonds.

Historically, the portfolios held by life insurance industry, mutual funds and employees provident fund have been heavily regulated by government. As discussed in a previous section, the profit rate offered by the national saving organisations of

the Ministry of Finance, Government of Pakistan was kept high and such schemes have pre-empted bulk of the household savings for financing of the budget deficit of the government. In the light of the above weaknesses of the financial sector, long-term saving instrument markets have failed to develop in the private sector:

6.1. Pension and Provident Fund

Pension plan may be one of two types. A defined benefit plan either pays a retired employee so many rupees per month or it pays the individual worker a percentage of his/her average final salaries, both weighted by the number of years of service. Such plans are known as unfunded or not fully funded. The pension liabilities in such cases do not appear on the balance sheet of the employer organisation. The second type of pension plan is a defined contribution plan. Under this scheme, the employer undertakes to make a specified monthly (or annual) payment to the pension plan. The contributions are invested and at retirement, the employee is entitled to accumulated total of contribution plus earnings on profits received on those contributions. Such pension plan is known as fully funded and may be read from the balance sheet of the employer agency.

The employees provident fund system as obtaining in Pakistan provides fully funded, defined contribution retirement scheme to only about 6 percent of the labour force. The scheme covers employees of the government, semi-government and autonomous bodies and the employees in the larger enterprises in the organised private sector. Employees and the private sector employer contribute equally between eight and 1/3rd to 10 percent of the monthly emoluments. The balances are returned to the employees at the time of cessation of employment, i.e. retirement. The provident fund balance includes the accumulated income from the investment of the contribution made during the entire period of service. The interest rate on the balances is fixed by the government and has varied over time. Table 6.1 shows the interest rate fixed by the government. It should be noted that the nominal interest and real interest rates are quite high.

The public sector organisations which offer a life pension do not contribute to the employees contributory provident fund. Instead, such organisations pay back the accumulated amount of employees contribution plus a monthly pension and a lumpsum gratuity. Pension-cum-gratuity scheme of 1954 as revised from time to time regulates the pension of government and semi-government employees. This pension plan is unfunded and is financed from the annual budgetary allocations. It should be noted that most of the organisations recently have allowed pensionary benefits to their employees with the approval of the government. In their case, Contributory Provident (CP) Fund accounts have been converted into General Provident (GP) Fund. In such cases, organisation's share has been withdrawn and has been credited to the organisation fund.

It is worth noting that the advances from the GP Fund account are allowed as

Table 6.1

*Rate of Interest Allowed by the Government on General
Provident Fund Accumulations*

Years	Rate of Interest (Percent per Annum)	Real Interest Rate (Percent per Annum)
1982-83	13.20	8.50
1983-84	14.00	6.70
1984-85	14.60	8.90
1985-86	14.72	10.32
1986-87	14.70	11.10
1987-88	14.00	7.70
1988-89	14.83	4.43
1989-90	15.93	9.89
1990-91	15.93	3.27
1991-92	15.93	5.35
1992-93	15.93	6.10
1993-94	15.53	4.26
1994-95	15.43	2.41
1995-96	15.49	4.70
1996-97	16.76	5.14

Source: Government of Pakistan. Auditor General of Pakistan, Islamabad.

Note: From 1986-87 onward, 30 percent bonus has also been allowed on interest. If bonus is included both the nominal and real rate of interest on the provident fund balances are quite high.

and when requested by the contributor and are sanctioned subject to restriction that no more than one advance will be allowed at a time. These advances are to be refunded. Non-refundable advances are also allowed in accordance with certain conditions. The withdrawal of funds by the contributors from the provident fund is often large. It needs an explanation especially when the real rate of return in the forced savings is high.

Various studies have argued in favour of not only broadening the coverage of GP Fund schemes but raising the subscription rate above the ceiling rate fixed now in Pakistan to raise the level of forced savings. In this context, it may be noted that employees often resort to borrowings from the GP Fund despite the fact that funds in such schemes have historically earned high positive real returns. One of the reasons for such withdrawals from the GP Fund scheme could be an imperfectly functioning credit market. For example, employees may be unable to borrow from the commercial banks and other financial institutions at the market rate of interest.³ In this scenario, many employees find GP Fund scheme as the only source from

³Credit rationing may result owing to asymmetric information problems. Such problems are believed to be widespread in developing economies.

where they can borrow money.

The social security system in Pakistan covers only the employees in the organised sector including the public sector agencies. Government and semi-government employees as stated earlier, receive pension and General Provident Fund balances whereas private sector employees are served by the employees old age benefit institution in addition. The employees old age benefit institution (EOBI) is being transformed into a national pension fund from the current fiscal year, which would, over a short span of time, be extended to all employed persons except government employees and armed forces personnel. Such measures, however, cannot address the structural deficiencies of the present pension system. Under the prevailing system, the employees are collecting and disbursing pension annually with least concern for the future pension liabilities which are bound to grow with the demographic changes, i.e. increasing life expectancy at birth and declining death rate.

The regulatory framework for provident funds are highly conservative. As much as 90 percent of the balances are required to be placed with the government or quasi-government securities. Earlier, the entire amount in the fund was invested in government and quasi-government instruments. Currently, 10 percent of the balance can be invested in specified/registered securities. These measures are meant to secure the principal and de-emphasise the return aspect which may substantially be greater than the return obtainable from fixed income securities offered by the national saving organisations of the government. It would probably be unkind to emphasise this point any further in view of the stark performance of most of the companies listed at the stock exchanges in Pakistan. This issue is further examined in the later section of this report pertaining to mutual funds.

In order to improve the real rate of return to owners of provident fund, the government must relax the rigid control on investments of provident fund balance by slashing the government securities from the portfolio of employees provident fund from current 90 percent to a maximum of 30 percent and increase the share of TFCs etc. from the present level of 10 percent to 40 percent.

6.2. Life Insurance

Contractual savings embodied in life insurance policies are a major source of long-term capital. The sum of insurance premia collected regularly from the insured persons can have substantial impact upon the securities market, facilitate privatisation process, promote dispersal of corporate ownership and enhance corporate efficiency. The insurance, pension and provident fund together mobilise financial resources, aggregating to Rs 100 to 150 billion annually in the country which is 5.99 percent of GDP. It is estimated that 75 percent of these funds are absorbed or claimed by fiscal deficit of government. Further development of this sector will not only improve the social security net, but would also generate funds needed for the building up of the infrastructure which has been holding back rapid industrialisation and urban and rural infrastructure in Pakistan.

The insurance industry comprises of 62 companies of which only 3 are life insurance companies. Of the three life insurance companies, two are in the private sector which have started operations only recently. The State Life Insurance Corporation of Pakistan (SLIC) which dominates life businesses was created in 1974 by nationalisation of 32 companies in the private sector. The assets owned by SLIC were valued at Rs 30.8 billion (0.7 billion US\$) as on December 31, 1993. The value of assets owned by SLIC of India in March 1995 have been reported at about US\$19 billion. The value of life insurance industry assets in Pakistan has lagged behind India. The life insurance industry has a vast potential in Pakistan as well. As per the yardstick proposed by the World bank, i.e., 5 US\$ per capita insurance contribution, life insurance industry can mobilise financial resources worth US\$7 billion and not US\$ 0.7 billion as is the case today in Pakistan.

The slow growth of SLIC assets establishes the point that the average yield on SLIC portfolio has remained low. Probably, the policy holders whose policies mature are getting negative return. That may be one of the reasons for slow growth of life insurance industry in Pakistan. Privatisation of the insurance industry and its deregulation may be able to revive this important area of resource generation and improve the long-term saving instruments.

4.3. Mutual Funds

A small investor faces many hardships in the share market. He cannot afford the professional advice of professional investment consultants. He lacks ability to invest in a balanced and diversified portfolio including shares of certain blue-chip companies with his limited resources. There is no other better way out for the small investors to enter the capital market, except the mutual funds.

A mutual fund is a special type of investment institution which acts as investment conduit. It collects or pools the savings of the community and invests large funds in a fairly large and well diversified portfolio of sound investments. It employs professionally qualified and well experienced investment consultants and fund managers, who take the pooled money and invest it in a variety of blue-chip companies, which are selected from a wide array of industries with the object of maximising returns/income on investments. Such institutions that collectively manage the funds obtained from different investors have commonly come to be known as mutual funds. These funds form an important part of the capital market providing the benefits of diversified portfolios and expert fund management to a large number of persons, particularly small investors.

The actual size of Mutual Fund industry in Pakistan is small in relation to the over all capital market. Currently, there are forty Mutual Funds; thirty nine are Close-end and one is Open-end Mutual Fund. The mutual fund industry in Pakistan has been dominated by the Government controlled National Investment Trust (NIT) with 88 percent of the market, Investment Corporation of Pakistan

(ICP) with nearly 8 percent of the market, and private sector mutual fund 4 percent of the market. ICP manages 26 Close-end Mutual Funds, remaining 13 Close-end Mutual Funds are managed by the private sector. The total size of the mutual fund industry is approximately Rs35 billion.

NIT, established in 1962, has been the only Open-end Mutual Fund operating in Pakistan. As of June, 1995, NIT managed over Rs39 billion in the Trust for 89,255 registered unit holders and an unknown number of bearers unit holders. NIT had originally been enjoying certain special privileges which have since been withdrawn by the Government, so as to place them on equal footing with the private sector Open-end Mutual Fund, which are now being floated in the private sector. The CLA has permitted an Open-end Mutual Fund which is in the process of launching its investment schemes viz., Pakistan Unit Trust. The CLA encourages Open-end Mutual Funds in the private sector particularly if it has collaboration with some international fund management companies.

Till early 90s, the Close-end Mutual Funds were strictly confined within the domain of ICP. As of August, 1995 ICP had floated and manages 26 Close-end Mutual Funds with a total capital layout of Rs 3.14 billion. 25 of the Funds were floated in a series while a State Enterprise Mutual Fund (SEMF) was floated in 1980, specifically for the benefit of overseas Pakistanis. After the 90s, private sector also entered in the Close-end Mutual Funds.

Both NIT and ICP being owned by the government have lacked efficient management and effective operating policies and procedures. Recently, the Government of Pakistan has taken important decisions to develop the mutual funds industry in the country in the private sector. Accordingly 17 Investment Companies were registered for floatation of Closed-end Mutual Fund in the private sector, of which 13 funds have already been listed on the Stock Exchange(s) with a paid-up capital of Rs1.621 billion and four are awaiting floatation/listing. Even though private sector entry has been eased, the performance of newly formed mutual funds leaves ample room for improvement.

At the time when Pakistan had opened the gate for setting up of mutual funds (1990) in the private sector, India had also followed the suit. The newly formed private sector mutual fund in India has attracted massive response from the savers. So much so that the size of the private sector mutual fund in 1991-92 (US\$ 1 billion) had exceeded the portfolio held by the Unit Trust of India (a public sector close-ended mutual fund) during the preceding year a little lower than US\$1 billion. But the honey-moon in India was short-lived. The net asset value of all the private sector mutual funds declined drastically when the stock market prices began to plummet in 1992 in India. These mutual funds were not allowed to shift their holdings into alternative investments. Thus, these funds could either hold cash or continue to hold their shares whose prices had declined. Regulatory measures had to be amended in India and a set of new rules adopted. These include the relaxation of investment restrictions into money market and debt instruments, the listing of

open-ended mutual fund in the private sector, and the possibility of mutual fund to launch pension scheme.

The lessons from India suggest that the mutual funds industry in the private sector would be viable only and only if the regulatory measures are comprehensive enough to enable the fund manager to make optimal choices available within the economy. Private sector in the financial industry must be absolutely free to adjust during the changing economic environment. Mutual funds industry holds great promises for boosting household saving provided the risk-return pendulum is not allowed to operate in the short-run, thereby maintaining investors confidence in long-term saving instruments.

7. STRATEGY AND POLICY OPTIONS FOR INCREASING SAVINGS

There are two issues that need to be addressed at the very outset. First, the target level of domestic savings required to finance the investment needs for achieving the objective of 7 to 8 percent growth in the economy needs to be known. This exercise requires, among other things, the expected sectoral composition as different sectors vary in their capital requirements and expected changes in the efficiency of investment would in future years. In view of the current infrastructural constraints, it is expected that future investment would be characterised with a high level of Incremental Capital Output Ratio (ICOR) as investments in the infrastructural sectors has a higher ICOR than most other sectors. If the improvements in the efficiency of investments does not fully offset the impact of larger required investments in infrastructures, it is expected that ICOR would increase over time in Pakistan.

Table 7.1 presents ICOR measures for Pakistan, India and a few other countries. The countries in South-East Asia had a strong economic reforms programme which had a favourable impact on the efficient use of resources. Despite increased efficiency of investment, the ICOR have been in excess of 4. It, therefore, appears that given the high infrastructural needs of the Pakistani economy, it is quite probable that Pakistan's ICOR would rise to about 4.5 over the next 10 years or so. Given the target growth rate of 7 percent, it implies that investment rate needs to increase to over 30 percent. Assuming some recourse to foreign savings, the domestic savings rates would need to rise to about 28 percent in the medium to long-term from the current rate of 14.46 percent in 1995/96.

Whether such an increase in domestic savings rates is feasible and, if so, what policy steps need to be taken is the issue we turn to. We had shown that in East-Asia, some countries that had low saving rates initially were successful in raising savings to the required high levels. This was achieved by a mix of policies aimed directly at mobilising savings and by the initiation of a virtuous growth-saving circle by first putting in place a strong structural reforms programme that had increased efficiency of resource use and had resulted in sustained high growth. The accelerated growth had Granger-caused increased savings with a lag.

Table 7.1

*Increased Capital Output Ratio (ICOR) Measures for Pakistan
India and East Asian Countries*

	(Average Values)				
	1975-80	1981-85	1986-90	1991-95	1975-95
Pakistan	3.16	2.78	3.31	5.11	3.59
China	0.82	3.54	5.02	3.48	3.44
Indonesia	3.07	5.59	5.27	4.98	4.73
Malaysia	3.20	4.29	7.21	4.34	4.76
Thailand	3.59	4.76	3.29	4.88	4.13
India	4.70	4.16	4.02	4.65	4.35

What events and/or policies might contribute to an increase in the savings rate? Among the possible candidates are:

- (i) An increase in per capita income over time. Though Khan, Hassan and Malik (1994) report a strong and positive effect, it is noteworthy that although per capita incomes has risen by about 150 percent since the beginning of the 1960s the average savings ratio has shown no clear upward trend, raising the possibility that though short term increases in income coincide with increases in savings, this relationship is less in evidence, if at all, in the longer run.
- (ii) An increase in the growth rate of per capita income. This variable, which seems to have played a role in some developing countries, did not have explanatory power in the cited Khan *et al* study.
- (iii) The real interest rate is other possible influence. The magnitude of its possible effect needs attention.
- (iv) Trade and openness were reported by Khan *et al* to have positive effects. This may be a good omen for Pakistan as it moves towards a more open economy. Foreign capital inflow has a reported negative effect in the current period though a positive one with lags of one and two years.
- (v) Household savings have been positively related to the dependency ratio. An increasing dependency ratio indicates a higher burden on the working generation, increasing the need for retirement saving.
- (vi) The level of financial deepening in the economy has a positive impact on savings. Thus savings rate is likely to improve as the economy achieves a greater level of financial deepening.
- (vii) As for the structural effects, share of agriculture in GDP may be related to savings, as confirmed in this study but without statistical significance. The impact of this variable thus remains to be seen as well.

Most of the factors indicated above would raise the domestic savings rates gradually over time. The gradual projected increase in the saving rate would not suffice to finance the investment needs. A strong action on both the public and private saving front is, therefore, needed.

7.1. Policy Options

1. Public savings in Pakistan have been low and have declined over time. A strong effort spread over tax policy (tax reforms as well as tax administration), expenditure restraint, effective expenditure management and public sector corporation reforms should aim at raising public savings to about 6 percent of GDP. Higher public savings would depress, by a third, private savings through a Ricardian equivalence effect. On balance, an increase of domestic savings by 4 percent of GDP should be a significant step. The materialisation of increased public savings requires a strong public policy response. The only silver lining is that some countries had succeeded in this area.
2. The incentives for private savings in Pakistan need to be revamped. The paucity of long-term saving instruments, such as provident funds, life insurance and mutual funds has hindered the channelling of savings in productive uses. Markets in long-term saving instrument have been dominated by the public sector. The allocation of portfolios is heavily regulated which has resulted in the use of funds in areas of low returns. There is a need to introduce flexibility to enable actors to respond to market developments and not be bound by government dictate.
3. The provident fund system in Pakistan provides defined-contribution retirement schemes for not more than 6 percent of the labour force. Public sector employees receive an additional budget-financed government pension.

In addition to policies aimed at increasing the rate of voluntary saving, the Government needs to adopt measures to generate involuntary saving through mandatory pension schemes. There are two types of such schemes: unfunded social security or pay as you go (PAYG) schemes; and fully funded pension plans. While the social security systems of Europe and the United States are characterised by PAYG scheme, Japan, Malaysia, and Singapore have introduced fully funded mandatory pension plans. The impact of compulsory pension plans on aggregate saving depends on the extent to which they substitute for voluntary saving. Empirical evidence on the impact of pension funds on aggregate saving is generally mixed. For example, results for the United States show that unfunded social security had increased long-term saving and investment by only modest amounts. Empirical evidence for other industrial countries shows little or no effects of

unfunded social security on contemporaneous private saving levels. In contrast, econometric evidence on Singapore's fully funded central Provident Fund shows that it has stimulated aggregate saving. Similarly, empirical evidence for Chile suggests that the substitution of fully funded for PAYG plans has contributed to Chile's large increase in private saving. It should be noted that increase in private savings in Chile occurred after a long time lag. Pakistan should introduce mandatory pension schemes with a very broad employee coverage in the private sector. In Pakistan, there is a need to improve the credit market to enable contribution of the provident fund system to borrow as and when they need to remove their liquidity constraints. This should lead to lesser withdrawal of funds from the provident fund system by its contributors who forego high returns from accumulation from provident fund only to meet short-term needs.

8. CONCLUDING REMARKS

Domestic savings in Pakistan have been low and have risen quite slowly. Public savings have been the major problem area in the past. An econometric analysis of private savings determinants shows that we can expect private savings to grow gradually as a result of rising per capita income, falling dependency burden, improved financial deepening and macro stability. If public savings remain low, private savings would not suffice to finance the high growth target needed to eradicate poverty as well as improve the general living standard. Part of the problem of a low savings rate would be solved if a virtuous cycle is created whereby high GDP growth contributes to an acceleration in the growth rate of savings.

The most promising strategy for Pakistan to raise its domestic saving rate is to raise public saving through tax and expenditure reforms, introduction of extensive compulsory forced saving schemes and opening of the private sector to provide financial instruments for long-term savings.

The development of a market for the long-term saving instruments can serve two major objectives. First, the efficient use of invisible funds can be promoted if government does not use funds mobilised to finance its fiscal deficit and/or its unproductive portfolio of public sector projects. The recent improvement in this area should be taken to its logical conclusion wherein resources raised through provident fund, insurance and mutual funds are allowed to be allocated to their best uses. Second, the NPF mechanism has the potential to increase national savings only when certain conditions are met. First, the mandated savings must be beyond the level individuals would have voluntarily chosen to save. Second, individuals should not be allowed to find ways to evade the discipline imposed by forced savings through such means as additional borrowings. In this context, it is important to improve the functioning of credit market. Third, the government must not offset this saving by running a larger deficit. Indeed, there is a danger that the

availability of continuous flow of funds through the government-controlled NPF mechanism may soften government's budget constraint, and this in turn could result in the selection of projects which do not pass the test of social benefit-cost analysis.

It should not be assumed that the introduction of the NPF will automatically result in increased private savings, let alone, in increased aggregate domestic savings. This is especially the case when a transition is being made from the PAYG to the NPF system, as those with claims on the system before transition would need to be compensated. Paying compensation would have a negative impact on government saving.

APPENDIX I

Saving and Growth: Causality Tests

The Appendix I reports the results of bivariate causality tests between GNP and private saving, domestic saving, and public saving in turn. A variable X_t is said to cause a variable Y_t in the Granger sense if the forecast for Y_t improves when lagged X_t 's are included in the regression. We employ the Engle-Granger Error Correction approach to test for the existence of a causal relationship. Prior to estimating an Error Correction Model (ECM), tests for the existence of unit roots were conducted for the time series of GNP, private saving, domestic saving, and public saving. The following table reports the results from Augmented Dickey Fuller (ADF) t -test. It is clear from these tables that the hypothesis of a unit root without trend is accepted for all the variables. Next, we tested for cointegration between GNP and the three categories of savings in turn.

Results of Augmented Dickey Fuller t -Test

Period	Variable	t -Statistic	t -Statistic
		(Without Trend)	(With Trend)
1961–1996	LPS	-0.8739	-2.4576
	LPBS	-1.8978	-2.3498
	LDS	0.1275	-1.5762
	LGNP	-0.2862	-3.6698

Notes: (1) For t -statistic without trend, MacKinnon critical values are -3.6353, -2.9499 and 2.6133 respectively at 1 percent, 5 percent and 10 percent level of significance. The corresponding critical values for t -statistic with trend are -4.2505, -3.5468 and -3.2056.

(2) LPS, LPBS, LDS, and LGNP respectively denote logarithms of private, public, and domestic savings and GNP.

The following table reports the cointegrating equations.

Period	Co-integration Equations	Dickey Fuller Test	CRDW
1961-96	LDS = 1.518 + 0.944 LGNP	-2.66	2.01
	LGNP = 2.324 + 0.987 DS	-2.73	2.02
	LPS = -2.276 + 1.01 LGNP	-4.68	2.04
	LGNP = 2.798 + 0.935 LPS	-4.60	1.99
	LPBS = -13.899 + 1.701 LGNP	-2.63	2.16
	LGNP = 10.766 + 0.193 LPBS	1.52	2.04

Having analysed the time series properties of the relevant variables, the following equations have been estimated for the three categories of savings.

$$(1-I)MS_t = \sum_{i=1}^m \alpha_i (1-L)MSM_t + \sum_{j=1}^n \beta_j \delta_j (\backslash-L)GNP_{t-j} + e(NS_{t-1} - z)GNP_{t-1}$$

$$(1-L)GNP_t = \sum_{i=1}^m \gamma_i Y_i (\backslash-L)GNP_{t-j} + \sum_{j=1}^n \delta_j (\backslash-L)NS_{t-j} + H(CAPM - O_{NS,t})$$

where L is the lag operator.

Table given below provides a summary of the causality tests. The F-test shows that GNP causes both domestic and public savings. However, the result is inconclusive in the case of private saving.

Variable	1961-96
DS on GNP	2.89
GNP on DS	0.71
PS on GNP	0.43
GNP on PS	0.42
PBS on GNP	6.77*
GNP on PBS	1.10

Chart of Direction of Causation Between Saving and Income

Period	From	To	
1961-96	GNP	==>	DS
	GNP	-/-	PS
	GNP	==>	PBS

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ABSTRACT

This paper examines the determinants of private, domestic, and household savings in Pakistan. The analysis shows that private savings can be expected to grow gradually as a result of rising per-capita income, falling dependency burden, improved financial deepening and macro stability. Bivariate causality tests between GNP and savings show that GNP causes both domestic and public savings. However, the causality test is inconclusive in the case of causation between GNP and private savings. This finding has important policy implication in the sense that once a virtual cycle succeeds in accelerating growth, saving would catch up with a lag. In this sense, financing of investment is not a major constraint. It would get relaxed with time as has been the case of many East Asian countries. The paper also addresses the role of long term savings instruments in increasing savings and in improving their efficient allocation. The paper underlines the following policy options (i) a strong effort spread over tax policy (Tax reforms as well as tax administration), expenditure restraint, effective expenditure management and public sector corporation reforms should aim at raising public savings to about 6 percent of GDP. (ii) The incentives for private savings in Pakistan need to be revamped. (iii) In addition to policies aimed at increasing the rate of voluntary saving, the government needs to adopt measures to generate involuntary saving through mandatory pension scheme.

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