Economic growth, financial liberalisation and poverty reduction of Pakistan (1970-2000)

By

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Abstract

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This thesis investigates, theoretically and empirically, the relationship among economic growth, financial liberalisation and poverty reduction in Pakistan, between 1970 and 2000, with the aid of a rigorous co-integration analysis. A literature review provides an account of the existing models and other poverty reduction strategies in Pakistan. An analysis of poverty trends (1970-2000) in Pakistan shows large variations in poverty indices during all three decades under observation, at both provincial and intra -provincial levels. Human development indices show that poverty is highly concentrated in rural areas. Among provinces, the rural areas of Sindh and Balochistan provinces are worst affected. The trend of poverty shows a high rise during the 1990s, a decade of slow economic growth in Pakistan. The rural poverty nexus is correlated to the agricultural land reforms and weak institutional mechanism. Ineffective public services delivery to the poor has been the result of weak institutional response. The gender poverty is also all pervasive in Pakistan, as rural women are found to be more vulnerable to poverty shocks. Institutional failure has been found to be the main cause of the rising poverty in Pakistan. To analyse the relationship between economic growth and poverty reduction in Pakistan, we used the Dollar and Kraay model (2000) that predicts that economic growth reduces poverty. Using annual data sets for Pakistan from 1970 to 2000, our results show a positive relationship between economic growth and poverty reduction in Pakistan. We also tested the impact of financial development and growth in Pakistan. The McKinnon-Shaw hypothesis (1973) implies that increase in real rate of interest will increase savings and investment, which will lead to higher economic growth. The co-integration tests of the McKinnon-Shaw model (1970-2000) for Pakistan could not substantiate the prediction of the model. With a significant increase in savings over the period under observation, investment failed to rise. However, overall financial intermediation plays a significant and positive role in boosting economic growth. Authoritarian governments and the nationalisation policies are largely responsible for the inability to transform savings into investment.

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Abbreviation

ACF	Auto correlation function
ADF	Augmented Dicky-Fuller
AIC	Akiake Information Criteria
ARDL	Auto regressive distributed Log
CC/RD	Currency in circulation in rupee deposit
CC/TD	Currency in circulation in total deposit ratio
CDNS	Directorate of National Savings
CPI	Consumer Price Index
CRR	Cash Reserve Requirement
CV	Co-integrating vector
DF	Dicky-Fuller
DFIs	Development Finance Institutions
EG	Engle Granger
FL	Financial Liberalisation
FR	Financial repression
GOP	Government of Pakistan
HDI	Human Development Index
IFIs	International financial institutions
MM	Money multiplier
NBFIs	Non Bank Financial Institutions
NWFP	North West Frontier Province
OLS	Ordinary Least Squares
OMM	Organised Money Market
PBC	Pakistan Banking Council

PDF	Probability density function
PIHS	Pakistan integrated household survey
PPP	Purchasing Power Parity
REER	Real effective exchange rate
SBC	Schwarz Baysian information Criteia
SIC	Schwartz information criterion
SLR	Statuary Liquidity Requirement
SPI	Sensitive Price Index
UMM	Unorganised Money Market
UNDP	United Nations Development Programme
WB	World Bank
WDI	World Development Indicator
WPI	Whole Sale Price Index
PR	Political rights
CL	Civil liberties

Chapter 1

Introduction

1. 1 Introduction

South Asia has one of the largest concentrations of the poor in the world. It is estimated that about a billion people are concentrated to live in abject poverty. Pakistan is one of the severely poverty-ridden areas among the South Asian countries, with a 30.6 % of its population with a national poverty line of Rupees.670 per capita per month in 1998-99.

The per capita income was restructured based on the calories intake requirement of 2350 per adult equivalence per day, which approximated Rs.748.56 per month per adult equivalence in 2000-2001(GOP Planning Commission 2002) Keeping in view the Government of Pakistan Planning Commission poverty estimates, based on these changes the poverty figures rose from 30.6 percent to 32.1 percent in 2000-01, the last estimates available from the commission . UNDP (2003) reports more severity of poverty in Pakistan.

Pakistan's poverty line, based on Rs.670 per person per month, confirms that about 40 million poor are living below US $1.65 per person per day (PPP). This makes 65% higher poverty in Pakistan than the internationally accepted norm for absolute poverty.

Pakistan's economy has grew over 6 % from 1960 to 1987. The poverty level in the country also declined from 40 percent in 1960 to 17 percent in 1980s. But the economic growth slowed during the 1990s which led to a sharp increase in poverty level in the country.

1.2 Motivation

There is a strong motivation to work on the empirical relationship between economic growth and poverty reduction in Pakistan.

This motivation was encouraged by the Besley and Burgess (2003) study which sets a clear responsibility to individual researchers to play a role in conducting sub-national analysis to identify effective anti poverty policies, to building up bodies of evidence based on various countries, and to tie up studies on particular theoretical accounts. In addition, the study emphasises creation of menu of anti poverty policy options.

The decade of the 1990s seems to have had a remarkable reverse effect on the economy of Pakistan. During the 1990s to 2000, manufacturing and agricultural productivity decreased significantly leading to a high rise in unemployment in the country. During this period, inequality was also increased, and gaps were widened in the living standards of the rural and urban inhabitants of Pakistan .

Faced with twin challenges, the Pakistan government at the end of 1990s was trying to revive growth and reduce poverty. The required rapid economic growth should be equitable in nature and broad-based in its reach. Keeping in view the factors responsible for slowing growth and rising poverty, the Government of Pakistan formulated a comprehensive economic revival strategy in December 1999. Aims of the plan were to reduce poverty through the revival of economic growth, supported by macro economic stabilisation and improved governance.

With a weak institutional framework, Pakistan, with the help of international donors like World Bank, IMF, and Asian Development Bank, undertook a poverty reduction strategy. As a matter of fact, Pakistan had defined the poverty line only recently in 2001-2002, which shows that during the study period (1970-2000), the country was probably not following any targeted plan of poverty reduction. The relationship between economic growth and poverty reduction is an important theoretical and empirical issue. For Pakistan, to the best of our knowledge, no such analysis has been attempted before.

We replicate the Dollar and Kraay(2000) hypothesis that economic growth reduces poverty. The study period was selected from 1970 to 2000. The period includes three different kinds of governments which adopted different economic policies and priorities.

The decade of the 70s was dominated by a democratically elected government with socialistic policies. This government adopted a nationalisation policy which hampered the private sector growth at large. This was followed by an authoritarian regime in the 1980s which attracted a high volume of foreign aid. The decade of the 90s was the most difficult time, in which Pakistan faced a turbulent political era with a higher frequency in change of governments which affected the country's economic performance. Even in these conditions, Pakistan had been doing very well in achieving high economic growth, except in the last decade of the 1990s. Despite the growth, poverty in Pakistan has been on increase in three dimensions: (a) rural areas. (b) provinces, and (c) gender.

Researchers are normally confronted with the data availability issue when working on poor countries. Fortunately the World Bank's data-bank provided all the required data except a few with regard to Pakistan. However they were also easily available form other institutes like State Bank of Pakistan and Federal Bureau of Statistics, Pakistan.

Poverty has been relatively a recent research topic to attract attention of researchers within Pakistan. Studies on poverty gained momentum just by the end of 1990s, with a remarkable intervention and guidelines provided by the international donor organisations like World Bank, UNDP, and Asian Development Bank. It was a difficult task for international organisations (WB, UNDP, etc) to make effective anti poverty intervention in Pakistan without a basic set of indicators on poverty.

Encouraged and funded by the international organisations like WB, UNDP, and other donors, during the 1990s, a few studies were produced on poverty assessment of Pakistan. There are many avenues of research still widely open to individual and institutional researchers on poverty issues. This thesis seeks to seize one of these opportunities.

1.3 Aims and Objectives of the Study

The purpose of this research is mainly to see whether or not growth in Pakistan has been pro-poor and has helped to reduce poverty through the trickle- down effect. Thus, this thesis has a vital scope in the strand of the research work carried out by the individual researchers and other institutions.

Additionally, the study aims to investigate the impact of economic growth and financial liberalization on poverty reduction in Pakistan. We used the financial repression models (McKinnon-Shaw 1973) which aim to provide empirical evidence to measure the success or failure of Pakistan's financial policies in the last three decades and their impact on poverty through increased growth rate.

Pakistan adopted her official poverty line just after 2001. By the end of the lost decade of 1990s, the government of Pakistan was faced with a twin challenge of reviving growth and poverty reduction. Pakistan followed a policy of economic growth to reduce poverty.

Pakistan has recorded a high growth rate of 8.4 % during 2004-05 (Pakistan Economic Survey 2004-5). The focus of our study is directed to investigate three decades (1970-2000) of economic performance and poverty reduction in Pakistan. These three decades provide us with mixed answers that poverty has responded to the increased growth. On the other hand, these decades recorded widening social gaps in different provinces and within provinces. Indeed, urban-rural social gaps and increasing gender gaps have been observed as a permanent feature of Pakistan's economic progress during our study period.

1.4 Organization of the thesis

This thesis is organised as follow; After the introductory chapter, chapter 2 deals with the literature review, in which the concepts of absolute and relative poverty, the measurement of poverty, and findings of main studies are included. Studies on economic growth and poverty reduction experiences in other poor countries are also reviewed in this chapter. Chapter 3 takes a look into historical economic growth trends in important sectors like agriculture and industry, and poverty trends in the three decades under study.

Pakistan's GDP growth is analysed in five decades from 1950 to 2000. Pakistan has recorded a economic growth rate during 1950-60, 3.14 % , which was followed by the 6.77 % of 1960-70. During the decades of 1970-80, 80-90 and 90-2000, the GDP growth was 4.84, 6.11, 4.44, respectively. The GDP growth is also discussed in terms of various five year plans of Pakistan. Further, Pakistan's recent macro economic developments are also analyzed. Trends for Pakistan's economic recovery after 2000 to 2005 show that GDP growth has been picking up progressively during these years. (In year 2000-2001, the GDP growth was targeted at 4 %, which was missed by, and the economy could achieve only 3.6 percent well below the original target).

The year 2002-3 started to recover after a significant time with a slow growth of 5.1 % rate, which continued to rise to 6.4 in 2003-4, and reached 8.4 % in 2004-5 . The impressive recovery was the fastest pace in the last two decades. The recovery of the economy is mainly projected as the stellar performance in manufacturing, agriculture, and the services sector.

Chapter 4 discusses the methodology of empirical tests and issues to be encountered during the empirical tests. We have used co-integration tests to find the best results from our data. The OLS diagnostics have a common problem of non-stationarity in time series data. Thus concepts of stationary and non-stationary are explained first, and then the adjustment mechanism for non-stationarity is also explained. The error correction mechanism is also discussed briefly with appropriate models given in every example.

In chapter 5, we investigate the link between income of the poor (defined as the bottom one-fifth of the income distribution) and overall income (per capita GDP). We put together the data on income of the poor and mean income for Pakistan covering three decades, linking growth of income of the poor to growth in overall income. We use data from Pakistan to investigate some of the hypotheses about the growth-poverty nexus:

1. The general relationship between growth of income of the poor and overall economic growth. Dollar and Kraay (2002) established that there is a positive relationship between economic growth and poverty reduction.

2. We then ask: Does policy-induced growth, through increased financial intermediation, benefit the poor proportionally or more or less than proportionally? Section 3 provides details on the data and our econometric strategy for estimating the relationship between growth of income of the poor and the overall income. In that section, we also indicate how our work relates to the large literature on income distribution and growth.

Income of the poor has a very important link with overall incomes. Evidence indicates that as overall income increases, on average incomes of the poor increase by exactly the same amount. We relate income growth of the poor over a period of 30 years (1970-2000) to overall economic growth of income of the poor over the same period.

Chapter 6 investigates the social gaps in Pakistan. The enquiries into the prevailing social gaps in Pakistan provide an overarching view of the regional composition of poverty. The other dimensions of inter-province and intra-province, with a focus on gender perspectives, are also discussed . The major determinants of poverty are the public goods provision. The relationship among income education, health and other factors is investigated, with regional comparisons (in terms of rural and urban) and provincial levels. While our fifth chapter establishes a significant relationship between economic growth and poverty reduction, the sixth chapter examines whether growth in these three decades has been pro-poor or not. The chapter examines the gaps in social goods provision in three main dimensions, i.e. rural-urban, gender, and intra-provinces. The chapter establishes that Pakistan's priorities have been leaned towards expensive defense at the cost of poverty reduction. The chapter also establishes that in Pakistan there has been more than 30 years of martial law governments, which inevitably undermined the true public representation which often leads to non-developmental resource allocation.

Chapter 7 investigates empirically the impact of financial liberalisation on economic growth in Pakistan. Using the data set from 1970-2000 for Pakistan, we test the McKinnon- Shaw (MS) hypothesis (1973). The MS hypothesis (MS) that money and physical capital are complementary to each other rather than substitutes in LDCs. Investment is saving constrained by savings and orthogonal to changes in real rates of interest. It is availability rather than cost of credit which determines

investment. Higher real rate of interest will achieve higher savings, investment and growth, which will eventually reduce poverty. The chapter is divided in two sections: the first discusses the financial liberalisation hypothesis theoretically, the second deals with the criticism against the financial liberalisation hypothesis. The structuralist school of thought presents one of the opposing views of the financial liberalisation theory. Later we test the MS hypothesis with data from Pakistan. We reject the validity of the MS theory on the basis of co-integration tests. The conclusion of the thesis is presented in the last section, with some policy recommendations for researchers, academics, policy makers Government, and other research institutions.

Chapter 2

Literature Review

Introduction

This chapter presents a review of literature related to the poverty issues. Here we will discuss the theoretical and empirical works on poverty, economic growth, and financial liberalization. First we review the poverty concepts and the differences between the two main school of thoughts on the subject, we also review the poverty trends in Pakistan. It is then followed by a review of the main findings of the Dollar and Kraay (2000) paper on economic growth and poverty reduction which is the central testable hypothesis of our thesis. Next, a review of income distribution and poverty reduction (Kuznet's trickle down hypothesis), along with an analysis of the impact of aid, growth and good governance on poverty reduction is also presented. A further review of financial liberalization and economic growth is presented.

2.1 Different concepts of poverty

The concepts of poverty has been discussed for a long period by development economists. Poverty is defined in absolute and relative terms by two different schools of thought. Sen (1983,1984) argues that poverty should be estimated with a cut-off line that reflects a level below which people are, in some sense 'absolutely impoverished', or a level that reflects (minimum) standards of living common to the countries in particular.

On the other hand, as an advocate of the relative concept of poverty, Townsend, argues that any rigorous conceptualisation of the social determination of need dissolves the idea of 'absolute' need. The necessities of life are not fixed. They are continuously being adapted and augmented, and changes take place in a society and in its products (Townsend 1979).

Sen (1981) stated that there is an irreducible core of absolute deprivation in our idea of poverty; this is reflected in an idea of starvation, malnutrition, and visible hardship, without having a relative picture. Thus the approach of relative deprivation supplements rather than supplants the analysis of poverty in terms of absolute dispossession. In his later works, (1985, 1989) Sen argues that malnutrition is a cause of lack of access to food rather than the shortage of food supply. It is more related to the people's entitlements to a food basket. The famines may happen as result of people's entitlement to food may become short. He argues that to understand poverty and starvation, and the malnutrition associated with it, it is necessary to understand both the ownership pattern and exchange entitlements, which in turn requires an understanding of modes of production and the class structure. In support of his thesis, he puts forward major famine studies such as the Great famine of Bengal in 1943, the Ethiopian famine of 1973-75, the famine in the Sahel region of Africa in the early 1970s, and the Bangladesh famine of 1974. Through these studies, he establishes that the worst famines occurred with no significant fall in food availability per head, but due to the entitlement failure to consume food. The pervasive nature of poverty in Pakistan makes it an absolute rather than a relative picture.

The growing number of poor in the world has been noted by many research organisations. UNCTAD (2002) indicates that absolute poverty is all-pervasive in the poor parts of the world. The report shows that in the African continent during the 1990s, four out of every five people were living on less then $2 a day, and half of the total population was living on a $1 a day. The same report suggests that the number of population living on less than one $ 1 a day has doubled in last 30 years. From 1960 to 1990 the population living under $1 a day increased from 138 million to 307 million, and the report further suggests that over the same period the daily consumption of extremely poor also fell from 66 % to 59 % (UNCTAD 2002).

A significant body of literature indicates that poverty is increasing in many LDCs. The reason failure to overcome the growing extent of poverty in such countries is for mainly because of their characteristics. These countries are mainly single commodity-dependent, stagnant with short spurts of growth followed by an economic collapse triggered by natural disasters. Streeten (1994) focuses on causes of poverty. He elucidates that the poor may be identified by their social and economic class, people who lack physical assets or have assets of only low value – the landless worker, the proletariat, the small peasant who is the owner of the dry and un-irrigated poor land, or by residence the rural poor, the urban poor, or by their lack of human capital. People with low educational attainments may be stuck in low paying jobs without access to retraining or by ethnic group. All these situations are explained in terms of exclusion of individuals from the system.

The WDR (1990) considers that strengthening the participation of the poor in decision-making is a key factor to reduce poverty. Provision of protection against shocks which could change living conditions abruptly and push individuals in to poverty, and also contribute to creating opportunities to escape from poverty. Thus WDR (1990) attaches a great importance to the phenomenon of exclusion. Exclusion is a phenomenon related to a society and a historic period, and to individuals or groups. Going back to Sen's concepts of relative deprivation in terms of income (for example, the inability to buy certain commodities) can become absolute deprivation in terms of capabilities, i.e. it can lead to the

impossibility of certain social functioning, for example to appear in public without any shame, (Sen,1984).

Benrjee and Newman (1994) in a behavioural study of stylised facts about the poor across economies show a contrasting economic behaviour between rich and poor, and they also use the same framework to show how poverty can have significant aggregate effects. Interestingly, their stylised facts obtained across economies show that the poor in America behave more or less like the poor in India. The question arises why the poor in America do not behave like those of middle class in India. The article concludes on the basis of the same behavioural traits the poor in America and the poor in India, suggest more relative rather than absolute poverty.

2.2 Poverty trends in Pakistan

After the theoretical debates on the issues related to the concept of poverty, the most important issue to be dealt with was its measurement. Different schools of thought have adopted different measurement methods.

Organizations like the World Bank (WB) and United Nations Development Programme (UNDP), have not only been producing world development reports but also country specific reports on poverty.

World Development Report (WDR) (1990) was a landmark study in this regard. The importance of WDR (1990) is that it provides the basic theoretical and empirical framework on the pervasive nature of world poverty. On other hand, the UNDP has been providing us Human Development Reports.

The WB approach is widely considered as a welfarist one. This approach relates well-being as the function of income.

The WB in its WDR heavily emphasises a strategy to tackle poverty through policies to raise the income of the poor. Thus, on the issue of poverty, WB gives importance to raising incomes of the poor as an objective rather than as a means.

On the other hand, UNDP, in its human development reports (HDRs), insists on the application of the human development approach. Overall, there is a broad-based consensus between WDRs and HDRs that reduction of poverty in its income and (other) human development manifestations is the overarching

objective of development. There is also a consensus that achieving this objective requires progress on broad based growth, basic social services, and social safety nets. Regarding economic growth, there is a wide understanding that it is best achieved in a market economy (WDR 1991 Ch.2).

The HDR insists on good governance issues with a focus on human rights and other factors which may help to create a favourable environment for economic progress.

The WDR emphasises more tough choices in macro-economic and sectoral growth policies to achieve higher economic growth and better social indicators. The two institutions differ on the issue of whether the adjustment programmes by the WB and other organisations pay sufficient attention to poverty reduction in general.

Generally, the WDRs emphasises the income aspects of poverty reduction more, as means and ends, while the HDRs emphasise more the non-income aspects of development. In order to understand poverty on a broad basis, HDR's view has greater scope to understand the all pervasive nature of poverty in LDCs.

Aturupane, Glewwe and Isenman (1994) provide us with empirical work, testing data from 1960 to 1990 for a group of countries, and show that even when some countries have done well on the economic growth side, they could not achieve an impressive increase on social indicators.

With a comparison between Sri Lanka and Pakistan, the study established that even when both countries have grown at similar pace (2.6 % and 2.9 % GDP growth, respectively) from 1960 to 1990, but both countries show a different trend in their social indicators. The study shows that between the two countries, Sri Lanka has an admirable record on social indicators relative to Pakistan, in infant mortality, primary education, and population growth. Taking into account the rapid economic growth of Pakistan from 1960 to 1990 Pakistan's primary school enrolment was substantially worse than Sri Lanka. Pakistan's weak record on social indicators is now widely recognised, both by those who are primarily concerned with growth, and those who are concerned about human development objectives. (with reference to the two approaches by UNDP and WR, the concluding remarks of this article insist on a general agreement between WDR's and HDR's). Despite differences between two, their objectives leads to similar operational conclusions. The author recommends to the WB to alter its approach,

to give more importance to the non-income objectives, particularly those measured by social indicators. Regression results obtained by the authors establish that income growth is important, but is not regarded as the primary determinant of improvement in social indicators.

Blackburn, M (1994) compares poverty measures based on the income data he considers comparable across countries. His criticises the LIS (Luxembourg income study), income study, that since the living conditions of those at the low end of income distribution are not fully reflected in the LIS measure of disposable income, these poverty measures may be misleading. Blackburn recommends further research on the issue before drawing conclusions about the nature of such biases. However his study clearly mentions high sensitivity of poverty comparisons across industrialised nations in order to decide whether an absolute or relative concept of poverty is appropriate. According to Morduch (1994), vulnerability and its impact on household income is a matter of concern for development economists. Vulnerability is often seen as a component of the risk, but slightly different from risk itself. Vulnerability to income shocks may be intrinsically detrimental to the poverty of a household. Just as deprivation in health and nutrition may be considered as part of an expanded poverty concept, one could also consider a measure of lack of access to consumption smoothing mechanisms as a reflection of poverty. Practically, it is difficult to make it precise and operational. One avenue involves measuring poverty in terms of both the mean and variance of consumption over time. Another possibility is to measure poverty in terms of certainty-equivalent consumption over time. Considering risk aversion, poor households, are even worse off. They not only have lower incomes than richer households but their consumption can vary over time. Thus concluding that vulnerability does not just result from poverty; it can also enforce the income processes which lead to poverty, and further diminish the expected welfare of the poor.

Defining chronic and transitory concepts of poverty, Blackburn explains that if a household is poor in every period in the sample, it could be termed as chronically, poor otherwise it is transitory poor. Transitory poverty is often given by a failure to find protection against stochastic elements in the economic environment. Consider that x is the households permanent income, c is current consumption and z is the

poverty line, then the stochastically poor will be those for whom $c < z < x$; its poverty arises only because it is not possible for such a household to borrow against its future income. This kind of poverty is a bit different from the poverty which occurs as a result of the household head falling ill.

Most of the studies that estimated poverty trends in Pakistan have used a head count measure under an arbitrarily defined poverty line. It therefore becomes difficult to ascertain the trends in poverty. Amjad and Kemal (1997) and Ali and Tahir (1999) have developed consistent time series on rural, and urban, and total poverty, Amjad and Kemal estimated the trends by using the data set of 8 surveys (HIES), while Ali and Tahir (1999) used 14 surveys, from 1963-64 to 1993-1994. These two studies seem not to define a new poverty threshold, rather they used the income poverty line defined by Malik (1988) as a bench mark, and adjusted according to inflation. Interestingly, for the period 1963-64 to 1987-88, the results of these two studies confirm the outcomes of previous studies based on different methodologies and poverty lines.

For this period, three main conclusions are drawn:

1. Poverty levels increased between 1963-64 and 1969-70 . The increase in poverty level is confirmed on overall as well as in rural areas.
2. The next decade, 1969/70-1979, witnessed a decline in poverty in both rural and urban areas.
3. This declining trend in poverty continued till 1987-88.

The major differences in the results as regards in trends in poverty are between 1987-88 and 1993-1994. For this period, some other studies have estimated the trends in poverty. Gazdar (1994) shows a decline in poverty overall and in rural areas, but a slight increase in urban poverty. Jafri (1995) has also estimated the levels of poverty for six years i.e 1986-87,1987-88,1988-89,1990-1991,1992-93 and 1993-1994, by using two methods: Caloric intake and basic needs. He shows that the declining trend in food poverty in the1980s continued till the early 1990s, with a slight increase in poverty between 1992-93 and 1993-94. In contrast, Malik (1994) shows a rise in poverty between 1987-88 and 1990-91, overall as well as in urban and rural comparisons. Amjad and Kemal (1997) also show a 5 % increase in poverty between 1987-88 and 1992-93 over all as well as in rural areas. In the case

of urban areas, according to their estimates, it first increased from 15 % in 1987-88 to about 19 % in 1990-91. In 1992-93, it declined to a level of 15.5 %.

Ali and Tahir (1999) also show an increase in poverty between 1987-88 and 1992-93, overall as well as for rural and urban areas. According to their estimates, the level of overall urban poverty declined slightly between 1992-93 and 1993-94, but it increased in rural areas. It is evident from the review of the studies which have estimated poverty for the 1990s, that no consensus is found among the economists regarding the poverty trends after 1987-88 in Pakistan. Quireshi and Arif (1999) have estimated poverty for two periods, 1993-94 and 1998-99, using the same poverty line as used by Jafri (1999), but a different methodology. According to Jafri, the incidence of food poverty in 1993-94 was 21%, However, Qureshi and Arif show a rather significant difference in the incidence of food poverty. According to their results in 1993-94, 24 % of households were below the food poverty line of Pakistan, and the incidence of poverty increased by about 33 % in 1998-99.

The incidence of food poverty was higher in rural areas as much as 35 % as compared to urban areas 26 percent. In 1998-99, the WB study (2002) highlights the overall poverty level in Pakistan as highest in the western province of Balochistan, followed by Sindh, Punjab, and NWFP. UNDP-HDI (2003) shows the highest concentration of rural poverty in Sindh followed by Balochistan, NWFP, and Punjab, Interestingly UNDP-HDI (2003) shows the highest urban living standard in the same southern province of Sindh followed by Punjab, NWFP and Balochistan, respectively.

2.3 Economic growth and poverty reduction

There is an intense debate over the extent to which the poor benefit from economic growth. There are two clear opposing views on this issue. At one end, there are economists who argue that potential benefits of economic growth for the poor are undermined or offset entirely by sharp increases in inequality that accompany growth. At the other end is the argument that the liberal economic policies such as monetary and fiscal stability and free markets raise incomes of everyone and the

poor in a changing society, proportionately. Dollar & Kraay (2000, 2002) examine empirically the relationship between growth in average incomes of the poor and growth of overall incomes, using a large sample of developed and developing countries data for the last four decades.

Having established a strong relationship between income of the poor and average income, a set of institutional policies and institutions are regarded as important to reduce poverty including openness to international trade, macro-economic stability and moderate size of Government. Financial development and strong property rights are also identified as important players to combat poverty. However, their empirical work finds little evidence that either average incomes, or a wide variety of policy and other variables are significantly associated with the income share of the poorest quintile. Therefore the null hypothesis is not rejected that incomes of the poor rise equiproportionately with average incomes. The study concludes that growth is not everything required for the improvement of the poor in society, so the distributional effects of the policies cannot be ignored.

It is mentioned that use of cross-country data on income distribution contains substantial measurement error. Therefore the possibility of a failure to uncover systematic effects of average incomes and policy on the income share of the poorest quintile could be a consequence of measurement error.

The relationship between inequality and growth not captured by the empirical model is not ruled out by the Dollar and Kraay. However, the study concludes that policies that raise average incomes are likely to be central to the successful poverty reduction strategies, and that existing cross country evidence does not provide a great deal of guidance on the issue to what mix of growth-oriented policies might especially benefit the poorest in society.

The term pro-poor has emerged relatively recently in economic development spheres. Pro-poor growth has been broadly defined as growth that leads to significant reduction in poverty. The relative definition of pro-poor growth requires increase in the income share of poor. It can be said that growth is pro-poor if inequality falls. Pro poor growth under this definition would be primarily inequality

reducing growth. Thus to attempt pro-poor growth under this definition would favour an out come characterized by average income growth of 2 percent where the income of poor households grew by 3 percent, over an out come, where an average growth was 6 percent, but the incomes of the poor households grew by only 4 percent. While the distributional pattern favours poor households in the first scenario, both poor and non poor households are better off in the second. So the relative definition might favour interventions that reduce inequality regardless of their impact on growth. While the reduction in inequality may be welcomed in principle. The second definition of pro poor growth focuses on accelerating the rate of income growth of the poor and thus the rate of poverty reduction (Ravallion and Chen 2003).

Empirical evidence shows that growth is the primary driver of the rate of pro-poor growth, but changes in inequality can either enhance or reduce the pro-poor growth rate. Accelerating the rate of pro-poor growth will require not only faster growth but also the efforts to enhance the capabilities of poor households to take advantage of opportunities generated by growth (WB 2005).

A recent study by World bank (2005) on pro-poor growth in 1990's shows promising results. This study is based on survey data of 14 less developed countries i.e. Bangladesh, Bolivia, Brazil, Burkina Faso, El Salvador, Ghana, India, Indonesia, Romania, Senegal, Tunisia, Uganda Vietnam and Zambia. The study results show that poverty in these countries tended to fall, with the median annual rate of reduction equal to 2.6 percent a year. (Table no.2.1). Vietnam, Uganda and El Salvador show a negative growth while in Romania where mean incomes declined for the overall population, per capita growth stagnated.

Table.2.1. GDP Growth and Poverty head count ratio trends, for 14 countries

Country	Survey year 1	Survey Year 2	Annual GDP Growth rate %	Annual change in head count poverty %	Annual Change in Gini Coefficeint %
Bangladesh	1992	2000	3.09	-2.78	1.47
Bolivia	1989	2002	1.17	-1.03	-0.06
Brazil	1993	2001	1.47	-2.27	-0.23
Burkina Faso	1994	2003	2.25	-1.80	-0.48
El Salvador	1991	2000	2.54	-5.39	0.30
Ghana	1992	1999	1.63	-3.85	0.56
India	1994	2000	4.18	-3.84	0.56
Indonesia	1996	2002	-0.81	0.67	-0.94
Romania	1996	2002	0.20	6.05	-1.23
Senagal	1994	2001	2.47	-2.46	0.68
Tunisia	1990	2000	3.03	-3.76	0.20
Uganda	1992	2002	3.34	-3.90	1.78
Vietnam	1993	2002	5.70	-7.76	2.35
Zambia	1991	1998	-2.26	1.29	-2.65
Median Sample	-	-	2.36	-2.62	0.25

Source; World bank 2005

While every region of the world is included in the sample, Sub-sharan Africa has five countries reflecting its challenges to accelerate the growth of poor peoples income. All the case countries included in study have different economic structures, with different size of GDP per capita income (GDP per capita in PPP) level. Zambia with lowest PPP $ 883, in 2003 as compared to Brazil with highest PPP $ 7,767. Half of these 14 countries fall in low income countries, and the other half a mix of middle and upper low income countries.

The study clearly established a positive relationship between growth and poverty reduction in many countries. It also reveals that experiences of poverty reduction are different from country to country. Per capita GDP growth was by far the strongest in Vietnam, at 5.7 percent a year, moderate in Burkina Faso at 2.25 percent a year and negative in Zambia where it fell by 2.26 percent per year. The positive relationship between growth and poverty reduction also held broadly for all the 14 countries. There is a positive and significant correlation between changes in poverty and changes in growth (differences in log), with a regression

co-efficient of -1.7. The mean growth rate of the consumption of the poor provides a more precise indicator of their wellbeing of poor. The regression coefficient between the lagged changes in the rate of pro-poor growth and mean growth rate in consumption is 0.71.

Ravallion and Chen (2004) review the economic growth with relation to poverty in China. China's economic growth in the last 25 years has transformed China into one of the most dynamic economies of the world. China had a high incidence of poverty in the world in 1980s.The increasing growth could be associated with the decreasing poverty in China today. A poverty line which could reflect better prevailing consumption conditions in China. The poverty lines are designed to have a fixed real value over time, and between urban and rural areas, so they can be interpreted as absolute rather than relative poverty line which tend to rise with overall rise in living standards. The region-specific food bundles are used on the basis of rural urban separately. The food bundle is estimated to give 2100 calories per person per day, with 75 % calories from food grains. The poverty lines adapted for their study was 850 Yuan ($102) for rural areas, and 1200 Yuan ($145) a year for urban areas (both at 2002 prices). Using these measures, national poverty rate in China is estimated from 1981-2001. Over this 20 year period, the proportion of population living in poverty fell from 53 % to 8 %. This is a huge progress made in the last 20 years.

While absolute poverty has fallen, income inequality has been rising in China. The rising inequality has been observed in some provinces and within some time gaps. The GINI index of income inequality rose from 28 % in 1981 to 39 % in 2001. Like many developing countries, living standards tend to be lower in rural areas of China compared to the urban areas. In China, the mean income is about 70 % higher in urban areas. The balanced economic growth is one of the relevant issues in developing economies, and China is no exception to that. Poverty and inequality are related to the pattern of growth. The poverty reduction in China during the 1980s and 1990s was the outcome of economic growth, mainly in rural sectors, and remittances from urban areas. Growth in the primary sector (agriculture sector) was the primary source of poverty reduction in rural areas compared to the secondary or tertiary sectors. Thus the sectoral imbalances in agriculture, with falling GDP share, had an impact on aggregate poverty reduction rate. If the same aggregate growth had occurred in a balanced way across these three sectors, then

it would have taken 10 years to bring the poverty level down to 8 %, rather than 20 years.

The Chinese growth experience also had a strong regional dimension. An uneven growth is indicated, with some provinces having more rapid reduction in poverty compared to others. Coastal area's poverty reduction rate was 17 %, compared to 8 % in mainland provinces of China.

It is argued that the pattern of growth also influenced the evolution of inequality. Growth in the agriculture sector, particularly, helps to bring down inequality. The rural economic growth not only reduces inequality in rural areas, but also reduces the inequality between rural and urban areas.

Ghatak, A. (1996) enquires about the growth experience in India. All growth theories agree that emergence of a surplus of total output over total consumption are the fundamentals and a productive re-investment of this surplus. Despite efforts regarding the domestic savings mobilisation the Indian experience suggests the steep rise in savings and investment ratio has not been matched by economic growth. The Year, 1979-80 was characterised as high saving and investment ratio with a negative growth rate and the period for Indian economy, and the period of 1951-1985 also did not show any impressive over all rate of growth despite substantial rises in savings and investment. During 1950-51 to 1979-80, the investment ratio rise to 6.8% 16.6% at current and from 9.3 to 14.7 at 1970-71 prices. The miss-match between investment and growth raises many questions about the single factor explanation of economic growth. An explanation of the slow rate of growth is the lower productivity. The lower rate of productivity can be related to the low investment and lack of nutrition in LDCs. The basic need approach to economic growth and development propound that increase in consumption in LDCs may raise rate of growth by increasing the level of nutrition, efficiency and labour productivity (Ghatak, S. 1986)

Ghatak, A.(1996) attempts a time series analysis of productivity growth and real per capita consumption for India, based on Marshall's distinction between 'necessary' and non-essential consumption which is regarded as productive consumption, necessary, in order to maintain worker's productive efficiency. The data range from 1919 to 1986, contain two significant structural breaks which Indian economy has

gone through, the Indian freedom from British Colonial rule and launching the Indian Five year plans.

The co-integration results for long-run time series data for India consistently support the Marshallian hypothesis that raising real per capita consumption can raise the rate of growth of productivity. In short run, the contribution of real per capita consumption can explain a high percentage of variation in the growth rate of productivity proved by a high valued R^2 in Error Correction Models (ECM). In long-run the contribution of real per capita consumption is highly significant but the percentage variation of growth rate explained by variation of consumption is small. The negative influences on productivity growth is explained by slow growth in industrial sector. Lack of international competitiveness, regulatory system not conducive to growth, lack of physical infrastructure are also responsible for negative productivity growth. The results of this research suggest that raising real per-capita necessary consumption is a pre-condition for achieving a higher rate of growth.

2.4 Income distribution and poverty reduction (Trickle-down hypothesis)

Distribution of income is one of the important dimensions of development economics today. Simon Kuznets (1955) occupies a very important place in identifying the distributional pattern of development. His best known findings are related to capital accumulation and income distribution. Kuznet was the first economist who established empirically that during modern economic growth there was a significant rise in the proportion of savings and investment in national incomes. Analysing long-term trends in capital formation in a number of countries through time, from the historical experience of the developed countries he concluded that at low levels of per capita income, economic growth tends to increase inequality in income distribution, and at the intermediate and higher levels of per capita income, economic growth reduces inequality. This leads to the so-called U-shaped hypothesis of income distribution, i.e. the income share of the poorest households decline, then rise with increasing per capita GDP. Explanation of why inequality seems first to rise, and then in a second stage it improves, is open to academic debate. Economists like Todaro associate their reasons to the structural changes within the economy. Although long-run time series data for the

developed countries do confirm the Kuznets hypothesis, studies in the LDCs produce conflicting results (Todaro 1997 P.160-161), for which part of the problem is to be blamed on methodological shortfalls related to the availability of time series data from LDCs. Unavailability of time series data leaves economists with a limited choice of cross-sectional data. Researchers test a longitudinal phenomenon with cross-sectional data, observing many countries at one point in time rather than one country over a long period of time. Drawing conclusions from cross sectional data for a time-series phenomenon is widely believed to be fraught, and could provide misleading results. Some critics noted that studies in support of the Kuznets curve can sometimes be reversed simply by eliminating one or two outlier countries from the statistical sample (Todaro 1997).

Disregarding the methodological debate, some economists believe that Kuznet's proposition that inequality first rises and then declines is inevitable, and this is supported by many case studies, such as Taiwan, South Korea, China, Costa Rica, Sri Lanka and Hong Kong which demonstrate that higher income levels can be accompanied by falling and not rising inequality. And that it all depends on the variable nature of the development process. Todaro (1997) examines the relationship between inequality and levels of per capita income. The scatter diagram offers little evidence to confirm any obvious relationship between GNP growth and the distribution of income, which high growth rates do not necessarily worsen. Countries like Taiwan, Iran and South Korea experienced relatively high rates of GNP growth and have shown improved and least unchanged distribution of income, and countries like Mexico and Panama have grown faster, almost on the same path, but their income distribution has shown deterioration signs. However, there is no relationship between low GNP growth and improved income distribution.

Based on further evidence from the 43 developing countries the author concludes that there is no evidence of automatic trickle-down of the benefits of economic growth to the very poor segments of the society; on the contrary growth process of these 43 LDCs seems to be typically led to the "Trickle up" in favour of small middle class and the very rich segment of the society. Therefore it is "economic

structure" rather than the level or rate of economic growth, which determines the pattern of income distribution.

2.5 Economic Reforms and poverty reduction

Osmani, (1994) reviews the impact of economic liberalisation on Sri Lanka.

In 1977, with a newly elected government led by the United National Party (UNP), Sri Lanka embarked on a reforms programme. Like Pakistan, Sri Lanka also pursued a policy of an import substituting industrialisation programme. A large proportion of national products were allocated to subsidise food, health, education and agricultural inputs like fertiliser and producer price of rice. The economy was doing well but in the 1960s, following decade faced a severe economic crisis which was inevitable, due to a serious decline in trade of Sri Lanka's major export commodities, tea and rubber. Shortage of foreign currency resulted in a balance of payments crisis, And in this economic crisis, it became impossible to guarantee the subsidies. To deal with the crisis, with the help of IMF and World Bank, the UNP government instituted a package of policy reforms. The major elements of these were:

1. Liberalisation of the economy (i.e. removal of many impediments to the operation of free-market forces in trade, industry , and finance)
2. Reduction in consumer subsidy (particularly food items).
3. Huge public investment plan financed largely by generous donors (IMF and World Bank).

The study is basically devoted to the post-reform effects on the poor strata of Sri Lanka. The most likely affect on poor was due to reduction on food subdidy component. The reduction in food subsidy came in two stages, the first was to give up the subsidy on cheap rations for the well to do segment of society, which was guaranteed to the entire population. The subsidy was not withdrawn from the poorest of the society. In second stage these reforms hit food rationing to the poor, replacing rations with food stamps. The value of stamps was fixed in nominal terms. Inflation soon wiped out the real value of such stamps which was reduced to a fraction of their value.

Sri Lanka succeeded to improve its growth. The rate of growth of GNP accelerated from 3.2 % in the 1950 to 1977 period, to 4.3 % during 1978 to 1985, and per capita GNP growth rose even more impressively from 0.9 % to 3.4% . Given this

impressive growth, it is appropriate to draw a conclusion that the reforms of 1977 out-weighed any adverse effects of reduced subsidies, and thereby enabled Sri Lanka to continue with the nutritional standards. Sri Lanka had a remarkable success in reducing pre- mature mortality which continued in the post reform period as well. According to various nutritional surveys, the rate of under age five mortality has fell continuously from 58.7 per thousand during 1972-77, to 49.3 per thousand during 1977 to 1981, which continued further to 34.6 per thousand during 1982 to 1987.

For the purpose of analytical convenience, the welfare effects of reforms are grouped in two categories, i.e. direct and indirect effects.

The direct effect of reforms was to give up the food subsidy which resulted in the diminished entitlement of the poor to food. The indirect effect of these reforms is attributed to the growth rate which did not include the poor among its beneficiaries. The Sri Lankan growth experience was clearly the kind of growth which was not meant to benefit the poor, It was accompanied with major characteristics of un-equalising distributional patterns. The Gini co-efficient of per capita income distributed shows an increase from o.33 in 1969-70 to 0.38 in 1985-86. At the same time, the income share of the top 20% of population increased from 42% to 55% , while the income share of bottom 40 percent of the population had fallen from 21% in 1969-70 to 14 % in 1985-86. The article describes three different sources of inequality. First, the composition of income shifted in favour of profit income which happened to be distributed almost twice as unequally as wage income.

The article concludes that despite the cutbacks in food subsidy that accompanied the economic reforms of 1978, the Sri Lankan people have experienced a secular improvement in their nutritional standards, even though their vulnerability to short-term stress may have remained the same. A possible hypothesis to explain this secular improvement is that, a growth spurt unleashed by economic reforms has played its part, but the author identifies two problems with this possible explanation. First, the growth spurt that did occur owed rather little to economic reforms, secondly, the growth process was of a kind that actually bypassed the bulk of the poor, as one can establish from the evidence on distribution, wages, employment, consumption, and poverty indicators.

A more likely explanation lies in the fact that, while cutting down food subsidies, the Sri Lankan government actually raised the level of expenditure on education and health after 1977. Average annual per capita health expenditure rose in real terms from Rs13.16 in the 1973 to 1977 period to Rs 15.48 in the 1978-1982 period, while education expenditure rose from Rs 27.04 to Rs 30.44 . These are significant facts to understand that the context of the withdrawn subsidies by the government, the nutritional capabilities were still maintained. These nutritional capabilities are not only associated to the food consumption, but provision of health services also play an important role. Ability of population to use these services is again related to the educational level of the poor. Osmani asserts that there are good reasons to believe that the exceptionally high levels of nutritional standards attained by the Sri Lankan's in the pre-reform period owed rather little to food subsidies, which contributed only a small fraction of the calories consumed even by the poorest of the people. This provides ample reason to establish that services provided by the Sri Lankan government in the non food spheres, such as health and education, plays a more important role compared to the direct subsidies. This is partially confirmed by the regression results which show that, in the two decades following 1960, infant mortality in Sri Lanka was hardly affected by government expenditure on food subsidy and education, but was significantly affected by expenditure on health. It is therefore plausible to argue that much of Sri Lanka's ability to sustain progress in their nutritional attainments in the post-reform era can be associated to its decision not to cut down government expenditure on health services in the process of reforms. The Sri Lankan experience has a clear message to other countries embarking on the path of economic reform . The pro-poor economic reforms need not to cut expenditure on provision of essential public goods like health and education.

Butt, Qazi and Nadeem (1996) investigate the relationship between expansion in government expenditure and economic growth in Pakistan. The basic hypotheses of Wagner's Law are tested to find out the nature of their relationship for Pakistan. According to Wagner's law, with expansion of economic development, the role of government expands, thus public expenditure also expands. The study seeks to determine whether there is a long-run relationship between the growth of government activity and the level of economic growth, based on time series data

from 1961 to 1995, both the relative government expenditure and national income show an increasing growth in Pakistan. The researchers use co-integration tests to verify or reject the Wagner's hypotheses. In order to accomplish the verification of Wagner's law of the public sector, they are convinced that an appropriate test should be based on the growth of government civilian expenditure relative to GDP and its relationship to per capita national output over time. Conventionally, researchers working on time series data face stationary problems, and the non-stationary data may arise in so- called spurious results, which generate inconsistent estimates of the parameters, unless the variables under consideration are integrated. One way to avoid this problem is to take the first differences before running the regression, which is only a part of the solution. Based on the Engle and Granger two-step framework, in the first stage, it is necessary to establish that the variables series under consideration are integrated of the same order, because series integrated with different order can not be co-integrated. In order to test the level of integration of the government spending share (GE/GDP), and real income per capita (RGDP/POP), the ADF and DF tests were applied to the levels and first differences of these two series for the period 1961 to 1965. Both series are in logs. The null hypotheses for these tests are that each of these series under consideration has a unit root against the alternative hypotheses that a unit root is less than one. The reported results of the integration in Table 2.2 seem to suggest that the 'levels' of both the series are characterised by unit root non-stationary, I(1), process. As indicated by ADF statistics, in no case the null hypotheses that the variable series follow, I(1) process could be easily rejected at the 5 percent significance level, as indicated by the relevant DF test, implying the 'first-differences' of the variables series do not have unit roots, and are thus stationary.

Econometric estimations

$$ln\left(\frac{GE}{GDP}\right)=ln_0+\beta_1 ln\left(\frac{RGDP}{pop}\right)+Z_t \qquad (1)$$

Given that the government spending share and real income per capita series are all I(1) process, following the two- step approach to test whether there is any co-integration (long-run) relationship among these variable series using standard tests of co-integration. The co-integration results of (GE/GDP) and In(RGDP/POP) are reported in table 2.2.

After estimating equation (1) by the OLS method, two sets of co-integration , the CRDW and ADF test, based on the residuals generated from equation (1) are applied to reject the null hypotheses of non-stationarity of the error-term , z_t or the acceptance of co-integration among the concerned variables series. In general, both CRDW and ADF statistics co-integration can not be found among the government spending share, (ln(GD/GDP)),and real income per capita. (ln (RGDP/POP)), since null hypotheses of non-stationarity of the residual in equation (1) can not be rejected, significantly. The observed CRDW values do not exceed the respective critical values at the 1 percent and 5 percent significance levels, and the absolute value of the calculated t-values smaller than the critical ADF value indicated that the null hypotheses of no co-integration can not be rejected. This implies, that the co-integrating vectors among the concerned variables series do not exist, and suggests no evidence of a stable long-run relationship, between government spending share and real per capita income. In addition the fact that the ratio income elasticity, though statistically significant, but with wrong sign also provide adequate empirical support for the belief that Wagner's Law, i.e. the proposition that Government spending as a share of national income tends to grow in the course of economic development, is not valid for Pakistan.

Table 2.2 ADF Test for unit root in the two series

Series	Unit root in level		Unit root in First	
	Model-A	Model-B	Model-A	Model-B
In (GE/GDP) log of share of government expenditure in GDP				
$t(\beta)$ β	-0.204	-0.382	-0.748	-0.759
$t(\beta)$	-1.785	-2.519	-4.557	-4.466
P	2	2	0	0
T	32	32	33	33
SEE	0.067	0.067	0.074	0.075
In (RGDP/POP) Log of real GDP per capita				
β	-0.023	-0.301	-0.903	-0.961
$t(\beta)$	-1.372	-2.100	-05.011	-5.269
P	2	2	0	0
T	32	32	33	33
SEE	0.023	0.021	0.023	0.22

Notes: $t(\beta)$ is the ratio of OLS estimates of β to its respective standard error. P is the number of lagged dependent variables used in the auto-regressive to ensure the residual terms, are white noise. The critical value for $t(\beta)$ at, respectively, 1% and 5%, are -3.58 and -293 for N= 50. If the calculated t-ratio is less then the critical value, then the series is said to be stationary.

Model-A: $$\Delta x_t = t(\beta)x_{t-1} + \sum_{j=1}^{p} \lambda_j \Delta x_{t-j} + \varepsilon_t$$

Model-B: $$\Delta x_t = \mu + \gamma T + \beta x_{t-1} + \sum_{j=1}^{p} \lambda_j \Delta x_{t-j} + \varepsilon_t$$

Model-C: $$\Delta X_t = \beta X_{t-1} + \sum_{j=1}^{p} \lambda_j \Delta X_{t-j} + \varepsilon_t$$

Table .2.3 Test for co-integration between two series

Co-integration Regression: In(GE/GDP)= $\alpha_0 + \alpha_1$ In (RGDP/POP)+ z_t

ADF Regression: $\Delta z_t = \alpha + \beta_0 Z_{t-1} + \sum_{j=1}^{p} \beta j \Delta z_{t-j} + \varepsilon_t$

	OLS Estimates	t-statistics
1. Co-integration Regression:		
$\alpha 1$	-0.261	4.020
Constant	-3.681	-7.059
R^2	0.33	
CDRW	0.57	
F-Test	16.16	
N	35	
2. ADF Regression:		
β^0	-0.376	-2.672
P	2	
T	32	
SEE	0.063	
3. Co-integration Status:	No	
Notes: 5% critical values for CRDW and ADF are as follow: CRDW 0.78; ADF -3.29, for N=50. Absolute value of calculated t-value smaller than critical value indicates acceptance of null hypotheses of no-co integration.		

The major finding of this research may be summarised as follows:

1. During the period 1967-1995, it was demonstrated that both variables series employed in this study are integrated of order one, thereby the usual assumptions for such time series analyses are violated.

The evidence from the co-integration test suggests that these two variables are not co-integrated, implying that estimation of a standard regression relationship with the levels of these variables would give biased estimates. Furthermore, even though in Pakistan, during 1961-1995, both government spending share and real income per capita had risen significantly, but a positive long-run relationship can not be established, as being envisaged by Wagner's' Law. Therefore any future empirical

work on this issue should include more variables which influence the government spending share. This paper does not address the causality.

2.6 AID and Economic growth

Two Gap Model

The two gap model was formulated by Ronald McKinnon (1973). The two gap models are based on the Keynesian model of economic growth which propounds that the level of planned savings equal to planned investment is the necessary condition for income equilibrium.

In this model, when domestic savings are inadequate to finance the desired level of investment, then this domestic gap becomes the binding constraint on the rate of economic growth.

In the McKinnon model imports include consumers and producers and durable goods necessary to achieve the desired level of income. The target level of income must be financed with foreign exchange earnings, either from exports or by the foreign capital inflows. If these are less than the amount required to finance imports, than this foreign exchange gap becomes the binding constraint on economic growth.

If the foreign exchange earnings are more than sufficient to finance imports, then the domestic savings gap becomes the binding constraint. In that case, the actual level of imports will be determined by the level of income consistent with domestic savings and investment. Conversely, if foreign exchange earnings are inadequate to finance imports, then the foreign exchange gap becomes the binding constraint. In that case, the level of domestic savings and investment will be determined by the level of income consistent with imports (William Easterly 2003) Using two gap model by Chenery and Strout (1966), explain that the first gap is between amount of investment necessary to attain a certain rate of growth and the available domestic savings. The second gap is the one between import requirements between a given level of production and foreign exchange earnings. At any moment in time, one gap is binding and foreign aid fills that gap.

Easterly (2003) concentrates on the investment-savings gap. Chenery and Strout (1966) build their model on basic features of Lewis (1954) and W.W.Rostow (1960). Easterly uses a simple model in which economic growth depends on investment as a share of GDP, adjusted by a factor that reveals whether investment is of high or poor quality. The amount of investment is the sum of domestic savings and foreign aid.

The model can be written as:

$$g = (I/Y)/\mu$$

$$I/Y = A/Y + S/Y$$

where I is required investment, Y is output , g is targeted GDP growth, A is aid, and S is domestic savings.

The parameter μ is known as incremental capital output ratio (ICOR), which is usually thought to be in the range of 2 and 5 , high ICOR ratio is often taken as poor quality of investment. ICOR gives the actual level of required additional capital to yield additional output. When both the units of additional capital and units of additional output are divided by the initial output, we can get the investment ratio to GDP and growth, respectively. The investment rate is 24 % and the ICOR is 4, then the economy is expected to grow at 6 percent. However the more efficient use of ICOR of 3, could take only 18 % rate of investment to achieve 6 % growth.

Foreign aid as tool of development was used after the World War II to develop the devastated war affected European countries. Following the successful interventions in European countries, the AID was seen as an effective tool for development and poverty reduction. Pakistan is one of the poor countries which has to rely heavily on foreign aid. The purpose of foreign aid to Pakistan has been to alleviate poverty by increasing social sector spending. The aid was basically part of the drive to boost the economic growth of country, which in turn could have helped to sustain a growth process which was meant to reduce country's dependence on foreign aid. The conditions attached to the aid packages have been widely criticised by economists with references to developing countries and particularly in Pakistan (Akbar 1995, Stiglitz 2002).

Akbar (1995) enquires into the nature of the relationship between aid and development in Pakistan from 1972 to 1990. Looking into the flow of foreign aid, his article gives an account that aggregate external debt of Pakistan grew from US $ 3.75 billions in 1972 to US$ 15.2 billion in 1990. The debt in this period increased four-fold at an average annaul rate of 22.5%. Pakistan's exports growth rate has almost remained stagnant in the same time, maintaining a huge gap between the two. The debt servicing payments grew more rapidly from US$ 0.15 billion Dollars in 1972 to US$ 1.6 billion in 1989, which eventually fell to US$1.2 billion in 1990. Over the same period, GDP (at constant factor cost 1960) increased by 25 % from US $ 40 million US Dollars to $ 50 million US Dollars in 1990, before rising to a record level of $ 65 million in 1982. If we compare the pace at which both external debt and debt servicing payments have increased with the pace at which real GDP is increasing, the picture that emerges is not very encouraging. Growth in real GDP is much less than accumulation of external debt. Similarly, it is established that growth in debt servicing has been faster than growth in external debt itself. This however, indicates that there has been a substantial reduction in the degree of concessions attached to the foreign aid and due to tight conditions with associated to the aid, recipient countries are always in weak negotiation position. Net aid transfers were as low as only 13 % of the total disbursement during 1984 and 1987, which was 39% of the total disbursement, which means that 61% of the total foreign aid in the form of currency loans received has been repaid to the donors. This rise in repayments as increased in the ratio of external debt services payments to exports from 17.2 % in 1973 to more 34 % in 1990.This ratio declined during the late 1970s and in the early 1980s, but afterwards it started to increase at a faster rate.

Real GDP growth per capita increased by more than one and a half times over the period, while the growth in external debt per capita over the same period was more than four times what it was at the beginning of the period. Export earnings of the country stood at only up to 23 % aggregate external debt in 1973 (Table 2.4). After reaching at peak level of 35 % in 1988, this ratio went down again to the same level in 1990.

Table 2 .4 Selected economic indicators of Pakistan (1972-73 to 1989-90)

	Real GDP ($ million)	Real GDP per capita (Rs)	External debt per capita (Rs)	Export Earnings($ million)
1972-73	40	5.9	560	861
1973-74	42	5.9	580	1030
1974-75	43	6.0	668	1051
1975-76	45	6.1	778	1141
1976-77	47	6.1	833	1172
1977-78	50	6.4	918	1343
1978-79	53	6.5	964	1727
1979-80	57	6.9	1031	2394
1980-81	61	7.2	1030	2990
1981-82	65	7.4	992	2697
1982-83	54	7.6	1307	2723
1983-84	54	7.8	1370	2781
1984-85	52	8.2	1668	2540
1985-86	53	8.6	1898	3116
1986-87	52	8.8	2019	3780
1987-88	54	8.9	2156	4510
1988-89	58	9.3	2536	4690
1989-90	50	9.5	2892	3550
Growth over period	125	161	516.4	75.6

Source: Akbar (1995)

Table 2.5 shows that the rate of growth in current expenditure was faster than the rate at which development expenditure was growing. Current expenditure rose from $ 0.72 billion in 1973 to $ 6.13 billion in 1990. Development expenditure on the other hand, grew to $ 2.667 billion in 1990 from $ 0.364 dollars in 1973. The share of the two expenditures has remained more or less the same, with current expenditure accounting for about 70 % of total expenditure in most of the years during the period. External debt service as a percentage of total current expenditure was generally around 20 %.

Table.2.5 Major indicators of the economy of Pakistan 1972 to 1990.

Year	Current expenditure	External debt service as % of current expenditure	External debt as %of GNP	Annual development Expenditure (US $ billions)	Current expenditure (US$ billion)
1972-73	0.72	20.8	48.1	0.364	0.72
1973-74	1.12	15.2	46.2	0.495	1.12
1974-75	1.84	14.2	44.3	0.869	1.48
1975-76	1.57	16.6	42.7	1.253	1.57
1976-77	1.58	19.0	40.4	1.515	1.58
1977-78	2.04	16.2	37.7	1.560	2.04
1978-79	2.55	13.7	36.8	1.869	2.55
1979-80	2.92	17.1	33.9	2.203	2.92
1980-81	3.14	16.2	28.9	2.606	3.14
1981-82	3.46	15.3	26.7	2.677	3.46
1982-83	3.54	17.0	29.5	2.313	3.54
1983-84	4.08	17.4	27.9	2.084	4.08
1984-85	4.26	17.1	28.9	2.185	4.26
1985-86	4.48	18.5	32.2	2.466	4.48
1986-87	5.16	18.6	33.9	2.110	5.16
1987-88	5.92	16.2	32.5	2.653	5.92
1988-89	6.31	25.4	34.2	2.431	6.31
1989-90	6.13	19.6	35.8	2.667	6.13

Source: Akbar (1995)

The author believes that since independence, Pakistan has undertaken public projects in an attempt to strengthen economic activity, with donor support, and generally with heavy use of foreign financing in the form of loans. Many of these development projects have been designed to improve domestic industry and infrastructure, rather than to boost export production directly. The assumption was that the national economy would grow over time, and that commensurate increase in export production and reasonable trends in export prices would allow the debt services' obligation arising from these projects to be met. This perception about aid

has proved quite naïve. Akbar believes that aid has been more helpful to the donors themselves rather than recipient countries. The aid has not been designed to make recipients capable to repay, rather it is a source of income and control over the recipient economies.

The debt problem of Pakistan was further deepened due to devaluation of the Pakistan rupee during 1973 and the introduction of the floating exchange rate in 1982, two oil price shocks in 1973-74 and in 1979-80 also deepened the crisis of debt of Pakistan. Following the first round of the oil prices increase in 1973, prices of a number of other primary commodities also experienced sharp increases. Because of this, there was a sharp expansion in public expenditure. Revenue from commodity taxation, though higher, did not rise as fast, and the government used foreign borrowing to meet the growing costs of projects, previous borrowings, was often supplemented with new loans to maintain expenditure levels.

During 1988-89 there were substantial cuts in current expenditure when the IMF forced the Pakistan government to implement a four year structural adjustment programme before loans were taken to maintain the repayment of previous loans . Beside all this, other factors responsible for the increase in debt burden and higher debt servicing obligation were increase in the international interest rates and reduced quantum of foreign exchange earnings, especially transfer of foreign exchange by Pakistani workers abroad. But foreign exchange workers remittances started to decline from 1983. Workers remittances reduced from $ 2.886 billions in 1983 to only $1.89 billions in 1989-90. Domestic policies have also contributed to cause of the foreign debt accumulation of Pakistan. Import-dependent projects helped to increase external debt as spending increases outpaced the rise in tax receipts. Above all, the change in the composition of foreign aid from grant-type assistance to loans, which have had to be repaid at almost commercial rates of interest increased the debt burden. Beside the change from grants, which do not involve repayment, to loans, foreign economic assistance also shifted from soft loans repayable in non- convertible rupees, towards hard loans repayable in foreign exchange. This meant that loans taken at that time did not only include interest on loans but the additional cost incurred due to depreciation of the rupee value vis-a vis the US dollars.

The heavy external debt burden affected the average Pakistani citizen in two ways: (1) As the debt servicing obligation increases, a large portion of personal income would be taken away by the Government in the form of taxes in order to be able to repay the outstanding debt. (2) Since the foreign exchange earnings of the country are not enough to meet the ever rising debt-servicing obligation, the government will search for new sources of income to meet these debt-servicing requirements. The Government will request the donors countries to give concessions, which in turn would result in the adoption of policies dictated by the donors, and these policies dictated do not necessarily prove to be in the national interest of the recipient country.

The article concludes that a situation like this leaves very limited room for any Government like Pakistan to spend on anti poverty projects like human resources and physical infrastructure. The decade of the1990s has seen a remarkable increase in poverty in Pakistan. He recommends that Pakistan must take steps to decrease its debt burden. The development projects which attracted the major portion of loans were not self sustaining. Steps should be taken increasing domestic savings to finance the development needs of the country. This could be achieved in two ways, by encouraging private savings, and by increasing public savings through fiscal policies. Encouraging private savings would require measures to make savings an attractive alternative to consumption.

Since inflation has been historically high and the real rate low in Pakistan, two policies were recommended; that the real interest rate should be increased to positive and attractive levels, and through firm monetary and fiscal polices, inflation should be reduced and maintained at a reasonable level. To reduce the government budget deficits, it is vital to boost public savings.

2.7 Structural change and economic growth

Sarkar, P.C (1996) studied as regards structural change and economic growth, the changing pattern of per capita national income population, labour force, urbanisation and literacy in South and East Asian countries. The countries under study are divided into three groups, the first group comprises the South Asian countries India, Pakistan, Bangladesh, Myanmar, Nepal and Sri Lanka. The second

group comprises South-East Asian, Indonesia, Malaysia, Philippines and Thailand, while the third group of countries involve Newly industrialised countries (NICs), Hong Kong, Taiwan, Singapore and South Korea and Vietnam. The comparative analysis of these countries shows that the region constituted almost a half of the world population, with China and India most populated countries of the world located in region. In 1970s, the six South Asian countries constituted 40.4 % of the total population of 15 countries. While the four South Asian countries four NICs constituted 11.2% and 2.9% respectively. The shares in population show a slight increase for the South and South-East Asian countries, while a declining trend can be observed from table2.6.

Table 2.6 Share of regions in population (in percent)

Region	1970	1980	1989
South Asia	40.38	41.11	42.62
South-East Asia	11.23	11.62	12.02
NICs	02.92	02.86	02.72
China	45.47	44.41	42.64

Source: Sarkar (1996)

The share of per capita GNP for each region is calculated by the population and per capita GNP of each country in 2.7

Table 2.7 Share of regions in total GNP (in percent)

Region	1970	1980	1989
South Asia	32.5	25.7	26.4
South –East Asia	11.20	18.88	16.74
NICs	16.37	20.03	27.97
China	39.96	35.40	28.85

Source: Sarkar (1996)

The total share of South Asia in GNP declined from 32.5 percent in 1970 to 25.7 percent in 1980 and improved slightly 26.4% in 1989, but GNP Growth in South-East Asia and NICs was much more impressive. GNP per capita income has gone up nominal terms, growth was very slow in South Asian group of countries, while there was an enormous growth in NICs and South-East Asian countries. In 1970s, except for Malaysia, Singapore, Hong Kong and Taiwan, the Per capita income was below $300 for all the remaining countries Bangladesh and Nepal had the lowest

per capita income of $100 and $80 respectively. The per capita income of Taiwan was as high as $2,016.

South Asian countries group India, Pakistan and Sri Lanka crossed the per capita income over $300 in 1989. Sri Lanka was on the top of all group with a $430 followed by Pakistan $360, India $350, Bangladesh and Nepal at the lowest per capita income level among all $180 and $170 respectively. In terms of population China and India constituted about 75 percent of the total population of all group while two city states Singapore and Hong Kong were at the lowest in terms of their population size, but in terms of per capita income the case is totally opposite .

The research work is devoted mainly to estimate the structural changes in South-East Asian and South-Asian Economies, and the effects of these structural changes on economic growth. In 1960s the Green revolution was the land mark change in agricultural productivity, some of South-East Asian countries emphasised to seek self sufficiency in rice production. The traditional rice exporting countries like Thai Land, Malaysia , Philippines and Indonesia. Vietnam and Bangladesh also joined these countries later on. The Green revolution took place in mid 60s and it born fruits in early 1970s.The Green revolution forced structural changes in the economies by the way of opening new industries for fertilizer's, pesticides and agriculture implements as well as services like distribution of improved seeds, marketing and transportation.

India, Pakistan and south-Korea adapted import substitution policies, while Singapore adapted market economy from beginning and attracted huge foreign investment, which resulted in much faster growth in industry and services sector.

While most of the South-Asian countries were still exporters of primary goods at the beginning of 80s, soon they realised the need to reform and started economic liberalisation policies thorough the privatisation of publicly owned productive units.

The sectoral share of GNP trend shows that sectoral share of agriculture in GNP had gone down over the study period, while share of manufacturing and services sector has moved up.

These changes effected the output pattern and labour pattern in Asian Economies. In 1970s, Bangladesh, India, Pakistan, Myanmar, Nepal, Sri Lanka, Indonesia and China had over 35% share in agriculture sector which was observed only with fewer of them, Bangladesh, Nepal and Myanmar on same scale in 1989 period.

Econometric analysis of structural change

The use of econometric estimation of structural change in the economy follows the Adelman and Morris(1984) model which represents the changes in both demand and supply as follow:

$$X = a + B_1 \ln Y + B_2 (\ln Y)^2 + t_1 \ln N + t_2 (\ln N)^2 + \Sigma S_i T_i + \Sigma F .....(i)$$

Where X is dependant variable , Y is per capita GNP, N is population, T is time period, and F is net resource inflow as share of GNP. In this model cross section data for three time point has been used, the term ($\Sigma S_i t_i$) has not been considered. Again the variable F is replaced by G , the gross domestic investment as a percentage of GDP. The modified regression model is considered as follow:

$$X = a + B_1 \ln Y = B_2 (\ln Y)^2 + t_1 \ln N + t_2 (\ln N)^2 + EG .....(ii)$$

The equation for labour force in agriculture fit well with all three time points and the explanatory variables i.e. per capita income, population and investment together explain 67 percent to 79 percent of total variation in labour force in agriculture. Again the co-efficient of correlation varies from 0.81 to 0.89 which shows the goodness of fit of reasonable order. None of the regression co-efficient is significant. Beside, sign of the coefficient changes from one time point to an other time point.

The parameters for labour force in industry, does not fit very well for the year 1970.

However, 1980 and 1989, could be explained in terms of income, population and investment. In this case the coefficients of explanatory variables are also not significant.

The equation for literacy rate shows a positive correlation with population size and investment in 1970 and 1980. This means that the large countries could effort higher their literacy drive as policy instrument with a few exceptions of small countries like Singapore and Hong Kong. Positive co-efficient for (lnN) and negative coefficient for (lnN) indicate that literacy rate follow inverted U shape curve against

the population size of the country. That means the moderate size countries such as South Korea, Philippines, Thai land and Taiwan had a higher literacy rate. The countries with higher gross domestic investment also have a higher literacy rate. The equation for 1989 reveals that that is a positive significant association between literacy rate and per capita income. That means countries with higher literacy per capita income had higher literacy rate.

In case of Urbanisation (percentage of urban population),the equations are well fitted as the value of R^2 varies between 0.79 and 0.89. However, there is no definite pattern emerging for the time point 1980 and 1989. There was a significant negative correlation reported between urban population and population size. Beside $(\ln N)^2$ had negative and positive signs which only reflected that the rate of urbanisation decreased progressively with the increase of population size.

The above results suggest that a substantial decline in 1980s in the pace of de development as compared to the growth witnessed in the 1970.The shift from agriculture to industrial sector might had released pressure from agriculture sector, which will promote labour productivity and adoption of new agricultural technologies . The shift could create more opportunities for employment and economic growth.

2.8 Government, democracy and development

The state has the direct instruments for providing entitlements through such mechanisms as public distribution of food and health care, public employment, provision of relief in distress situations. But the state has a broader role to play, from providing basic entitlements of citizens to supplying the necessary conditions to boost the economic growth of a country.

The WDR (1991) also emphasises that there is an important role for governments to play for political stability to provide adequate infrastructure, maintain a regulatory framework, promote competition and assist human resource development (WDR 1991 Ch.7).

WDR (1997) was devoted to the role of government in fostering economic growth. The government is a primary actor in promoting economic growth directly and indirectly. The report suggests that size of government, plays an important role in economic development. In the1960s, many of East Asian countries had almost the

same income per capita level as Sub-Saharan Africa, the size of both regions was almost same, but the composition of governments was different.

African Governments had higher spending on consumption, primarily on public employment. In the 1990s, the incomes in East Asia were five times more than those of African Countries, and government consumption in Africa relative to GDP increased one and a half times more than in East Asian countries. The report seems to be suggesting that size of government, with reduced government spending and a limited size of public employment, are more efficient in achieving rapid growth. What the report does not speak of is the type of government, the major factor to determine the increased government spending. The most autocratic forms of governments are inclined to more government spending, with a public sector employment rooted to the power bases in poor countries. Though we are aware that most East Asian countries may have not the same western style democratic form, at least they have more participation rates in public decision making. Sources of the divergence of the east Asian countries are complex, but it is widely believed that the East Asian growth is the outcome of their sound policies of their governments. The effective services delivery by these governments was the practical cause of the superb growth.

To consider the effects of government size on growth, the concepts of public consumption and public investment may be distinguished. Where government consumption is higher, it may cause an overdrag on growth. On the other hand, certain types of the public investment spending, like spending on the infrastructure and human resources development, may have a positive effect on growth. The report suggests many policy prescriptions for governments to create a conducive environment for economic growth. Private investment is the major determinant in the growth process. Private investors perceive a favourite state if this state has a reliable credibility. A survey by 3600 firms from 69 countries (WDR 1997Ch.2 pp32) revealed that firms are always concerned about the uncertainty about the rules to which firms are subject. Two key indicators included in the survey were: predictability of rule making; and the extent to which entrepreneurs have to cope with unexpected changes in rules and policies about which they have no say or

influence with the legislative bodies. Uncertainty may not be related to the rules themselves but it is more related to the way rules are enforced in certain countries.

Also, perception of political stability, frequent changes in governments, whether constitutional or unconstitutional, could seriously affect the private sector. Some indicators like crime against the person and property, reliability of judicial enforcement, freedom from corruption, and lack of credibility. Pakistan is one of the South Asian countries where all these indicators are not good, which has resulted in very low volume of private investment in the country. Despite the fact that during the 1990s successive governments of Pakistan offered numerous benefits to private investors, due to lack of positive indicators in the country it was not successful in attracting a significant size of investment. The WDR (1997) does not emphasise the form of government, and does not explore the relationship between above discussed indicators and the form of government. If comparing the same income group with almost the same geographical situation, India, with a long-standing history of democratic institutions, has attracted more private investors compared to the countries like Pakistan. Due to its democratic form of government, India has more credibility and reliability in law making.

Recently development economics has developed a relationship between political institutions and economic development. Political institutions can influence the efficiency of resource allocation. Many studies (e.g. Sen 1999, WB 1997, Barbra Ingham (1995), *et.al)* have indicated that countries are likely to sustain economic growth when their political institutions promote socio-economic stability, create good quality public services, offer freedom and civil liberties, provide credible and predictable policy changes, and can deliver strong property rights with fair law enforcement. Democracy is not confined to politics at the national level. Public participation in socio-economic process is the main aspect of democratic institutions. Democratic governments support popular mobilisation and empowerment of the poor is possible through the democratic institutions. The question of to what extent public policy influences the development process has attracted the attention of modern development practitioners and academics. Sen's "Development as Freedom" (1999) was a remarkable book to explain the role of participation of poor in the economic process through democratic institutions. The

UN human development report (HDR1993) points out that participation is not a new term in development economics, rather it has been occupying a significant place in economic literature since 1960, but the meaning of the participation was used with a limited understanding. In the 1960s, the term participation was referred to involvement of the people in particular projects or programmes. In the 1990s, participation was explained with a wider meaning, and was to be understood a part of the much broader development strategy. Participation has a clear objective to involve people in planning and processing their own development and wider access to decision making, and the process of participation enables the poor to gain access to a wider range of opportunities. Thus participation is both a means and an end, it is way of increasing social and economic development, and an end in itself, allowing the public a chance of personal fulfilment.

Barbara Ingham (1995) takes a brief look into the issue of democracy and development. Participation is the main feature of the democratic institutions. Exclusion of the poor from the social goods can be excluded by participation process. Participation has a number of interconnected forms. UN Human development report (HDR1993) points out that women rarely have an equal say in decision making in the household, nor do they have an equal say in the disposal of household income.

Many studies (ADB 2000, WB 2002, UNDP 2003,) establish that women poverty in Pakistan is the direct outcome of the exclusion of women from the household decision making process which is often derived from the income deprivation of women. South Asia has historically a gender-biased social structure. Women rarely have equal status in the decision-making process. This results in the much lower child survival rates for girls than boys. Rachel Marcus (1993) studies violence against women through the legal system in Pakistan. The Hudood ordinance law is an example of such institutional response to tackle women issues. In Pakistan, a set of laws like the Hudood ordinance clearly gives women a second class citizen status. Such a biased legal system works as a major deterrent to women's participation in the development process in family or in society.

Social participation is another way in which people realise their full potential. Communities and minority groups are unable to preserve their cultural identity, but

participation may mean the preservation of culture and identities of communities through their language, art, music and culture.

Political participation is closely linked to the multi-dimensional human rights. Human rights does not only mean protecting peoples legal rights, but it has a wider meaning. In words of Amartya Sen, "Political and civil rights give people the opportunity to draw attention forcefully to general needs, and to demand appropriate public action" (Sen.1999). Thus freedom and democracy mean a conducive social order which may help individuals to get themselves involved in the economic process, using their talents for individual and collective welfare. Free and fair elections is the minimum condition for political participation, but there is need for political accountability on the part of those elected, plus opportunities to influence policy makers through institutions. The debate that political participation of the masses in decision making through democratic institutions plays any role in the development process is relatively new thought which came into the academic sphere in the1990s.

Bruno, (1994) argues that popular referenda are a feasible and effective institution to fulfil the individual need preferences and are able to break the cartel of politicians directed against citizens who are the voters and tax payers. He does not undermine the value of democracy. Popular initiatives and referenda supplement, but are no substitutes for institutions of representative democracy such as parliament and government. The referenda do not simply consist of a choice between given alternatives, but should be looked at as a process extending over time. He explains three stages of referenda as: 1. Pre-referendum stage, 2. Formal decision stage, 3. Post-referendum stage. The first stage generates opinions on the decisions on public goods issues, articulating preferences of mutual benefits. It also empowers citizen's bargaining power and enables them to determine the agenda of alternatives. He argues in favour of pre- referendum discussion, that, it is practically relevant, focused, and limited in time, and it is in sharp contrast to "instant referendum", "electronic voting" or "tele-democracy" which simply register voters' preferences. The second stage screens the alternatives to be voted upon reduces the number of relevant alternatives and makes the preferences more homogeneous. Thus discussion supports a structure- induced equilibrium. The post-referendum stage is a

stage when participants seek to predict the vote outcome and attract voters in their favour. Governments do revise these outcomes with better alternatives, which does not mean that the revised referendum due to change of circumstances are a weakness of direct democracy, but rather it is a lively political discussion which gains new insight. With a weak institutional frame-work and very limited media freedom, the process of referendum could prove other wise. In Pakistan the General Zia Regime conducted such referenda to prolong his power during the decade of the 1980s. There are very few or no studies yet available which can empirically prove this relationship. In case of Pakistan, since its inception the country has been run by authoritarian governments, except for some insignificant periods which saw democratically elected governments.

2.9 Financial liberalisation and economic growth

Financial systems perform two main functions. Along with efficient payment systems, through improved mobilization of savings allocation of investment.

Theoretically, various financial policy variables have been postulated by the different schools of thought as the determinants of economic growth. For a brief literature survey, we can divide prevailing theories into two broad schools.

1.The financial structuralists

2.The financial repressionists

The financial structuralist school of thought contains the theorists who contend that the quantity of financial variables and their composition affect economic development. Thus factors like financial deepening (aggregated financial assets in relation to GDP) and the composition of aggregate financial variables are posited to be the relevant financial factors in economic growth. Such a position can be traced to the writings of Gurley and Shaw (1967); Goldsmith (1966,1969) Patrick (1966) , and Porter (1966).

The financial repressionsit school of thought emphasises the price variables as the more relevant financial factors in growth. Accordingly, they contend that

financial repression, in the form of negative below-equilibrium real interest rate and domestic currency over-valuation, retards growth.

This idea is of relatively recent origin, and was first put forward by McKinnnon (1973) and Shaw (1973), so that it is often referred to as (a part of) the McKinnon-Shaw hypothesis. Without altering the basics, further refinements of the hypothesis are contained in the subsequent theoretical writings of Gelb (1977); Methieson (1980), Fry (1978) etc. Also, more recently, Greenwood and Jovanovic (1990), Bencivenga, Valerie R. and Smith, Bruce D. (1991), Saint-Paul (1992), Roubini and Sala-i-Martin (1991,1992) and King and Lavine (1993a) have presented various theoretical frameworks that link financial activities or services with steady state growth.

The repressionist and structuralist schools, and other study groups mentioned above, are found to be in a common consensus, to establish the link between financial services and steady state growth, which is basically supported by the idea that the major channel through which financial variables affect economic growth is by enhancing the productive or efficient utilisation of investable resources. This is accomplished through the role of the higher level of financial development (e.g. financial deepening) and also financial liberalization, in facilitating screening of investment projects, migration of funds to more efficient investors, etc. A number of empirical tests have been carried out of the financial structuralist hypotheses. Some of these use a case study approach of relating the cross-country growth rate with the level of financial development, e.g McKinnon (1973) and Lanyi and Saracoglu (1983). Others consist of a 'mere' examination of the direction of causation between economic growth and the level of financial intermediation, notable among which are those reported by Fitzgerald (1984) Jung (1986), Some others, like, Tun Wai (1972), Gelb (1989), and Ghani (1992), adopted the approach of testing for financial intermediation variables (e.g. financial depth and growth of financial variables) in the economic growth equations.

Other empirical studies are based on a similar approach, including De Gregorio (1992), King and Lavine (1993a, 1993b), and Roubini and Sala-I- Martin (1991). King and Levine (1993a) have presented also.

various theoretical frameworks that link financial activities or services with steady state growth. γ

2.10 McKinnon-Shaw Model

Government policies were mainly dominated by Keynesian and structuralist views until the 1970s. This view argued that financial repression, in terms of low level of interest, increases investment and economic growth. McKinnon (1973) and Shaw (1973), however, opposed FR, and argued that it has an adverse impact on saving, investment, and eventually negatively affects the rate of growth, while FL positively affects these factors. Both models argue that the removal of ceilings on deposits results in positive real interest rates, which increase savings, i.e. the availability of funds for investment to boost the rate of economic growth. In these models investment (I) is a negative function of real interest rates (γ):

$$I = I(\gamma) \quad I_{\gamma} < 0 \tag{2.1}$$

Conversely, savings are positively influenced by γ and rate of growth of national income (g) increases in γ and g raise, respectively, returns on saving and the ability of saving:

$$S = S(\gamma, g) S\gamma > 0, S_g > 0 \tag{2.2}$$

We further discuss the impact of interest rate ceiling on savings and investment in chapter 7.

An excess demand will lead to credit rationing. Consequently, some profitable projects with a high level of productivity fail to obtain credit from financial institutions. Ceilings on interest rates distort the economy in the following ways (Fry 1995, p.26: Fry 1997): 1. a low level of interest rates encourages agents to increase present consumption, which reduces savings for future consumption below the socially optimal level. 2. depositors prefer to invest directly in low- yielding projects rather than accumulating money in banks, which lend this money to investors. 3. entrepreneurs choose more capital-intensive projects, as the cost of labour-intensive ones as prices of funds are lower than those with market determined interest rate. 4. entrepreneurs proceed with low-yielding projects for

which they would not want to or could not afford to borrow at market clearing interest rates. 5. a low level of income resulting from low lending rates discourages FIs from spending money on collecting information about projects or borrowers. Finally, FIs with externally determined interest rates prefer to finance low risk projects, as the FIs are barred from charging the high risk premia which are associated with high return projects. Consequently, many projects which have returns lower than the threshold level of returns are selected. These projects would not have been installed with market clearing rates.

2.11 Difference between McKinnon and Shaw Hypotheses

The McKinnon and Shaw models argue that FR negatively affects savings, investment and economic growth. However, the transmission mechanism, through which these negative effects work, differ between these models. McKinnon postulates that investors have to accumulate money balances, before investment takes place. Thus, in the McKinnon model, the demand for money and physical capital are complementary to each other. This complementarity hypothesis is based on the following two assumptions: (1) all investment is self financed; (2) investment expenditure is more indivisable than consumption expenditure. Under such circumstances, a high real deposit rate increases the accumulation of monitory balances, i.e. saving, and hence a rise in supply of funds for investment. This complementarity hypotheses is also considered as an outside money model, as firms are unable to borrow to finance investment.

On the other hand Shaw's approach is based on the debt intermediation view (Gurley and Shaw 1955). The Gurley and Shaw (1955) model predicts that degree of financial sophistication which facilitates intermediation between savers and investors positively affects per capita income. This positive relationship is supported by Goldsmith (1969). The Shaw (1973) model states that an increase in the money stock positively affects the capacity for intermediation of the banking system as a loan provider. Hence, FL increases the availability of funds for investment. The increase in interest rates also raises the efficiency of investment, as explained above.

2.12 FL, Stabilisation policies

The main objectives of stabilisation policies are to reduce macro imbalance; external imbalances or current account deficits of the balances of payments, and internal imbalances of government budget deficits, and to reduce threat of inflation to a viable level. According to monetarist economists, these imbalances are caused by the excess money supply created to finance government budget deficits, and hence they advocate reducing the excess money supply. However, if in a LDC, there is some unutilised fixed capital and the ratio of used fixed to working capital is constant, a reduction in the money supply, i.e. working capital, causes capacity

2.13 The Critics of financial liberalisation

Post-Keynesian economists, contrary to the McKinnon-Shaw approach, argue that FL reduces effective demand and economic growth and increases instability in the financial system (Tylor 1983, Burkett and Dutt,1991, Stiglitz 1994). The post-Keynesian approach opposes the view that investment matches savings for market determined equilibrium interest rate, since an investment decision depends on many other factors, like political stability, etc. Savings in the Keynesian tradition is function of income rather than interest rate. Thus increase in savings does not necessarily increase in the investment. Moreover, the presence of information asymmetries, externalities, and economies of scale causes market failures. These unregulated market failures may cause instability in the financial market.

2.14 Post-Keynesian view of financial liberalisation

The post-Keynesian theory of finance and economic growth predicts that FL in a close economy with axcess capacity will reduce the aggregate demand and profits. This reduction will reduce savings, investment and economic growth (Burkett and Dutt, 1991, Gibson *et al* 1994). FL in terms of interest rate deregulation has two opposing effects. The positive effect of FL influences the agents to increase the deposits/ savings and, hence, a rise in the supply of loans, which reduces the lending rate and boosts investment and economic growth. and the negative effect: the

increase in savings reduces the aggregate demand, hence a decline in profits, savings, investment and output. The resulting uncertainty or pessimistic view regarding future profits worsens the negative impact. Under such circumstances, the negative impact dominates the positive one, hence there is a decline in savings, investment and economic growth. However, these arguments only consider the short-run impact and ignore accelerator effects on investment.

Dutt (1991) incorporating long-run accelerator effects on investment, shows that an increase in nominal interest rate raises the cost of borrowing when an economy works below its capacity. However, he supports the predictions of the McKinnon-Shaw hypotheses when the economy is at full capacity. For a given 'mark up' in pricing policies, the increase in costs of borrowing in an economy with excess capacity raises prices, and reduces real wages and aggregate demand. Hence, there is a decline in saving, investment and capacity use. The long run negative impact is more persistent and severe than that in the short run.

Gibson and Tsakalotas (1994) argue that an increase in interest rate has the following negative consequences: they argue that it causes a real exchange rate appreciation, which exerts a negative impact on the trading sector by making exports more expansive, Thus the impact of appreciation will reduce exports, which leads to a rise in the trade deficit. These losses may incur when a bank is lending on a long-term and borrows on short-term basis because, Banks can not change landing rates on old credits during the agreed period. However, deposit rates go up after FL. Thus, from the bank's point of view, the cost of funds is higher than the return from the funds and hence, banks experience losses. Due to increase in interest rates the government budget deficits rise in LDCs where a significant proportion of budget deficits are funded by bank loans. Moreover, FL in terms of reduction in reserve requirements and a relief from buying a government bonds reduces tax revenues. The decline in government spending also reduces the aggregate demand, which further worsens the negative impact of FL on output and growth.

With reference to Pakistan, it is noteworthy that Government budget deficits and dependency of government revenues on inflationary taxes are high. In addition the

government is the major investor in education and other public services providing goods and infrastructure. Consequently, interest rate liberalisation would reduce government expenditure on public services provision like education and health, and other capital investment. Thus, the above argument suggests that government budget deficits should be reduced before liberalising the financial sector.

2.15 Upward financial repression' and instability in financial markets.

Upward financial repression' is regarded as Governments initiatives to increase real interest rate to a positive level when market clearing interest rates are not positive or very low for the various reasons (Beckerman 1988). This 'upward FR' causes instability in financial markets. Suppose that a low level of interest rates in a LDC like Pakistan is caused by the following two factors: (1) a low level of demand for investment caused by high uncertainty about the future; (2) cash holding or liquidity preference or the accumulation of savings to make large purchases when access to credit market is limited. Consequently, savings take place even when interest rates are negative.

In these circumstances, when government sets the real interest rate above the equilibrium rate there will be excess supply of funds, which may be explained other wise as the supply of invest able funds is higher then profitable invest able opportunities. In these conditions FIs are facing a prisoner's dilemma to lend or not to lend. In the absence of profitable investment opportunities, due to infrastructural development or to other political reasons, as is the case in Pakistan and other LDCs, banks can not lend out money as, under these circumstances, the probability of default is very high. This situation may be one of the causes of widespread bank loan defaults in Pakistan. On the other hand, banks become excessively liquid and make losses, or can not make profits, if they do not lend out deposits. Thus, 'upward financial repression' damages the stability of the financial system.

2.16 Information asymmetries and credit rationing

According to the McKinnon-Shaw hypothesis the credit rationing results from ceilings on interest rates, because they cause an under-supply of savings, which generates an excess demand for credit. Their hypothesis predicts that there would be

excess demand if interest rates are allowed to be determined by market clearing, under the general rule of demand and supply.

FL critics (Stiglitz and Weiss 1981, p.409 and Stiglitz 1991) argue that there are no hard and fast rules for market clearing and it could be viewed an an assumption for competitive markets. Stiglitz and Weiss argue, that assumption that ceiling on credit causes credit rationing is based mainly on some rather unrealistic assumptions that financial markets are the same as those of other goods, e.g. automobile markets and other consumer goods, hence, that the prices have no incentives and sorting effects. Lending rates, the cost of loans, help to distinguish risky and safe borrowers, only risky borrowers will come forward to borrow with high rates, this is what they call sorting effects. In addition, high rates force borrowers to undertake high-return projects in order to repay loans (incentive effects) They also indicate that the rate of return and the probability of the success of the project are generally negatively correlated. Thus, interest rates convey a signal of the probability of the default of the borrowers.

The expected returns on risky projects to risk averse lender are lowers then those from safe projects. Thus, a safe borrower, unlike a risky one, would be unwilling to pay a high interest rate. Consequently, FIs maximising expected profits usually charge interest rates which are lower than the equilibrium rates. As a result FIs will decline to advance loans to borrowers who are willing to pay equilibrium rates which are generally very high in LDCs like Pakistan. If, however, it is hypothetically assumed that banks charge market clearing rates, borrowers would be forced to take loans in high-yielding projects to pay the costs of loans. Consequently a high interest rates forces FIs to choose only risky borrowers and it also forces borrowers to under take risky projects. The selection of only risky borrowers is termed a moral hazard problem, while the choice of risky projects is considered an adverse selection problem. FIs avoid these problems by avoiding high interest rates and risky borrowers. Hence, a loan market in equilibrium is generally associated with credit rationing.

Stiglitz and Weiss (1981) also disagree with the McKinnon-Shaw school which suggests that the condition of a high collateral from risky borrowers eliminates the

adverse selection and moral hazard problems. Higher rates of failure to small firms than larger firms is caused by the requirement of the high collateral when they are unable to provide it. Starting with the same level of equity, the wealthier borrowers tend to choose to go for risky projects, and they succeed. Hence, high collateral has two negative aspects: (1) the high collateral demand excludes the potential borrowers who have bright chances of success, but are unable to provide high collateral (2) the high collateral condition favour only wealthy borrowers who like to undertake risky projects, probability of default for such borrowers being higher (ceteris paribus). Stiglitz and Weiss argue that Under such circumstances, reducing the debt equity of borrowers is not optimal option when small projects have higher probability of failure.

The Stiglitz and Weiss (1992) model is an extension of the earlier (Stiglitz and Weiss (1981) model, which incorporates the incentive and screening problems in credit markets. The extension of the model consider the impact of the changes of the interest rates and collateral on the loan contract. It shows that even in equilibrium conditions, credit rationing prevails when collateral in conjunction with interest rates is used optimally. Banks can offer two type of loan contracts, one is associated with high interest rates and weak collateral, the other with a low interest rates but higher level of collateral. The poor borrowers will tend to buy the first type of loan and the rich borrowers will go for the latter type of loan contract with low interest rate supported by high collateral. Banks in this situation will offer the loan contract with a high interest rate and low collateral base, obviously because it yields higher returns for the banks. If banks offer the loan contract with a higher collateral and lower interest rate, they will be unable to offer high deposit rates and to collect deposits from a competitive market, as a low lending rate is associated with the latter kind of loan contract. Thus both rich and poor borrowers have to accept the type one loan contract with a low collateral and higher interest rate, which will be the best option available to both type of borrowers. Therefore, an equilibrium exists, in which both risky and safe borrowers are offered the same loan contract. And if supply of the loan is less than the demand, some borrowers will fail to obtain a loan through the first category of contract regardless of whatever they stand in the rich or poor borrowers category. In this of situation, only a few rich borrowers could be offered a loan contract of the second category (with low interest and high collateral

base).That is where a separating equilibrium exists. Under both conditions, to differentiate between two types of borrowers in case the lender has knowledge about the borrower's category, if S/he is rich or poor, but the lender is unknown to the level of risk of the borrowers. In such a condition collateral with interest will not be helpful to allocate credits optimally. Thus the expected returns will be lower in comparison to other contracts where credit rationing exists.

The study further discusses the question: why the real interest rate and productivity of capital do not move together? With reference to competitive theory, the interest rate is equal to the marginal productivity of capital then both productivity of capital and interest rate should move together. But practically this is not the case. In the real world, the real interest rates charged to borrowers and paid to depositors vary over time. The nature of project determines the interest rate which are closely associated to the probability of success of the project. In sluggish economic conditions there are less chances of success of project. Thus the returns on an investment project obtained by the lender vary on the business cycle in given economic conditions. This is clear that in slow economic conditions, chances of failure of a project are more compared to booming economic conditions.

Stiglitz and Weiss also argue against the traditional theory which postulates that increase in money supply will reduce growth. On the contrary, they believe that increase in money supply contributes to boosting economic growth. Increased money supply increases the availability of credit which eventually lowers the interest rate. Therefore increase in money supply will enable the banks to offer more to the borrowers. The poor borrowers will have more chances of credit being offered on loan contract type A (with higher interest rates and lower collateral) which means more poor borrowers will be offered loan contracts. The poor borrowers are generally more excluded proportionately when banks face unavailability of funds. Thus an increase in money supply raises the capacity of lender to advance new loan with high average lending rates. On the other hand, MS-type of monetary policies reduces the availability of credit for poor borrowers, and hence reduce the average lending rates.

With reference to LDCs, the general view of Stiglitz and Wiess is supported by Ghatak (1995) that availability of credit matters more rather than cost of credit in LDCs. The credit policies historically had been leaned to benefit the big borrowers in Pakistan, compared to small borrowers. In the decade of the 1990s, the Government of Pakistan realised a need to make credit available to small borrowers, thus a new institutional frame-work of micro credit institutions has been established. The government of Pakistan has launched a set of encouraging policies to create a conducive environment for micro credit NGOs to flourish and play a vital role. Following the Agha Khan rural support programme, Pakistan established a national level micro credit, National Rural Support Programme (NRSP) in the 1990s.

2.17 Neo-structuralists and McKinnon-Shaw theory

The McKinnon-Shaw school argument is that increase in deposit rates will decrease investment in unproductive assets, like gold ornaments and other goods related to status rather than any productive usage. The MS school postulates that increased rate of deposits will raise financial savings, investment and economic growth. The MS school does not take the unorganized money market which occupies a central position in LDCs money markets scenario. In LDCs, a significant portion of rural people are not provided credit coverage by the institutional framework, either by the public sector financial institutions or by the private financial institutions. Ghatak (1975) suggests that a significant portion of rural borrowers is unable to obtain loans from the banking system of India. The institutional financial system in Pakistan could not develop any poor borrower-friendly policies yet. The main reason for such poor borrowers to obtain the institutional loans is their inability to produce the heavy collateral and meet other requirements. On the other hand, poor borrowers can easily borrow loans from the unorganized money market (UMM). Studies (Faruqee 1999) suggest that non-institutional credit has been the biggest lending source in Pakistan even today.

Table 2.8 Rural credit provision (%) by institutional and non-institutional sources

Year	Institutional source	Non institutional source
1973	11	89
1985	27	73
1990	38	62

Source: Faruqee (1999).

Table 2.8 shows that the unorganized money market (UMM) remains the main source of poor borrowers, which caters a wide range of their borrowing needs in Paksitan and other LDCs. The main feature of UMMs is their higher interest rates which yield profits to the lenders and ensures the sustainability of system. Hence, UMMs in LDCs act as substitutes for the formal banking system, and the large amount of transactions is realised in them (Wijenbergen, 1983a) (Taylor ,1983).

The lending procedures of UMMs is less complicated than formal institutions. So, the UMM lender often has the advantage of being local, he possesses symmetrical information about the borrowers behaviour, and in case of large-scale transactions, the lender has better access to local sources which are helpful in the screening process. More importantly, the screening process is cost effective with the UMMs lenders. On the other hand, FIs require a lot of guarantees, coupled with collateral. The poor borrowers who constitute a large population of landless agricultural workers, lacking other assets, find it difficult to meet the requirements of the FIs for obtaining credit. Importantly, UMMs can lend on a one-to-one basis, which makes them more efficient in lending procedure compared to the institutional lenders. The FIs are required to pay a proportion of their deposits to the central banks and reserves, whereas UMMs do not.

Wijnbergen (1983a) suggests that a tight monetary policy which reduces the supply of credit could lead to stagflation. A tighter monetary policy will increase interest rates and reduce investment (demand-reducing impact), and also reduce production (supply-reducing impact). According to Wijnbergen (1983a) if the supply- reducing impact is greater than the demand reducing-impact, a tight monetary policy would result in deterioration in the balance of payments, as the negative effect will affect the current accounts. The economy experiences deficits in current accounts when the government has failed to reduce expenditures in order to reduce demand.

2.18 Stiglitz controversy: Market Failures and Instability in the financial markets.

The McKinnon-Shaw school believes that market efficiency is increased in a competitive financial market through conveying and processing the information to allocate the funds and monitoring of the projects. In the case of LDCs, the information and monitoring systems do not exist, which could be useful for the organised financial market, because the information and monitoring are public goods in LDCs which are under-supplied by the competitive markets in most LDCs, (Stiglitz 1994). Hence, the regulatory role for governments to provide information and monitoring the financial markets is insisted.

Ghatak (1997) tests the McKinnon-Shaw (1973) model for Sri Lanka form 1950, to1987, and shows a positive and significant effect on growth due to financial liberalisation, despite the fact it has not gone through any structural change. The model is structurally invariant with regard to changes in expectations. The positive and significant effect of real balances on the growth rate of output in Sri Lanka seems to validate the direct relationship between the investment–income ratio and real balances, given the severity of credit restrictions. In his analyses, he did not detect any significant structural break in the Sri Lankan economy due to financial liberalisation in 1977. His results confirm the McKinnon-Shaw hypothesis about the favourable effect of accumulated real balances on the economic growth of Sri Lanka between 1950 and 1987. Thus his conclusions establish that a rise in real interest rates and financial deepening measured by real monitory growth increase economic growth in Sri Lanka.

Gelb (1989), in an empirical study, examined the impact of financial policies on economic growth using cross-section data of 34 countries over the period 1965-85. He finds that both the interest rate and financial deepening positively affect economic growth. Interest rates increases efficiency in terms of both the quantity and quality of investment where both effects together enhance economic growth. The efficiency of investment is given by the incremental capital-output ratio. However, the efficiency effect is at least twice as large as investment i.e. quantity, effects. The author also shows that financial deepening

(FD), measured by money supply as a percentage of GDP, increases economic growth and the inclusion of FD does not weaken the impact of interest rate. Moreover, his study reveals that causality runs in both directions. That is, interest rates increase growth rates by increasing saving, investment and efficiency of investment raises the returns from assets, which in turn increases the demand for loanable funds and interest rates.

Dematriades *et al,* (1996a) explore the relationship between financial policies and economic growth in Nepal during 1962-1992. This study reveals that real per capita income is positively associated with financial deepening (M2 GDP), and negatively with bank branches. The negative relationship between per capita income and bank branches reflects the X-efficiency (i.e. inefficiency) of financial intermediation for a given level of financial development. He finds that FR, in terms of selective interventions, has a positive impact on economic growth. The author observes that M2GDP and economic growth are jointly determined, implying that policies which affect M2GDP are also likely to affect economic growth.

In another extensive study using tied series techniques , Demtriades *et al,* (1996b) find that real per capita income, and at least one of the financial indicators in 13 out of 16 countries, are co-integrated. These 13 countries with co-integrated relationship include South Korea, which is considered a liberalised country with a high level of economic growth. Moreover, countries which have followed or have been following financial reforms recently are also included in the sample. Regarding causality, Due to country specific results of his study, hence it is not appropriate to draw a general conclusion.

Fry (1997), using data for 85 developing countries over 1971-95, finds an inverted, U-shaped, relationship between the annual rate of economic growth and the real rate of interest. The regression equation includes real income growth rates, squared interest rates, and the absolute value of cubic interest rates. Empirical findings show that growth is maximised when interest rates are within the range of -5 % to +15 %. Using Chilean and Korean experiences, Clark (1996) advocates positive but low interest rates, and the regulation of the financial system to ensure macro economic stability. The author also argues that the equilibrium interest rate

is undefined and unstable, as the interest rate plays dual roles. This equilibrium rate equilibrates saving and investment, and also determines portfolio readjustment, including capital inflows. Portfolio readjustment causes fluctuations in interest rates. This fluctuation is intensified by the uncertainty and volatility of expected returns to investment and the potential inflows of capital which distort the real exchange rate and increase cost of borrowing.

Fry (1998), using a simultaneous equation model and data for 16 developing countries over 1970-88, shows that financial repression, proxied by real squared interest rate and black market exchange rate premiums, reduces investment ratio which leads to reduction in export growth these reduction will reduces out put growth rates subsequently. Financial distortions, also reduce output growth through reduction in the efficient investment. His, simulation results show that the relationship between the real interest rate and national saving is inverted U-shaped. Morisset (1993) using data for Argentina over the period 1961-82, shows that an increase in interest rates does not necessarily raise the availability of credit to the private sector. He establishes that an increase in deposit rates influences people to change their portfolios from government bonds to bank deposits. This change will raise the government budget deficits. Hence, the government increases borrowing which crowds out private borrowing. This study suggests that governments must maintain the balance between receipts and expenditures before liberalising the financial sector.

Few studies also highlighted the importance of institutional credit in economic growth of Pakistan (Zuberi 1989; Malik & Gill, 1991). Zuberi (1989) find that 70 % of total institutional credit is used for the purchase of seed and fertilizer, and concludes that most of the increases in agricultural outputs can be explained by changes in the amount of seed and fertiliser expenditure. Malik and Gill (1991) attempt to provide evidence of the role of institutional credit in agricultural production. They use a two- stage method, where the probability of taking an institutional loan is predicted in the first stage, and the predicted value is used in the second stage to estimate the impact of fertiliser use per acre. Like Zuberi's study (1989), their results show that the institutional credit is an important determinant of production, fertilizer and seed expenditure (see also Von Braun, Malik and Zellor, 1993).

A recent study by UNDP (HDI 2003) provides strong evidence of these disparities in credit availability among the provinces of Pakistan shows significant disparities among the population. Economic development is a multidimensional process, and institutional interventions are needed in some sectors of the economy. In general, the rural population is believed to be the most vulnerable group.The development practitioners agree that the government and the international agencies should identify the major areas of intervention and extend their support to the most poverty-ridden groups. Financial support to these groups is an important area of intervention. Lack of access to bank credit in rural areas is believed to be one of major obstacles in the development of the poor in the LDC's. A large population of individuals in rural areas do not have enough collateral to secure a loan, which appears to be the basic condition for taking loan from any institution in the third world (Hoff & Stiglitiz,1990). Such groups of individuals are compelled to take loans from non-institutional sources, which are available on social guarantees rather than any capital collateral. Consequently, these borrowers pay a very high interest rate but the result is low productivity and little to save, though having nothing worth to invest this situation leaves the poor in a vicious circle of poverty. In 1995, out of 34 million of Pakistan's work force, 24 million (71%) worked in rural jobs, with 64% employed in agriculture, 12% in services, and 24 % in rural manufacturing, construction and trade. Each of the sub sectors has its own credit needs to which the formal finance must respond (Farouqi 1999).

In agriculture productive methods are still primitive Thus productive access to credit could help rural workers to switch over to the new technologies, enabling them to have more production, However, development of a credit market in Pakistan has been distorted, and the result is a fragmented market (Mellor 1995).

2.19 Economic growth, poverty and inflation

A considerable body of literature is found on the inflation and its relationship to poverty. A World Bank–IMF research group working paper (Easterly and Fischer,1999) examines the relationship between poverty and inflation. Using a cross-country data set of 31869 households in 38 countries, the WB establishes that inflation makes the poor worse off. The study shows the disadvantages on a

number of dimensions, and that the poor, the uneducated, the unskilled workers are relatively more likely to mention inflation as a top concern than the advantaged on these dimensions. Regarding the impact of changes in inflation on direct measures of poverty related to inflation, the results suggest that high inflation tended to lower the share of the bottom quintile and the real minimum wage, while tending to increase poverty. Similarly, Agenor (1998) and Romer and Romer (1998) found direct negative effect of inflation on per capita income of the poor.

2.20 Inflation and Growth

Several studies have estimated a negative relationship between inflation and economic growth. Nevertheless, some studies do suggest a contrary relationship instead. Thirlwall and Barton (1971) report a positive relationship between inflation and growth in a cross section of industrial countries and a negative relationship in cross-section of 7 developing countries. Based on a panel data of the organisation of Economic cooperation and Development (OECD) countries and Asia pacific Economic Cooperation (APEC) countries, Gillman et al. (2002), indicate that the reduction of high and medium inflation (double digits) to moderate, single digit figures has a significant positive effect on growth for OECD countries, and to a lesser extent for the APEC countries. They further add that the effect of an expected deceleration of inflation might only be observed when the world economy is not facing a sudden growth rate deceleration due to shocks. If there are no such shocks, a reduction in inflation rate can produce considerably higher growth rate. Alexander (1997) supports this idea with his findings of a strong negative influence of inflation on growth rate of per capita GDP.

Fischer (1993) reports that inflation reduces growth by reducing investment and productivity growth. He further notes that large budget surpluses are also strongly associated with more rapid growth, through greater capital accumulation and productivity growth. Ghosh and Phillip (1998) found that inflation and growth are positively correlated, but have a negative correlation at a high level of inflation. Similarly, the empirical results of Nell (2000) suggest that inflation with in a single-digit zone may be beneficial, while inflation in a double-digit zone appears to impose costs in terms of slower growth.

Bruno and Easterly (1996) find no evidence of any relationship between inflation and growth at annual inflation rates of less then 40 %. They find a negative, shorter to medium-term relationship between high inflation (more then 40 percent) and growth. Furthermore, they report that there was no lasting damage to growth from a discrete high inflation crisis, as countries tend to recover towards their pre-crisis growth rate.

Malik and Choudhry (2001) conducted a co-integration analysis of inflation on economic growth for South Asian countries (Pakistan, Bangladesh, India and Sri Lanka) and report two interesting points. First, inflation and growth are positively related. Second, the sensitivity of inflation to changes in growth rates is larger than that of growth to changes in inflation rates. However, their results are based relatively on a small sample size. Khan and Senhadji (2001) suggest that there is a threshold level of inflation in the relationship between output growth, and inflation. They examine the relationship between high and low inflation with economic growth but also suggest the threshold inflation level for both industrialised and developing countries. Their result strongly suggests the existence of a threshold beyond which inflation exerts a negative effect on economic growth. In particular, the threshold estimates are 1-3 percent and 7-11 percent for industrial and developing countries, respectively.

2.21 Conclusion

In this chapter we have reviewed important literature on the relevant topics which are also discussed in later chapters of the thesis. The first section reviews the prevailing concepts of poverty. Two main concepts of poverty, the absolute concept of poverty and the relative concept, are discussed in order to have a broad understanding of the poverty concepts. Townsend defines poverty in relative terms; he explains that any rigorous conceptualisation of the social determination of needs dissolves the idea of 'absolute' need. The necessities of life are not fixed. They are continuously being adapted and augmented, and changes takes place in society and the products. On the other hand, Amartya Sen explains poverty as an absolute concept, and defines that there is an irreducible core of absolute deprivation in our

idea of poverty which is reflected in malnutrition and visible hardship, without having a relative picture.

Two major organisations engaged in the fight against poverty, i.e. World Bank and UNDP, also differ in their approach. The World Bank's strategy to reduce poverty insists more on the income aspect of poverty reduction as means and ends, while the HDR developed by UNDP emphasises on the non-income aspect. The UNDP approach gives more importance to the policies to improve the physical quality of life.

A comparative analysis between Pakistan and Sri Lanka shows that while both countries had experienced almost the same growth rate between the 60s and 90s decades, Sri Lanka has an admirable record on improving social indicators relative to Pakistan. Vulnerability is the major dimension of poverty which shapes the lives, of the poor and vulnerability to income shocks may be detrimental to household poverty. Considered in risk aversion terms, the poor households are worst off.

Most of the studies estimating poverty trends in Pakistan have used the arbitrarily defined poverty line. Studies on poverty trends in Pakistan through the decades of the 60s to the 90s confirm that poverty was declining in both rural and urban areas, which continued till 1987-88. After that period, poverty seemed to be increasing at large, and the gaps in rural and urban poverty were increasing sharply, gaps which continued to rise through the decade of the 90s.

Generally in the 1990s, the incidence of food poverty was 35 percent higher in the rural areas compared to urban areas of Pakistan.

As a major focus on the economic growth and poverty reduction, a brief literature review is also carried out. Major studies by Dollar and Kraay confirm the direct relationship between growth and poverty reduction. While the distributional pattern favours poor households in some cases, an alternative growth scenario also is favourable to both income groups. Generally, it is established that growth has a significant impact on poverty reduction. An empirical study by World Bank on 14 LDCs also confirms a significant and positive correlation between economic growth and poverty reduction, but the study also suggests that the rate of poverty reduction is different from country to country.

Financial liberalisation plays a significant role in economic growth and two schools of thought the financial structuralists and the financial repressionists have

contradicting ideas on the issues. These two schools with some other study groups, establish a significant link between financial services and steady state of economic growth, which is basically supported by the idea that the major channel through which financial variables affect economic growth is by enhancing the effective and productive utilisation of investible resources. This may be accomplished through the role of higher level of financial development (e.g. financial deepening), and also financial liberalisation in facilitating screening of investment projects; migration of funds to more efficient investors; etc.

An empirical review of the literature related to inflation and economic growth and poverty shows that inflation has a deep impact on the poor, more than any other group in the society. Though there are many views which suggest that moderate inflation is good for the economic growth, most of the articles reviewed suggest that single digit inflation may prove good for the economy in general, but double digit inflation will have a very detrimental effect on economy overall.

The relationship among democracy government and poverty is also reviewed. Public participation is vital in decision making, and democracy as a form of state provides better public participation in resource allocation decisions. A brief review of the related literature is also included to understand the role of the state in promoting economic growth and poverty reduction.

Chapter 3

Macro Economic Development of Pakistan and Poverty Alleviation

3.1 Introduction

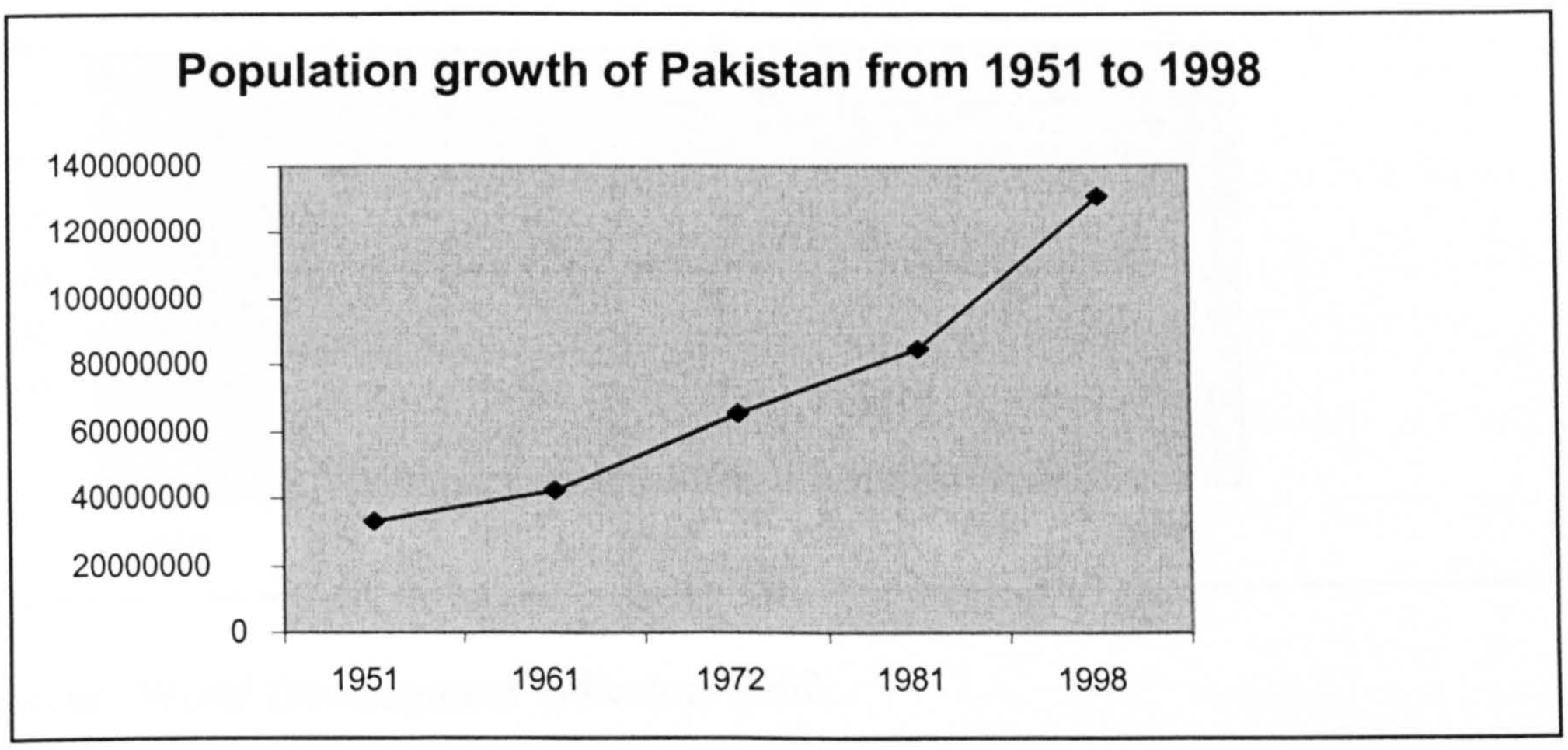
This chapter is organised in two sections. The first draws a picture of Pakistan's poverty profile, with some basic indicators of poverty. Some major determinants of poverty and economic growth are also discussed, with a special focus on population, health and education. Then we discuss the economic growth of Pakistan, with special attention to the sectoral shares of growth. Agriculture is the major sector of the economy of Pakistan, and the growth of agriculture between 1970 and 2000 will be discussed. Growth of the industrial sector in the same three decades, and its contribution to GDP growth, will also be elaborated. The second section of the chapter will focus on recent macroeconomic developments in Pakistan.

3.2 Population Growth of Pakistan

Pakistan is divided into four provinces; Punjab, Sindh, North Western Frontier Province (here after referred to as NWFP), and Balochistan. After the inception of Pakistan in 1947, the first census was held in 1951. It reported the population of the country at 33, 740,167 million, which increased to 42, 880,378 million in 1961. During the next 20 years, it almost doubled, and reached 84 million in 1981. According to the 1998 census, the population of Pakistan was about 131 million, registering an increase of more than 46 million persons between 1981 and 98.(FBS 2002).

However, population growth rate of Pakistan showed a significant change in 1981-98. In 1981, 2.61 percent per annum compared with 3.06 percent in 1972. The share of Punjab in the total population decreased from 61 percent in 1951 to 56 percent in 1998. However, the share of Sindh province in the total population increased from 18 percent in 1951 to 23 percent in 1998. The proportion of population living in other provinces, Balochistan and NWFP, was 5 and 16 percent respectively.

Figure.3.1 Population growth of Pakistan.(in millions)



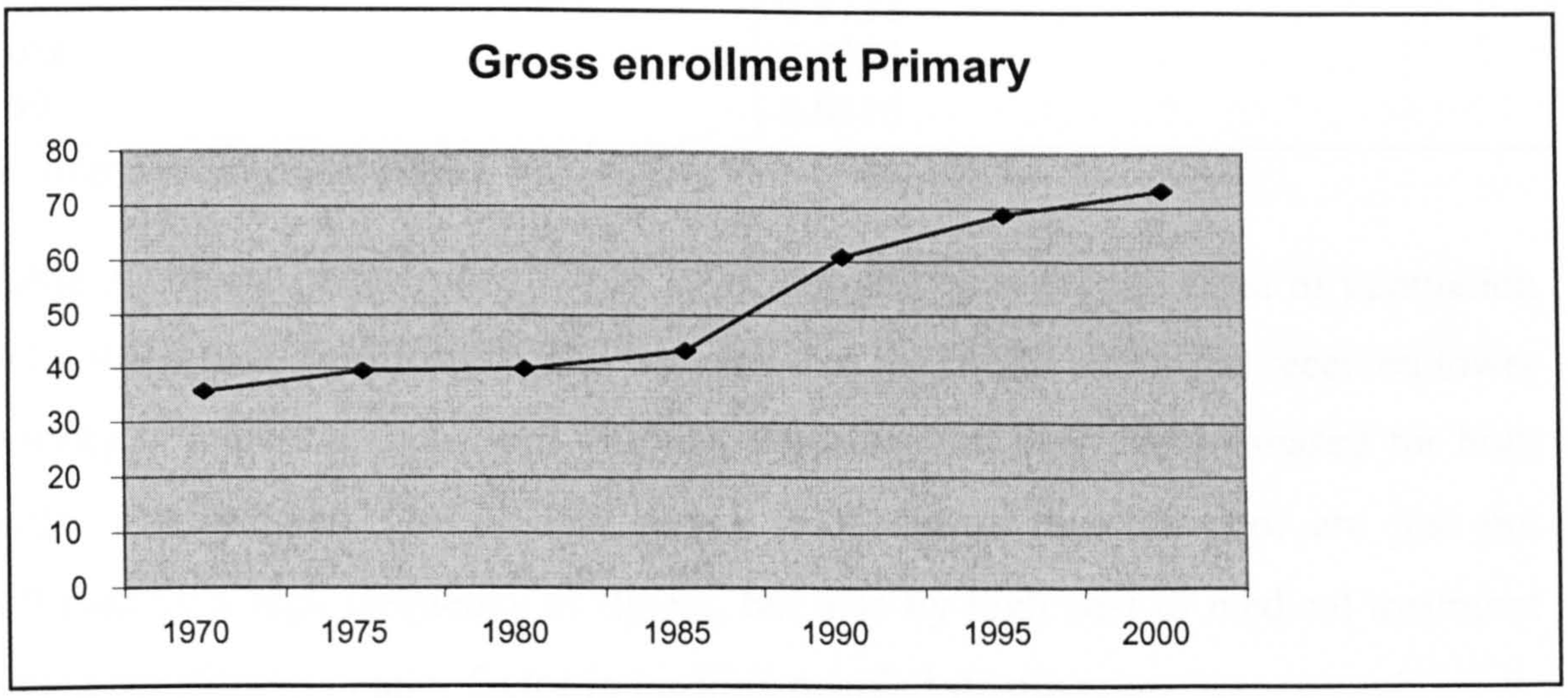
Source: Federal Bureau of Statistics, Islamabad (2005)

The share of urban population in the total population increased dramatically, From 18 percent in 1951 to about 33 percent in 1998. Sindh was the most urbanised province, with 49 percent of total provincial population living in urban areas in 1998. The least urbanised province, with only 17 % of provincial population living in urban areas, was the NWFP. The share of urban population in the total population of Punjab and Balochistan was, , 31 and 23 percent respectively. The urban population of Balochistan grew at the fastest rate, not only between 1972 and 1981, but also between the 1981 and 1998. The rapid rate of urbanisation in Balochistan can partly be attributed to both permanent settlement of Afghan refugees, and the major increase in public sector employment due to the big increase in provincial government expenditure during the 1980s.

3.3 Education

At the time of inception of Pakistan in 1947, Pakistan had a large population unable to read or write. In 1998, however, 45 % of the adult population (10 years and above) was literate. After almost 50 years of its existence, a large portion of population remains still illiterate.

Figure .3.2 Gross primary enrolment.(1970-2000)



Source: World Development indicators 2002.

The Figure 3.2 shows that after 1985, there was a significant increase in gross primary enrolment, which could be associated with the increased aid from donor organisations like World Bank, UNDP, and Asian Development Bank. Despite such an increase , there are still wide gaps persistent in Pakistan. These gaps are mostly in three dimensions: 1. Rural-urban , Provincial and Gender. Chapter 6 is devoted to the analysis of the social gaps in different dimensions of education.

3.4 Health

Health is the one of the most important indicators of development. More prosperous nations allocate a significant amount of their national resources to health.

Table.3.1 Pakistan's expenditure on health as % of GDP compared to other countries in South Asia.

Country	1972	1988
Pakistan	1.1	0.9
India	1.5	1.8
Sri Lanka	6.4	5.4

Source: World Development Report 1990.

The above table shows that, like education, health has been getting less attention from the Central Government of Pakistan in resource allocations. The table also provides a reason that why Sri Lanka has been doing well in human development indicators compared to Pakistan.

Table 3.2 Hospital beds in Pakistan (Selected years)

Years	Hospital beds per thousand peoples
1970	0.5208
1975	0.5263
1980	0.5731
1986	0.5995
1993	0.6515

Source: World Bank 2002.

Table 3.2 shows that from 1970 to 1993, hospital beds per thousand of population did not increase significantly, and it shows that the health sector has received lower priority in resource allocation. The life expectancy at birth has increased for both males and females. The NHDR survey 2003 shows that the poor are just not afflicted by a high frequency of illness, but also by high cost of medical treatment which constitutes a major factor in pushing people into poverty.

The poor, due to inadequate nutrition, and hence lowered immunity, are relatively more likely to become ill. Lack of basic public provisions like safe drinking water, unhygienic conditions, and consumption pattern would be expected to result in a relatively high frequency of illness among the poor. A poor community survey report by NHDR/PIDE (2001) reports that, 55 percent of the poor and 65 percent of the extremely poor were reported to be sick.

Table 3.3 Percentage of poor who are sick, number of days of sickness, treatment expenses, and distance travelled for medical consultation (Head of household only)

Economic status	**Sick at time of survey (%)**	**Number of days in current sickness(mean)**	**Treatment expenses (Rs)**	**Patients travelling over 6 kms (%)**
Extremely poor	65.1	94.9	1885	49.4
Poor	55.6	27.4	497	29.5

Source: UNDP (2003).

Table 3.3 shows a high number of extremely poor in sickness, and the greater differences are found between poor and extremely poor in terms of the days of sickness and the expenses incurred in their treatment. The table also reveals the

extremely poor are likely to pay as much as 1885 rupees, as compared to 497 rupees by the poor for their treatment expenses. These expenses are a direct result of the under-funded health sector of Pakistan. Due to the unavailability of trained doctors and other health facilities the poor are forced to visit the local hakims (para medics), These local doctors are trained in traditional ancient medical practices and use out-dated methods of treatment, beside their incompetence, they ask higher charges for their services provided to the poor in rural areas.

The data for life expectancy at birth show an increase for male and female. In 1998-99, it was 62 for males and 65 for females. The infant mortality declined from 162 (per 1000 live births) in the 1960s to 89 in 1998-99. A similar decline was also observed in the under-5 mortality rate. Still about 25,000 to 30,000 women die every year during pregnancy and child birth, and every maternal death, nearly 20 women suffer from chronic ill health (PIDE 2000).

3.5 Poor and health services

Failure to deliver the basic services increases the vulnerability of the poor in the society. This failure is often associated with the low spending on the health sector in Pakistan, which remains as low as 0.8 percent of GNP(1990) relative to other developing countries. Furthermore, the low level of spending on the health sector declined from 0.8 % of GNP in 1990, to 0.7 percent of GNP in 2003. Not only is the spending on the health sector low, but also its allocation within the sector is directed to areas which may not benefit the poor. Clearly, high priority is given to hospitals, medical colleges and curative services in urban areas, while primary health care and rural health services have been ignored, it has led to a high rural-urban disparity in health care, resulting in a repeatedly increasing poverty level in rural areas compared to urban areas, during the last decade.

Consequently, infant mortality rate was high (82 per thousand live births), life expectancy was low, at 63 years, in 2003. Although the country's health indicators improved over time, but its pace has been very low. Maternal mortality is also high at 350 to 435 per hundred thousand births, largely because 78 percent of births take place at home, under the care of traditional birth attendants. Pakistan's health indicators also depict a dismal picture when compared with the countries with the

same level of development. The private sector health services have a fairly good share in health services but it is present only in urban areas and its data is not easily available in Pakistan. The country's health indicators remain poorer than some other low income counties such as India, Bangladesh, China and Sri Lanka.

3.6 Economic growth of Pakistan

An analyses of Pakistan's economic growth, suggests that cumulatively Pakistan has had a good record of economic growth since the 1950s. After the inception of Pakistan in 1947, Pakistan's GDP growth, from 1950 to 1960, was 3.14 percent (real GDP growth), and the following decade of 1960 to 70 doubled the growth rate, recording 6.77 percent growth . The decade of 1970 to 1980 recorded a sharp decrease in GDP growth, down to 4.84% . The 1970s decade was a decade of economic consequences of socialistic polices adopted by the Government of Zulfiqar Ali Bhutto (1971-1977). After the military takeover in 1977, Pakistan had to carry on with the martial law government of General Zia.

The following decade of 1980-90 was a period of reasonable economic progress. The GDP growth registered a rise of 6.11 percent per annum. This progress was achieved by increased foreign remittances and other forms of capital inflow.

The decade marked a remarkable achievement in attracting foreign aid and loans. Due to increased inflows in the foreign exchange accounts, Pakistan achieved a higher growth rate compared to the previous decades. The decade of 1990 to 2000 was the most difficult decade for Pakistan. The average annual GDP growth could not increase on the previous path, and it stood at about 4.44 % for the decade (FBS 2005).

If comparing the global GDP growth rates Pakistan has achieved remarkable growth rates. Taking a comparative look at the three decades under study (1970-2000), one can easily understand that on the face of Global GDP growth of 3.9 %, during the decade of 1970, Pakistan did achieve 4.84 %, in the following decade of 1980s, compared to 3.2 % global growth rate, Pakistan had an impressive rate of 6.11 percent which was not sustained during the decade of 1990 to 2000, but it recorded a higher rate than global growth of 2.3 percent (FBS 2005).

Pakistan's GNP at factor cost was estimated at just over Rs.12 billion in 1950, with a per capita income estimated at Rs.275. GNP in 1986-87 was estimated at over Rs.683 billion, with a per capita income of Rs.6336. However, due to substantial

effects of high inflation in the period the per capita income at constant factor cost was estimated at only Rs.935 in 1986-87, against Rs.275 in 1949-50.

During the last 40 years, the economic growth rate has varied. Analysing the growth rate of Pakistan in terms of five year plans, the annual average growth rate was estimated during the first five year plan (1955-60) at 3.0 percent. During the second (1960-65) and third five year plans (1965-70), the GNP was estimated to have grown by 6.8 percent annually. The period from 1970 to 78 was non-plan, and witnessed a significant slow-down in average annual growth of GNP at only 4.9 %. But it picked up momentum again by the fifth five-year plan (1978-83), averaging GNP growth rate of 6.7 percent. From the sixth five-year plan (1983-88), it shows a downward trend throughout the decade of the 1990s. Three successive plans, seventh, eighth and an other non-plan period from 1998-2000, recorded a GNP growth of 4.2, 3.9 and 3.5 % respectively.

It is fair to comment that, except for the decade of the 1990s, the economy has been progressively moving towards an industrial productive mode, shifting its dependence from an agricultural economic base.

Table 3.4 Ten-year average Pakistan GDP growth rates

	1950-60	1960-70	1970-80	1980-1990	1990-2000
GDP(fc) Global	4.5	5.4	3.9	3.2	2.3
GDP(fc) Pakistan	3.14	6.77	4.84	6.11	4.44

Source: Federal Bureau of Statistics, Islamabad (2005)

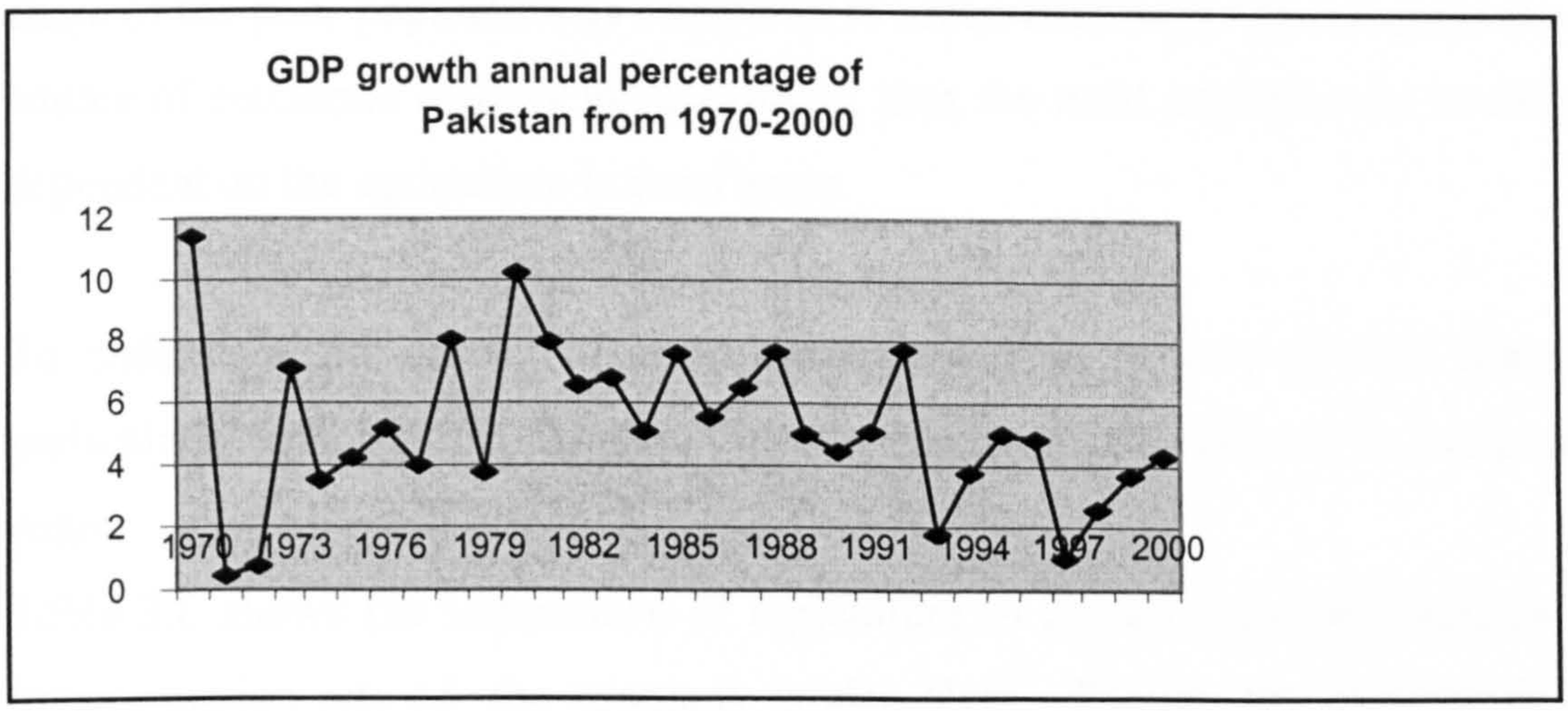
Table 3.5 GNP and GDP growth during Pakistan's five year plans.

	1st 1955-60	2nd 1960-65	3rd 165-70	Non 1970-78	5th 1978-83	6th 1983-88	7th 1988-93	8th 1993-98	Non 1998-2000	
GNP(fc)	3.0	6.8	6.7	5.3	6.4	5.0	4.2	3.9	3.5	
GDP(fc)	3.0	6.8	6.6	4.4	6.6	6.2	4.8	4.3	3.4	

Source: Federal Bureau of statistics, Pakistan (2005).

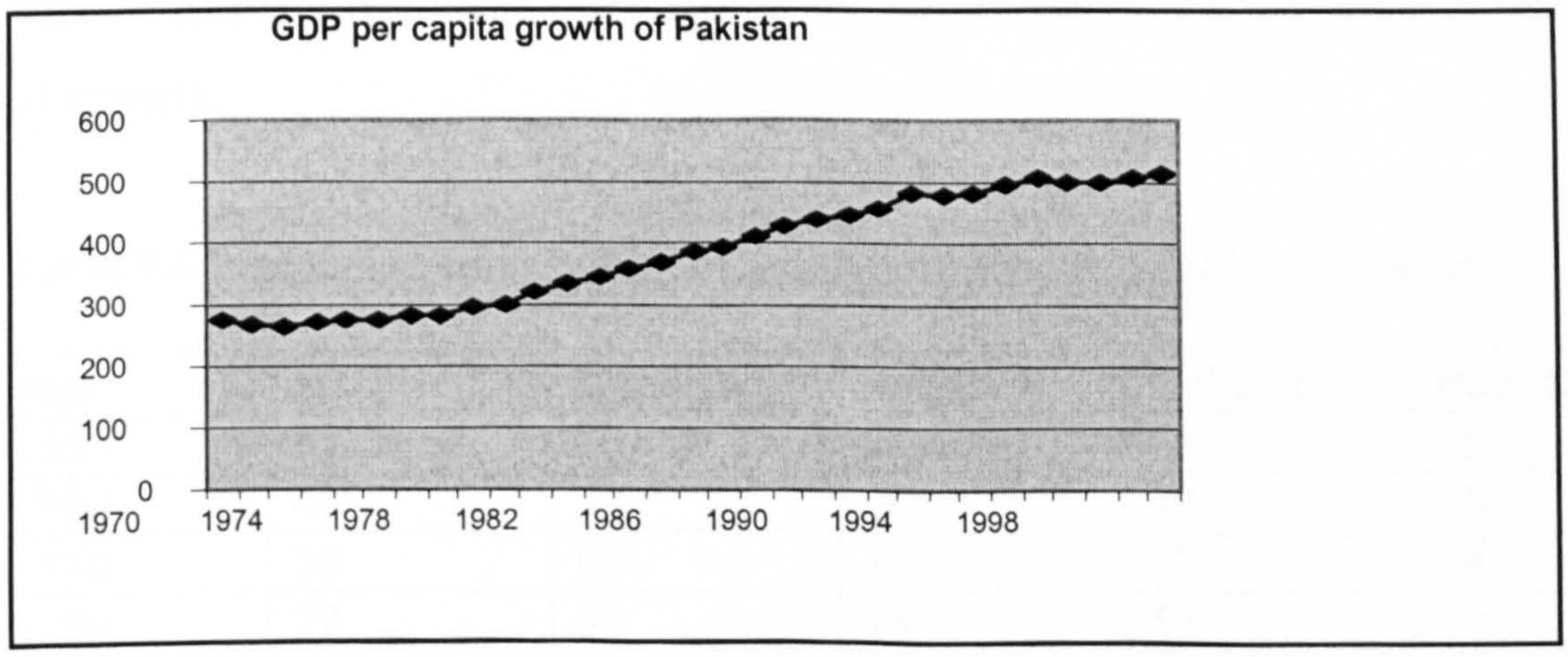
Figure 3.3 also indicates that despite high jumps in annual growth rates in some years, Pakistan's high GDP growth has not remained sustainable throughout the three decades under study.

Figure 3.3



Source: World Development Indicators (2002)

Figure 3.4



Source: World Development Indicators (2002)

Further, we shall look into the sectoral shares of agriculture and industry to know at what pace Pakistan has been progressing towards industrialisation.

3.7 Agricultural growth in Pakistan since 1947

In 1947, about 85 percent of Pakistan's population was living in rural areas, and agriculture was the main source of income for the population. Agriculture was then contributing one half of the total GDP of Pakistan. Due to structural changes in the

last forty years, there has been a significant shift in the contribution of a high proportion of agriculture to GDP in Pakistan. The issue of rural poverty and development can not be fully appreciated without examining several interrelated aspects of changes in the agriculture sector. Rural areas of Pakistan have the major share of the poor population as compared to urban Pakistan. Agriculture is the main source of economic activity in rural areas, thus the rural population's livelihood is dependent on the agriculture in rural areas.

To understand the impact of agricultural growth on poverty in rural areas, it is particularly important to examine first the nature of this growth in the past fifty years.

Table 3.6 shows the importance of agriculture in the economy of Pakistan. The transformation rate of the economy is also clear. Though the importance of the economy has been declining in overall process of economic growth in the country, it is still a highly significant contributor to the economy of Pakistan. It still engages 45 percent of the country's labour force, creates over one fifths products GDP, absorbs nearly one-fifth of the imports, and contributes about one-third of the value of exports.

Table.3.6 Percentage contribution of agriculture sector to Pakistan economy

year	GDP	Exports	Imports	Labour	Population
1950	53	80	21	68	85
1960	45	70	26	59	78
1970	38	63	19	57	74
1980	29	59	15	52	71
1990	23	25	19	47	69
1995	22	30	17	45	65

Source: Federal Bureau of statistics, Pakistan (2000).

Table 3.7 Annual average rate of growth of GDP, agriculture value added, and population (1950-1995)

Period	GDP %	Agricultural Value added	Population %
1950-55	3.4	1.4	2.0
1955-60	3.1	2.1	2.1
1950-60	3.2	1.7	2.0
1960-65	6.8	3.8	2.4
1965-70	6.8	6.4	3.0
1960-70	6.8	5.1	2.7
1970-75	4.5	0.8	3.2
1975-80	6.6	3.9	3.1
1970-80	5.5	2.4	3.1
1980-85	6.6	3.5	3.1
1985-90	4.6	4.4	3.0
1990-95	5.6	4.0	3.0

Source: Federal Bureau of Statistics, Pakistan.

Considering the average annual GDP growth rate of 5 percent since 1950, it is evident from Table 3.7 that changes in the growth of GDP have been affected by the growth in agricultural output. However, agriculture growth has been modest and quite uneven. Agricultural output has grown annually at just over 3 percent on the face of rising population growth a rate of 1.9 to nearly 3.0 percent. The impressive record of agricultural growth was in the 1960s, followed by the decade of modest growth in the 1980s. The rate of agricultural growth was less than the population growth rate in the 1950s and 1970s. In the first half of the 1990s, the annual average growth rate fallen to 3.4 % from 4 percent in the 1980s.The lower rate of growth of agriculture, and the relatively slow growth in industrial output, have kept the annual average growth rate of GDP at just over 4 percent in the first five years of the 1990s.

The aggregate growth rates of agricultural output do not reveal several important aspects of growth and distribution.

1. All sub-sectors do not show a sustained growth, which is clear from the imbalances in some crop's patterns.
2. Growth in output was not achieved through efficient and cost effective productive modes, even those areas which were regarded as highly significant.

3. The growth experience has been highly uneven between regions with or without irrigation. These variations are even higher in those provinces with a limited access to irrigation facilities.
4. Farm groups have been affected unequally, depending on their access to land and other related income-earning opportunities within or outside the agriculture sector.

All these generalisations can not be demonstrated due to insufficient data availability. Some available studies are also based on scattered primary (farm level) and secondary (aggregate) data. Agricultural growth did not recover until 2002. Pakistan's latest growth rate of 8.4 percent is remarkably high after a long time of stagnant growth, which is accompanied by the 7.5 % agricultural growth , but the question remains whether Pakistan can sustain this growth rate in coming years.

3.8 Industrial growth of Pakistan

At the time of inception of Pakistan, as mentioned above, the economy of Pakistan was essentially agrarian. There were only a handful of manufacturing units in the country. However, the growth of manufacturing output has been quite impressive, at an average annual rate of 7.4 % over the 1949-50 to 1994-95 periods.

Table 3.8 Growth rate of manufacturing sector of Pakistan.

Period	Small scale manufacturing%	Large scale manufacturing	Total manufacturing %
1950-60	2.3	15.4	7.7
1960-70	2.9	13.3	9.9
1970-80	7.9	3.9	4.8
1980-90	8.4	8.1	8.2
1990-95	8.4	4.4	5.5
1995-96	8.4	3.1	4.8
1950-95	5.4	9.4	7.4

Source; Pakistan Economic Survey, various issues.

Starting from a low industrial base, the manufacturing output registered a growth rate of 7.7 percent in the 1950s.The growth rate accelerated further to 9.9 % in the 1960s, but fell to 4.8 percent in the 1970s. The growth rate of manufacturing output, however, increased to 8.2 percent during the 1980s but fell to 5.5 percent in the 1990s. The small-scale and large scale manufacturing sectors do show a different

trend over the studied period. The divergent trends in small and large-scale manufacturing growth are actually indicators of various government policies. Table 3.9 shows the total contribution of manufacturing to the GDP of Pakistan.

Table 3.9 Percentage of sectoral share of manufacturing in GDP (Constant prices)

Period	Small scale manufacturing	Large scale manufacturing	Total manufacturing sector
1949-50	5.5	2.2	7.8
1959-60	5.1	6.9	12.0
1969-70	3.5	12.5	16.0
1979-80	4.6	12.4	17.0
1989-90	4.9	12.7	17.6
1994-95	5.8	12.4	18.2

Source: Pakistan economic survey, various issues.

Small-scale manufacturing in the 1950s and the 1960s grew at the rates of only 2.3% and 2.9 percent respectively, mainly because incentives were focused on large-scale, and small-scale manufacturing was discriminated against by the large-scale manufacturing. The small-scale manufacturing sector had to pay more for raw material purchasing, compared to the large-scale manufacturing which was paying less for the same. During these two periods, the large-scale manufacturing growth rate touched 15.4 % and 13.3 % respectively.

During the 1970s, the growth rate of small-scale manufacturing was increased to 7.9 percent, while growth rate of large-scale manufacturing declined to 3.9 %. The small-scale manufacturing had better access to imported inputs, and also benefited from the exemption from sales and excise taxes. The political period of the 70s was devoted towards nationalisation of all private sector enterprises in the country, and economic policy of the regime was to encourage the small manufacturing industry. It is estimated that since 1970, the growth rate of small-scale industries has been around 8 percent.

The decade of the 1980s registered a sharp increase in the large-scale manufacturing industries. The growth of this sector was about 8.1 percent in the 1980s, but that growth was not sustained in the decade of 1990s, Our thesis shows in the later chapters that the 1990s was indeed a disastrous decade for Pakistan's economy. The growth of large-scale manufacturing industry fell around 4.4 percent in 1990s. The growth rate in large-scale manufacturing in the 1980s was essentially due to policy-induced productivity enhancement in public sector enterprises, and the

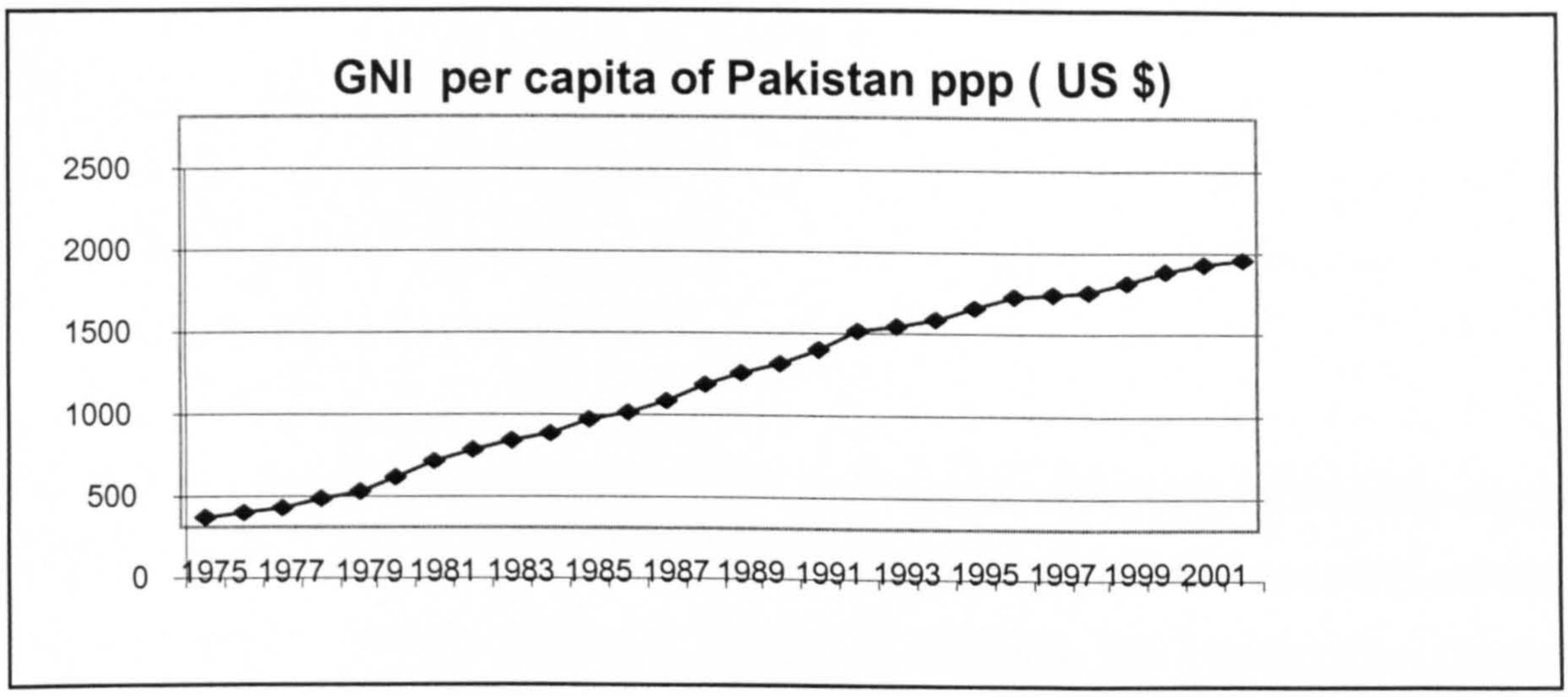
removal of restrictions on investments and imports. Even though the growth rate of the manufacturing sector has been quite impressive overall, if evaluated on value added on the world prices, its contribution to the GDP is much smaller.

The industrial sector continued its modest growth till 2002 . A slow growth performance of the economy forced the Pakistan government to revise the growth targets in 2001-02, because the industrial sector could grow only 8.6 % in 2001-02. The manufacturing sector showed signs of recovery after 2003-04, and continued to grow by 2004-05. Overall manufacturing, accounted for 18.3 % of GDP in 2004-05, registered 12.5 % against the 10.2 percent. Large-scale manufacturing, accounting for 69.5 percent of overall manufacturing, and 12 .7 percent of GDP in Pakistan in 2004.(Pakistan Economic Survey 2004-05).

3.9 Per capita income growth

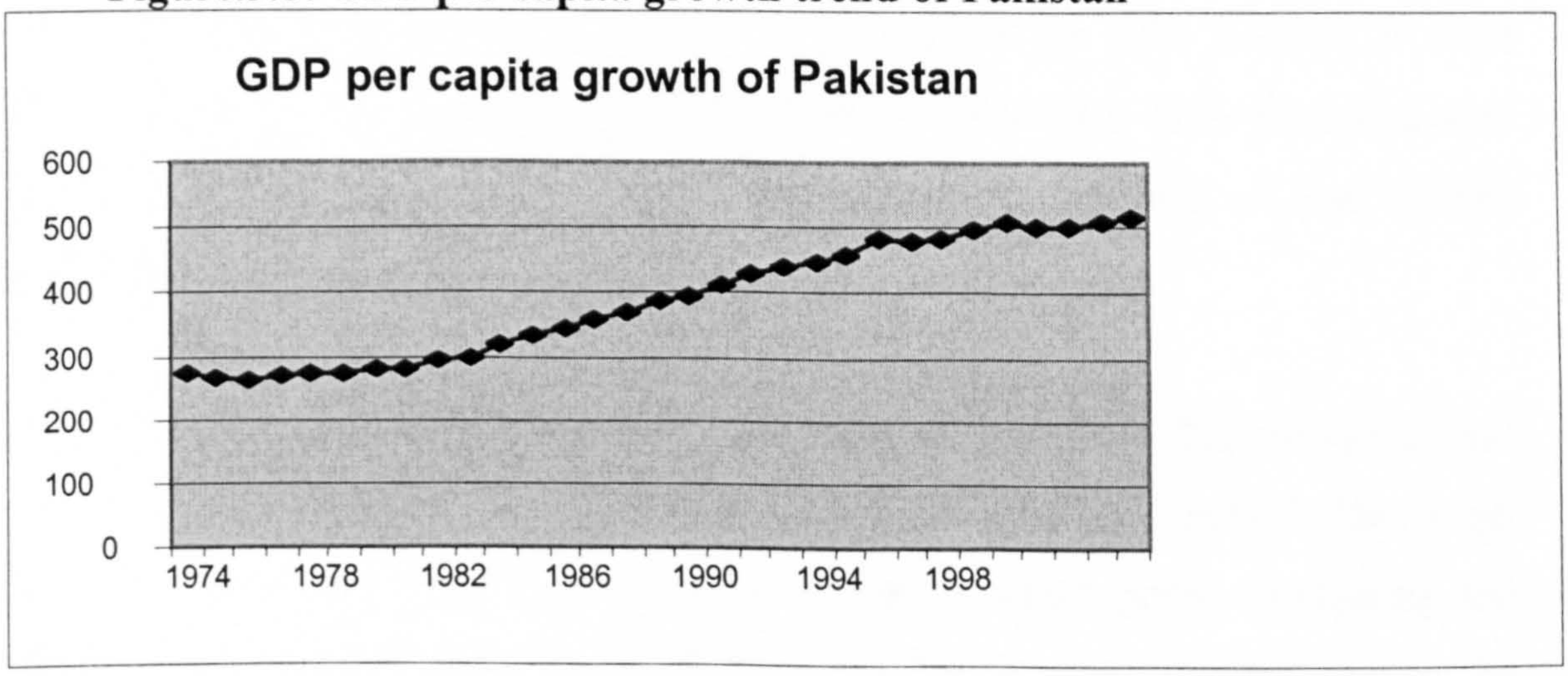
Per capita income is one of the main indicators of development. It simply indicates the average level of income. Per capita income, is defined as GNP at market price in dollar terms, divided by the country's population. Per capita income grew at a much slower pace of 1.4 percent per annum in the 1990s. The 1990s was a decade of slow economic growth. Overall economic growth of the 1980s
shows a relatively a better increasing trend. (Figures 3.5 and 3.6)

Figure 3.5 : **GNI per capita of Pakistan (PPP $)**



Source; WDI,2002

Figure.3.6: GDP per capita growth trend of Pakistan



Source: WDI (2002)

The per capita income in dollar terms has grown at an average rate of 13.5 percent per annum after 2002-03 to 2004-05, rising from $ 579 in 2002-03, to $ 657 in 2003-4, and reached to $736 in 2004-5. The main factor responsible for the sharp rise in per capita income could be associated with the high GDP growth achieved by Pakistan in these three years consecutively.

3.10 Inflation

Price stability has a primary importance in any economy, especially in those economies with a vast population living in abject poverty. Volatility of inflation

further deteriorates low income groups purchasing capacity, pushing them further towards poverty.

In Pakistan, the following four price indices are published.

1 Consumer price index (CPI)
2 Wholesale price index(WPI)
3 Sensitive price index (SPI)
4 GDP deflator.

The CPI covers retail prices of 375 items in 35 major cities and reflects the cost of living in urban areas of Pakistan. The WPI measures the price movement of selected items in the primary and wholesale markets of Pakistan. The commodities covered under WPI are those which are offered in lots for sale. The WPI covers the wholesale price of 425 items prevailing in the city of origin of the commodity. The SPI covers prices of 53 essential items consumed by those households whose monthly income ranges from Rs. 3000 to 12000 per month. In most countries, the main trend assessing inflationary trends is placed on the CPI, because it most closely represents the cost of living. In Pakistan, too, the main index for inflation is taken as the CPI. But in countries like Pakistan, with a majority of low income population, SPI could give a useful picture.

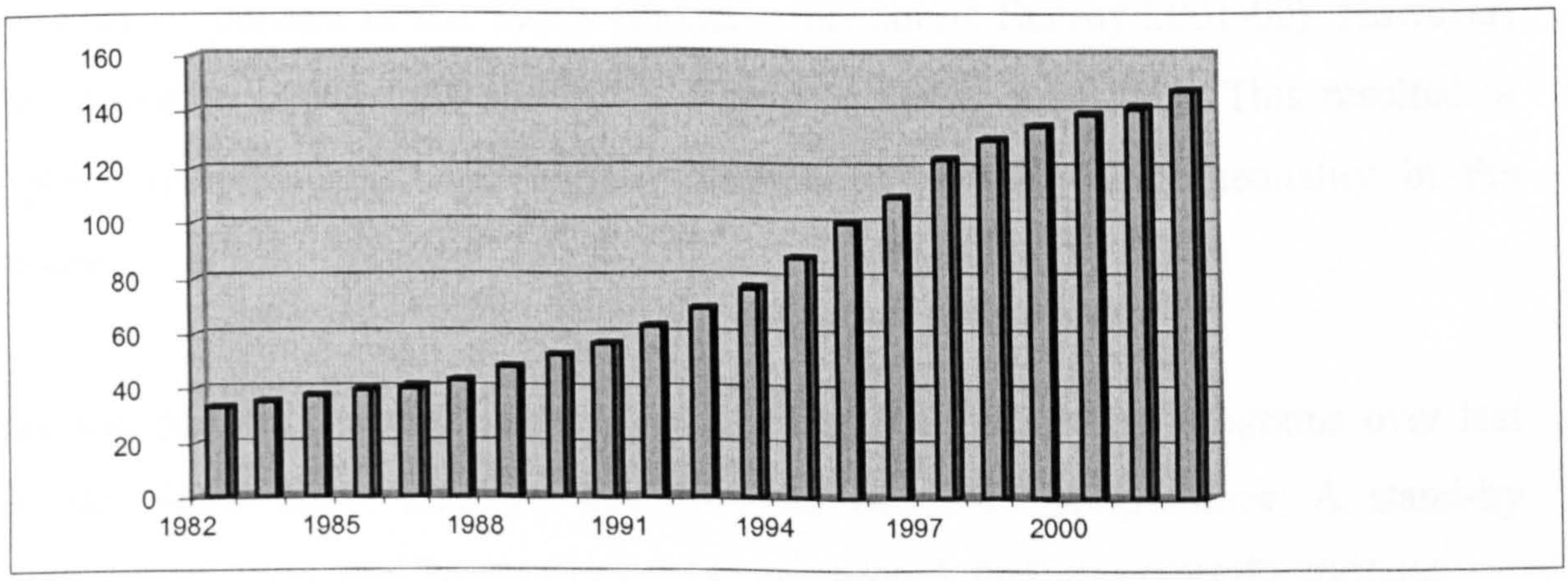
Figure 3.7 shows the inflation trend in CPI from 1970 to 2000. The overall prices' situation does not show any sign of sustained stability in any period. The graph shows that there is a high rise in inflation after a small pause. Analysing the inflation, one may observe that the highest inflation was recorded during the decade of the 70s when the inflation was highest as compared to the other two decades. The high rise in inflation during the 70s could be attributed to the two factors a rise in oil prices and nationalisation of the private enterprises in Pakistan, the transition of the economy from a private to nationalised bases created a supply gap. The following decade of the 80s also continues the inflationary trend, where a rise in prices to a significant level is evident, but compared to the 70s and 90s, it has relatively lower path . Prices remained volatile during the decade of the 1990s, ranging from 5.7 percent to 13 percent. This high rise is mainly associated with the decelerating economic growth, expansionary monetary policies, output setbacks, higher duties and taxes, depreciation of the Pakistani rupee, frequent changes in the prices of gas and electricity, gas and petroleum products. Price rises were intensified

in 1994-95 as inflation went up to 13 %. High rise in both food and non-food inflation contributed to the high inflation rate, averaging 12.2 and 10.7 % respectively, against the overall CPI inflation of 11.4 % during 1990-97. The inflation on CPI has been lower compared to the food price index, from 1982 to 1990, (Figure 3.7) shows a constant increase. A high rise in Food prices could be noted from 1990, at relatively higher rate. Food inflation between 2003 and 2004 increased because of increase in principal food items like wheat flour, meat, and fresh vegetables.

3.11 Impact of inflation on low income groups

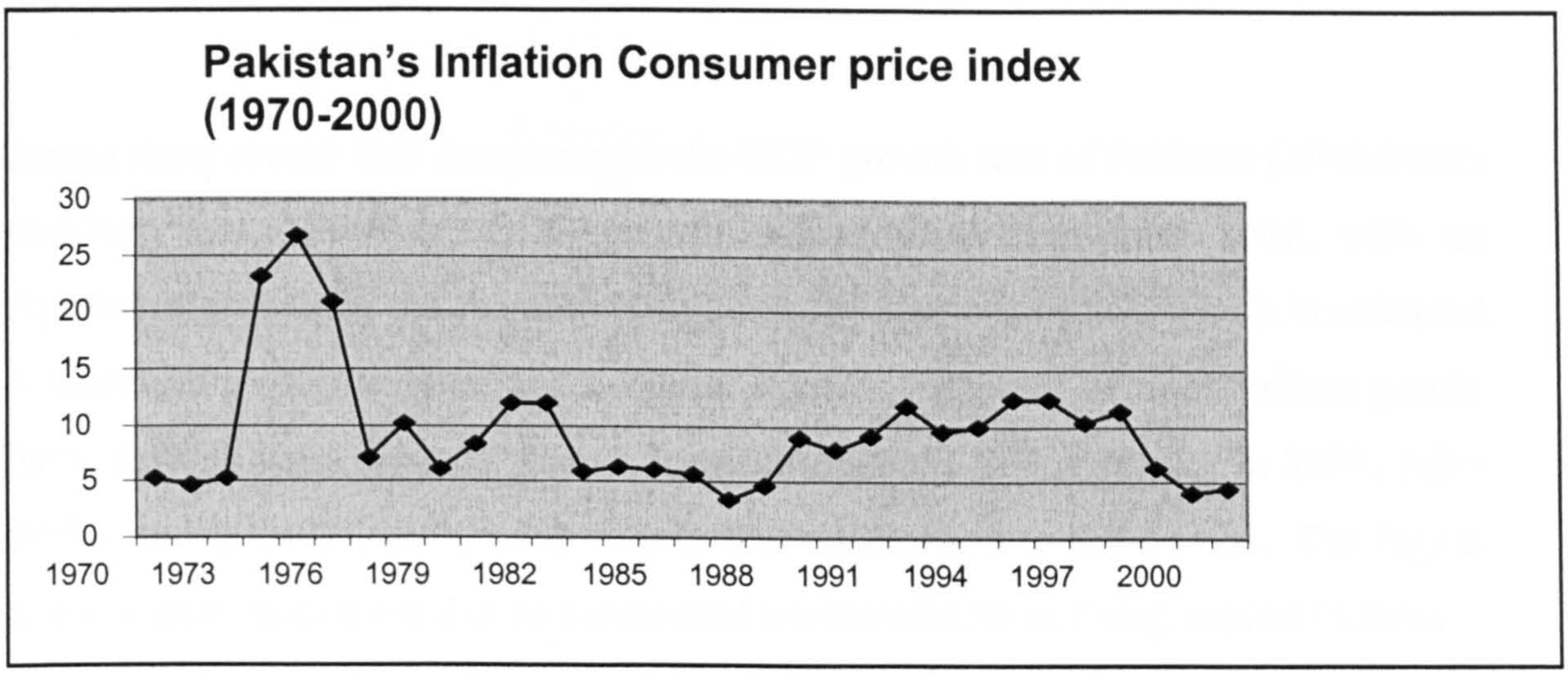
Inflation has a greater impact on the living standard of poor the segment of the society. In a country like Pakistan, where a vast majority of people is concentrated in rural areas , unemployment and underemployment are high. Rising inflation can further deteriorate their existing living standards. The Pakistan government's official publication Pakistan Economic Survey (2003) confirms that inflationary shocks are unsustainable for the lowest income group in Pakistan, which has income around Rs.3000 to 12000. The study shows that lowest group has experienced relatively higher inflation (4.5%) as compared to high income groups (3.7%). This is due to higher food inflation as the poor spend a larger share of their money on food items

Figure 3.7. Food price inflation in Pakistan



Source: WDI 2002.

Figure 3.8 Pakistan inflation CPI (1970-2000)



Source: WDI (2002)

3.12 Pakistan economy after 2000 at a glance

Pakistan achieved an average growth rate of 6 percent from 1960 to 1987 (Pakistan Economic survey 2001-2). This average growth rate is impressive compared to the other South Asian countries. The growth rate was mainly regarded as an outcome of increasing capital inflows in terms of foreign exchange during the above period. Increased level of foreign exchange was due to overseas worker's remittance contributions during this period. The foreign aid and loans have also played an important role to boost economic growth during this time. The high capital inflows, pushed by a reasonable economic growth, resulted in increased employment, resulting in decline in poverty. Poverty was declined from 40 percent in the 1960s to about 17 percent in the 1980s (Pakistan Economic Survey 2001-02). However, the economic growth rate slowed to 4 percent during the 1990s. This resulted in higher unemployment, and higher incidence of poverty and inequality in the country.

Pakistan has pursued a number of IMF/World Bank structural programs over last decade. Since 2000, Pakistan has followed two IMF programmes: A stand-by arrangement 2000, and Poverty reduction and growth facilities (PRGF) 2001-04.
While these programmes were primarily aimed to help Pakistan's fiscal deficits, enhancing export volume, and to achieve significant improvements in governance, it

is also argued that these programmes will have a significant impact on poverty reduction in the long run.

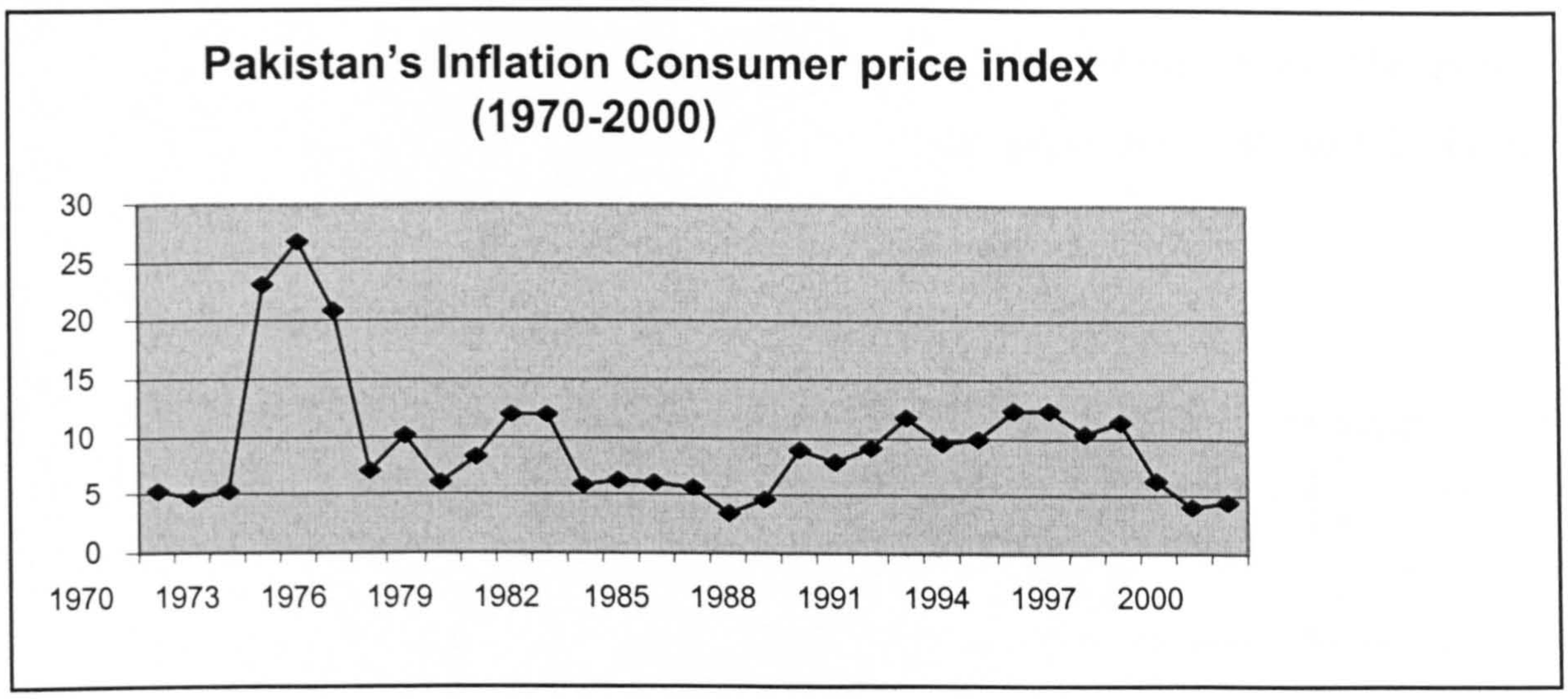
During these recent IMF programmes the GDP growth rate of Pakistan (2000-2002) remained low. However, GDP growth started recovering after 2002, with an impressive growth in the manufacturing and the services sector, which is reflected in increased export volume and a higher level of imports of intermediate goods. Fiscal deficits were reduced from 5.2 percent in 2002 to 4.4 percent in 2003. After 2003-4 and 2004-05, the growth rate further accelerated to 8.4 percent. The higher levels of growth rate are due to substantial improvements in rising capital inflows in the form of worker's remittances. After 2000 a substantial improvement has also come from the rising capital inflows in the form of worker's remittances. As a result, accumulation of foreign exchange reserves accelerated, pushing up the reserves to an unprecedented level of over US$12.6 billion (16.5% of GDP).(SBP 2004, & Pakistan Economic Survey various issues).

This chapter discusses the recent trends in economic growth in Pakistan. We shall glance at the fiscal policy and the trends in revenue and expenditure in the economy. Section 2 discusses the monetary policy and issues in the monetary and credit developments. Section 3 examines the external sector developments as well as the cost of holding foreign exchange reserves for Pakistan. Section 4 looks at the trends in various dimensions of poverty and implications of revival of growth for poverty and employment. Finally, we draw some conclusions and offer policy recommendations.

3.13 Economic growth and inflation in Pakistan

After performing below its potential over the past few years, (2000,-2002), the performance of Pakistan's economy has been marked by acceleration in economic activity in 2003. The real GDP grew by 5.1% on account of recovery in agriculture, and faster growth in manufacturing and the services sector of Pakistan.

Figure.3.9



Source: WDI 2002.

After negative growth over the past two successive years, agriculture sector recovered to 4.1 percent growth in the year 2003. The growth in the agriculture sector, which accounts for 23 percent of GDP, was primarily due to a rise in the productivity of important crops (wheat, cotton, rice and sugarcane) which are the main contributors to the total agricultural output of Pakistan. The share of these crops was 40.6 percent of total agricultural output. Agriculture sector output cumulatively grew by 5.78 percent. While cotton production recorded a negative growth rate (3.6 %), all other major crops registered a significantly higher growth rate (6.9 % to 15 %).

On the other hand, minor crops that contribute 15.9 percent to value added in agriculture recorded a marginal growth of 0.4 percent in the year 2003. Livestock which accounts for 39 percent of overall value addition in the agriculture sector recorded a modest growth of 2.9 percent (Pakistan Economic Survey 2004-5 & SBP 2005).

Recovery in the agriculture sector had also contributed to the faster growth in industry. The growth in industrial sector which accounts for 25.6 percent of GDP was largely contributed by a remarkable performance of large-scale manufacturing which grew by 8.7 percent during the year 2003. Significant increase in the production of consumer durables (automobiles and electronics), higher output of construction-related material, and expansion in exports of textile products were the

main factors for the strong performance of the large-scale manufacturing sector. The services sector which accounts for about 51 percent of Pakistan's GDP, shows faster growth rate than agriculture and industry over the past few years. The growth in the services sector accelerated from 4.1 percent in the year 2002 to 5.31 in the year 2003.

Table 3.10 Recent inflation trends in Pakistan

	1999	2000	2001	2002	2003
CPI	5.7	3.6	4.4	4.5	4
SPI	6.4	1.8	4.8	3.4	-

Source: Pakistan Economic Survey 2004-05

Inflation decelerated in terms of CPI over the past few years. CPI remained in the range of 3.1 to 4.4 percent. Which is being associated with the weak import prices and decline in the real private consumption in the last three years. However, inflation accelerated to 5.4 percent in the first half of 2004, mainly due to a sharp increase in food prices. Food inflation rose to 10.2 percent in May 2004 which ultimately reached to 50 percent at the SPI in 2003-04, (Pakistan economic survey 2004). The main contributory factors for the sharp increase in food inflation were supply shortage and higher international prices, Market monopolies are also to be blamed for continued inflationary trends in Pakistan.

3.14 Saving and investment

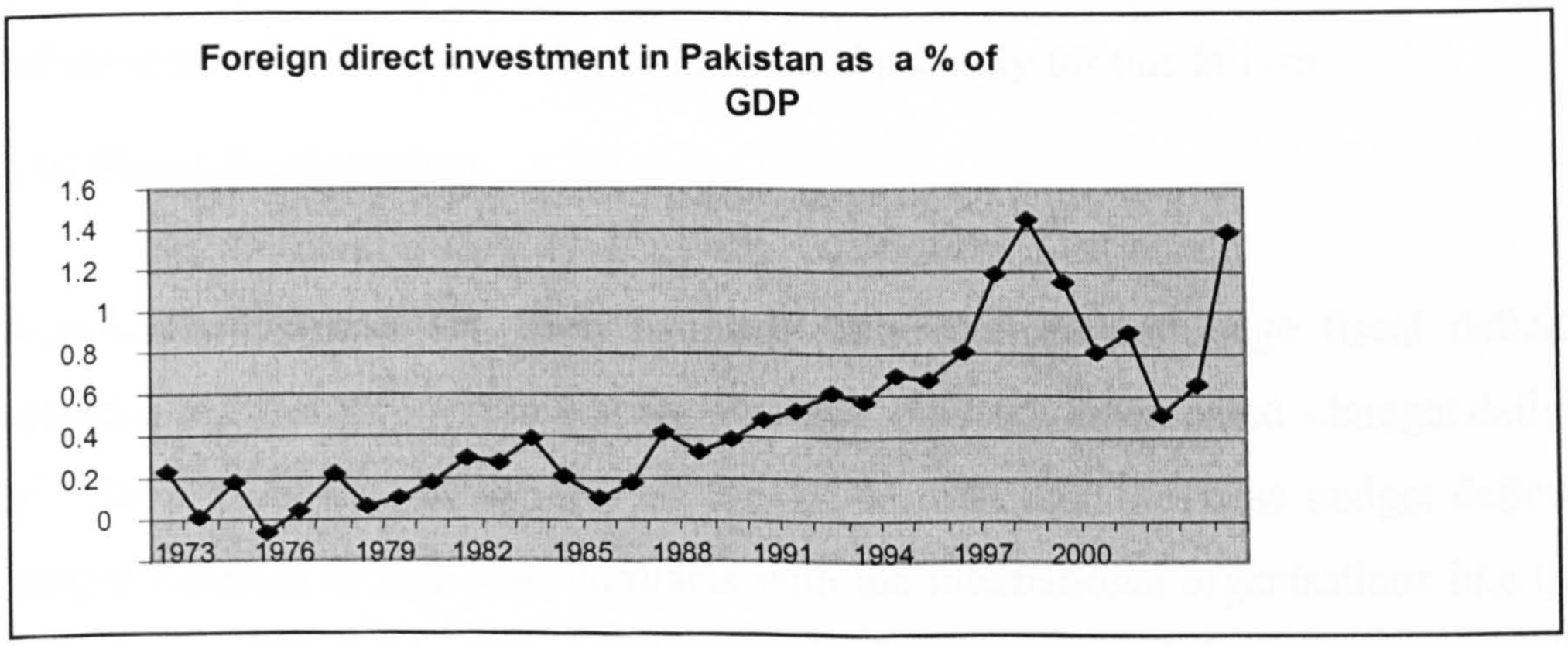
Pakistan's national savings increased substantially from 16.8 in the year 2001-2002 to 18.5% of GNP in 2003. The main factor to boost the savings rate was the increased inflows of foreign remittances by the Pakistani workers abroad. However, despite a substantial increase in savings, increase in overall investment was marginal. Total investment as percentage of GDP increased from 14.7 % in 2002 to 15.5 percent in 2003. This level of investment as percentage of GDP is very low, especially when compared with other developing countries. The total investment stands around 20 percent of GDP.

Although fixed investment grew by 10.5 percent in 2003 the high growth was due to a lower base in 2002. Interestingly, fixed investment, as a percentage of GDP

remained stagnant at 13.1 % implying that the marginal increase in overall investment was due to changes in stocks. While private investment remained stagnant at 8.4 % of GDP over the last five years and increased marginally in 2003, public sector investment declined during 2000-05.The private investment in public sector was remarkably low which was associated with the government policies which have been not encouraging. Thus stagnant private sector investment was the direct cause of a reduction in public sector investment which is associated to the persistent budget deficits consecutively over last four years. Low private investment in public sector, could be regarded as a failure of policy initiatives by the government of Pakistan. This explains, despite incentives offered by the government why the picture of private investment is less then encouraging in Pakistan.

3.15 Foreign Investment

Figure. 3.10. Foreign direct investment (FDI) in Pakistan.



Source: WDI 2002.

Historically, Pakistan has never attracted any impressive amount of foreign direct investment (FDI). Figure 3.10 shows the trend of FDI since the 1970s. The FDI trend is lower during the decade of the 70s, which reflects the impact of nationalisation policy of the then government.. The nationalisation effects could

have continued to the following decade of the 1980s. After a long sluggishness in the second half of the 1980s, the FDI continued to rise during the 1990s decade, despite uncertain political situations and a higher frequency of government changes in Pakistan. It peaked during 1995-1997, but the trend shows a sharp decline after 1997, and continues to depict a less than encouraging picture to date.

While domestic investment remained stagnant, foreign investment did not show any significant improvement, despite enormous incentives offered to foreign investors over the last half decade .

FDI remained in the range of US $322 to US $ 798 million accounting for less than 1.0 % of total FDI to the Asia Pacific region over the last four years. On the other hand, foreign portfolio investment did not exceed US$ 73.5 millions, and witnessed a decline trend in the last four years. There are number of reasons to account for failure to attract FDI in Pakistan. Investment in the public sector is an essential condition to create a favourable environment for foreign investment. Investment in human capital and physical infrastructure is the basic criterion to attract investors: unfortunately, Pakistan's record is not better than that of neighbouring South Asian countries, particularly, India and China. Political instability is another factor which contributed to this disappointing outcome. The unsatisfactory law and order conditions, slow bureaucratic process, and inadequate infrastructure facilities were also to be blamed partially for this failure.

3.16 Fiscal development

Historically Pakistan has been facing a fiscal deficits and huge fiscal deficits persisted in Pakistan over the last two decades. Pakistan maintained a budget deficit of 7 % of GDP on average, during the 1990s (SBP 2004). These budget deficits compel Pakistan to sign loan contracts with the international organisations like the IMF. Since 2000, Pakistan has signed two fresh IMF loan contracts:

1. Stand by arrangements, 2000.

2. Poverty reduction and growth facility (PRGF), 2001-04.

The basic purpose of the IMF programme is to balance the fiscal deficits. As a result of such programmes, the fiscal deficit of Pakistan has been reduced marginally. It declined from 6.6 percent of GDP in 2000 to 5.2 percent in 2001, and with no sign

of reduction in 2002, it then declined further to 4.4 % of GDP in 2003. After 2000 the government of Pakistan took some reasonable measures to grab the tax evaders, and new measures were designed to reinforce tax collection in an effective manner. These measures seem to produce better results, and tax revenues show some modest improvements.

As a result both total revenue to GDP, and tax to GDP ratios improved from 17.2 to 17.7 % and from 13.2 to 13.7 % respectively (SBP 2004). On the other hand current expenditure as a percentage of GDP declined from 19.3 % to 19.2 %. The expenditure as a percentage of GDP on education and health remained stagnant at best, and declined at worst, over the past few years. However, development expenditure, which was already low, also declined from 3.5 percent of GDP in 2002 to 3.2 % of GDP in 2003. Thus, the target of fiscal deficit has been achieved at the expense of public sector development and social sector expenditure, which is critical to future economic growth and poverty reduction.

Pakistan's public debt also declined over the last two years. The reduction in debt-to-GDP ratio was mainly due to the substantial primary surpluses, falling interest cost, and a slight appreciation of the Rupee against the US dollar.

3.17 Monetary and credit development

The State Bank of Pakistan (SBP) is the central bank of Pakistan, which is also the monetary authority of the country. Pakistan's monetary policy focus has been on avoiding the appreciation of the Pakistani Rupee against the US Dollar, which is primarily aimed to promote the exports of Pakistani commodities in international markets. Over the last few years, monetary policy has been dominated by the growth in net foreign assets (NFA) due to the external account surpluses. To achive this objective, the State Bank of Pakistan has been purchasing foreign currency from the kerb and inter-bank market. As a result, growth in money supply (M2) was increased to a high level, which is to be attributed to the exceptional increase in foreign assets of the banking sector.

M2 increased by 15.4 percent and 18.0 percent in 2002 and 2003, respectively

The Government's fiscal position improved because of higher revenue, greater availability of cheap external financing and larger-non banking borrowing.

Bank credit to the private sector increased tremendously, reaching 167 billion rupees in 2003, compared to the 53 billion in 2002. The biggest allocation of private sector bank credit was to the manufacturing 55%, personal loans 17 % , agriculture 14 %, and commerce 11 %, (SBP 2004).

The easy monetary policy coupled with cuts in discount rate and decline in average lending rates were the important factors in credit utilisation by the private sector.

3.18 Balance of Payments

Despite sluggish economic activity and rising international oil prices, Pakistan's external balance of payment improved. External sector had started improving since 2000 The improvement has been mainly due to the increase in worker's remittances and growth in export. The reduction in the rate of export finance scheme and increased textile quota and greater market access in the European Union was due to Pakistan's political position as a western ally in the war against terrorism, which contributed significantly towards high export growth in recent years.

A substantial increase in worker's remittances contributed towards recovery of the ailing economy. The remittances were almost doubled, rising from Rs.1.1 billion in 2001 to Rs.2.4 billion in 2002, and finally reached Rs.4.2 billion in 2003. (SBP2004). Fall in interest payments following the re-profiling of bilateral loans (Paris Club), retirement of some expensive debt liabilities, and the partial substitution of expensive debt with soft loans from IFIs also contributed positively.

Consequently, the current account balance of Pakistan turned out to be surplus in 2001, and posted surpluses of US$ 2.8 billion, and US $ 4 billion, equivalent to 4.8 percent and 5.9 percent of GDP, in 2002 and 2003, respectively. The increase in workers remittances is related to the international drive against the illegal means of money laundering after September 2001, which shook the confidence of Pakistani workers in the USA and elsewhere so they tend to shift their savings to their home country.

3.19 Exchange rate management of Pakistan

The exchange rate is a very important tool of trade for any country. Pakistan had a fixed exchange rate regime till the 1980s, which was aimed to support Pakistan's import substitution industrialisation strategy. The exchange rate was to keep the Pak rupee overvalued in comparison to other currencies, in order to keep Pakistan's imports of machinery and raw material cheap.

After the 1980s the exchange rate regime is managed float, with international relative prices adjusted smoothly, reflecting balance of payments performance. In more recent years, the exchange rate has become more an instrument for adjusting the countries macro-economic imbalances, rather than for supporting trade policy.

The managed float exchange rate regime in Pakistan has been concentrating to avoid the distortion which existed during the 1980s decade. However, in assessment of alternative exchange rate regimes, it is important to distinguish between (1) the effects of long run realignment of currency value over time, which can occur under any realistic exchange rate system and (2) the effects of floating exchange rates themselves. Advocates of more stable exchange rates frequently argue that floating rates reduce monetary discipline, and thus contribute to more divergent and high rates of inflation and, hence, to currency realignments (Helleiner 1990).

There is little evidence that the Pakistani rupee has been seriously overvalued. This is clear from the movement in the nominal exchange rate vis-à-vis major trading partners (the US, Japan, Germany, UK and France) who together account for nearly half of Pakistan's foreign trade. (imports plus exports). Table 3.11, gives the movement in the nominal effective exchange rate of the five major trading partners weighted by their share in trade between 1980-81 and September 1995. The calculations show that NEER depreciated from 100 to 405. In other words, the same unit of a major trading partner's currency now cost nearly four times as much as in 1980-81. This is a substantial nominal devaluation of the rupee (SBP 2004).

Table 3.11 Nominal effective exchange rate of five major trading partners

countries	1980-81 RO	Sept 1995 R1	(R1-RO)RO Trade weight		NEER
USA	9.91	31.55	2.2	35	111.4
France	2.11	6.64	2.1	8	24.5
Germany	4.92	22.29	3.5	19	86.1
UK	22.68	50.4	1.2	17	37.8
Japan	0.0463	0.32	5.9	21	145.1
				Sum	404.9

Source: Pakistan Economic Survey (2003)

But how have the relative prices moved? Table 3.12 traces the movement of prices in Pakistan and its five major trading partners. The last column of the table shows that trading weighted consumer price index(CPI) of trading partners has increased from 100 to 323. To compensate for differences in inflation, the real effective exchange rate (REER) needs to be adjusted which is simply the NEER (calculated in table.3.11) divided by the relative price index (calculated in table 3.12). Note that NEER is 405, and the relative price index is 241. Thus the depreciation in the nominal exchange rate has more than compensated for the higher inflation in Pakistan relative to its major trading partners. In fact, there has been a substantial depreciation in the real effective exchange rate.

Table 3.12 Trade-weighted relative price index

Countries	1980-81 PO	1995 P1	(P1-P0)P1	Trade weighted	(TW)CPI
USA	100	172	0.72	35	60.2
France	100	204	1.04	8	16.3
Germany	100	148	0.48	19	28.1
UK	100	218	1.18	17	37.1
Japan	100	125	0.25	21	26.3
Pakistan	100	323	2.23	-	167.95
			Relative price index		241

Source: Pakistan Economic Survey (2003)

3.20 Foreign Exchange Reserves

Since the year 2000, the State Bank of Pakistan (SBP) has been pursuing a policy of avoiding appreciation of the Pak rupee against the US dollar to preserve export competitiveness. To achieve this objective, the State Bank of Pakistan has been purchasing foreign currency from the kerb and inter-bank market stemming mainly from increased inflows of worker's remittances. The total State Bank purchases from open market were US $5.6 billion between 1999 and 2002,(SBP2004) While SBP net purchases from the inter bank market were US $6.8 billion between 1999 and 2004. As a result, accumulation of foreign exchange reserve accelerated, pushing up the reserve to an unprecedented level of over $12.1 billion, equivalent to 51 weeks of imports in the financial year 2004.

3.21 Cost of foreign exchange reserve holdings and Poverty reduction

The opportunity cost of reserve holdings could be defined as "the difference between the highest possible marginal productivity forgone from an alternative investment in fixed assets and the yield on international reserve".

However, the common perception is that the opportunity cost of reserve holdings is the interest rate on government debt. But this may not be a right counterfactual position. If assets were not held as reserves, they would be available to nations to fund domestic investment in physical capital. Thus, the opportunity cost of reserve holdings is the marginal product of capital in the nation holding the reserves. While calculating the cost of holding reserves, one should bear in mind that reserves provide some return. Thus, the cost of holding reserves is the difference between the opportunity cost of holding and the return on reserves. The return on physical capital varies across countries. In USA, before tax return remained an average close to 10 % over the post war period. The returns in developing countries are generally higher to compensate for the greater degree of risk. It is expected that the return on capital exceeds 20% in many of the poor countries. Evidence shows that public investment in infrastructure or education, which are two other alternative uses of assets, held as reserves, may give even higher rates of return than physical capital. On the other hand, the reserves held as interest-bearing deposits, such as the short-

term government debt of the USA, earns a very small rate of interest of about 1.0 %. It is noteworthy that the costs of poor nations are benefits in terms of low interest loans to the nations that supply reserve currencies, primarily the United States.

To calculate the cost of reserve holding, two set of estimates have been computed. The low end estimate assumes 10 percent cost of holding reserves, while the high end estimate assumes 20 percent cost of holding reserves. The low end assumption means that return on physical or human capital in poor countries is slightly higher than the USA, while high end implies that a relatively high rate of return on human and physical capital which has been the case in many poor countries. It is clear that the cost of increased reserves holdings has been substantial over the past three years. The cost of reserve holding increased sharply after 11 September, when the country witnessed heavy foreign capital inflows in the form of workers remittances, and SBP accumulated reserves through its purchases of foreign currency.

At the high end, which is more relevant for Pakistan, being a poor country, the annual cost of reserve holding has more than tripled over the past three years, rising rapidly from US $644 million or 1.1% of GDP in 2001 to US $ 2.5 billion or 3.3 % of GDP in 2004.

The cumulative cost of reserve holdings is US$5.9 billion, or about rupees 340 billion over the past three years. Thus, by diverting resources from more productive uses, the unprecedented rise in foreign exchange reserves holdings in Pakistan has imposed a substantial cost which has impeded significant economic and social progress over the past three years. This provides an answer to the question why the poor and the common man are not benefiting from the recent micro-economic gains.

Given the fact that the cost of reserves holdings has been substantial, and the main source of capital inflows is overseas workers remittances, the country does not require to maintain such high levels of reserves. If we consider the adequate level of reserves equivalent to 15 weeks of imports, the country was required to maintain reserves at US $ 3.7, billion in March 2004(SBP2004). By this criterion, the country was maintaining access reserves equivalent to US $8.9 billion, which involves a heavy cost of US $ 1.8 billion per annum or 2.34% of GDP. Notably, the cost of excess reserve holdings just exceeds the social sector budget of the country.

Foreign remittances play a direct role to increase household income; there is a need of a separate empirical study to know the exact magnitude of foreign exchange remittances to reduce household poverty in Pakistan.

3.22 Cost of foreign exchange reserve holding in South Asia

After estimating the cost of foreign exchange reserves holding in Pakistan, it would be interesting to examine how this heavy cost compared with other South Asian countries. Since all South Asian countries are poor, a cost end scenario is presented here. Clearly, India has the highest level of foreign exchange reserves, not only in absolute terms, but also in terms of months of imports. Thus, it has been bearing a huge cost at US$ 14.0 billion per annum. In contrast, Bangladesh holdings were just close to its adequacy level i.e equivalent to three months of its imports and thus bearing a very low cost. It is noteworthy that Pakistan bears the highest cost of holdings as a percentage of GDP in South Asia, followed by India. Thus, by maintaining high levels of reserves, both India and Pakistan have clearly obstructed significant economic and social progress in recent years. The accumulation of reserves in many developing countries is a reflection of imbalance in the current account of some countries, primarily the USA. The USA has a twin deficit: the current account deficit of 5 percent of GDP and fiscal deficit of 6 percent of GDP, Strangely, it is the developing countries, including India and Pakistan, that are financing the current account deficit of USA through investment of their reserve in US treasury bills at a very low rate of less than 1.0 percent and negative in real terms. A possible answer to the question why despite higher costs LDCs are inclined to maintain more than required foreign exchange reserves, could be related to the risks associated to international markets behaviour and unfair terms of trade imposed by the developed countries.

3.23 Trends and different dimensions of poverty

Poverty has various dimensions, such as income poverty, child mortality, high rate of disease, illiteracy, meagre assets, inaccessible markets scarce job opportunities, and vulnerability to economic shocks. Health and education are two important

dimensions of poverty. Illness pushes peoples into poverty through lost wages, high spending for disastrous illnesses, and repeated treatment for other illnesses. Likewise, inadequate education is one of the most important determinants of poverty, and unequal access to educational opportunity is a strong correlate of income inequality. It is therefore important to examine progress in these dimensions of human poverty.

3.24 Poverty and education

An other important dimension of poverty is deprivation from adequate education. The state of education in Pakistan also portrays a dismal picture. The public expenditure on education as percentage of GNP was the lowest at 1.8 percent in FY03 in Pakistan compared to other low income countries of the region such as India, Bangladesh and Sri Lanka. It is highly disappointing that even this low level of spending on the education declined further to 1.7 percent of GDP in FY03. Moreover, this low level of spending on the education sector goes largely to recurring expenditure. Not only is the over all budgetary allocation for education sector highly inadequate, but also its allocation within the sector is directed to areas which do not benefit the poor. Historically, priority was given to tertiary education, whereas primary education for the bulk of population was ignored.

As a result, the literacy rate was just 48 percent in 2001, with wide disparities prevailing between rural and urban and male and female literacy rates. The gross primary enrolment rate was 74 percent. Due to the persistent low level of primary enrolment, 5.8 million children are out of school of the 22.33 million children in the 5 to 9 age group, over 50 percent of them girls. More than 50 percent of students drop out before reaching class 5, resulting in a low gross secondary enrolment, which was 41 percent in 2001.(Pakistan Economic Survey 2002-2003).

3.25 Recent Trends in Absolute poverty and unemployment (after 1990s)

In contrast to the human development dimensions of poverty, absolute poverty defines poverty in terms of satisfaction of minimum physical needs of food and non food items to enable people at the lower end of the income distribution to engage in

economic activity. The Planning Commission, Government of Pakistan, has recently notified the national official poverty line for food and non-food expenditure at Rupees 748 per month per capita at 2001 prices (Pakistan planning commission 2002). This was derived from the intake requirement of 2350 calories per adult, plus expenditures on non-food items. Although defining the official poverty line in this way gives a lower poverty line, and thus a lower poverty line in the country, the investigation should be extended further so as to draw a policy conclusion on the basis of the official poverty line notified by the government.

With average households size 6.9, the official poverty line for households, on average comes at Rupees 5161 per month at 2001 prices. It must be acknowledged that this is not the basic needs poverty line, as is misconceived by the government officials. Rather, it is a threshold, which is derived in subsistence terms that give the level of income below which survival of an average household is threatened in the society. It is noteworthy that while average salary of lower grade, non-gazette employees in the public sector is clearly below this household poverty line, the monthly wage of an unskilled worker in urban areas remained stagnant at around rupees 3000 per month between 2003 and 2004 This suggests that income of a household headed by an average wage earner is 48 percent short of the official poverty line (in December 2003 prices), notified by the Government of Pakistan, Planning Commission. This trend shows that the real wages in Pakistan have fallen substantially below the subsistence level which has threatened to adversely affect the physical functioning of workers and their families which, in turn, is detrimental to economic growth.

Table 3.13 Trends in poverty: Head counts ratio (in percent)

	FY87	FY88	FY91	FY93	FY94	FY97	FY99a	FY01	FY03
Pakistan	29.1	29.2	26.1	26.8	28.7	29.8	30.6	23.1	31.8
Urban	29.8	30.3	26.6	28.3	26.9	22.6	20.91	22.67	22.39
Rural	**28.2**	**29.3**	**25.2**	**24.6**	**25.4**	**33.1**	**34.67**	**38.99**	**38.65**

Source; Economic survey 2003, Government of Pakistan

Note: the head count ratio is based up on the officially notified national poverty line of Rs.673.54 per capita per month.

Poverty trends show that incidence of poverty has increased from 26.1 percent in 1990 - 1991 to 32.1 percent in 2001(see Table 3.13). Poverty trends at the regional level show that while urban poverty declined from 26.6 percent to 22.67 percent, rural poverty increased from 25.2 percent to 38.99% between 1990 to 1991 and 2001. While the result of an increase in rural poverty is consistent with a number of studies conducted during the 1990s, the decline in urban poverty is quite contrary to the findings of others. It is noteworthy that the series of poverty estimates reported by the Planning Commission is not based on a consistent poverty line. Poverty estimates relating to 1998 to 1999 and 2001 are based on the official poverty line recently notified by the Commission. In contrast, poverty estimates relating to 1986-87, 1987-88, 1990-1991, 1992-1993, 1993-1994 and 1996-1997 and based on poverty line estimated by Jaferi (1999), were relatively higher than others. Thus, the higher poverty line by Jafery (1999), and the lower poverty line by the Planning Commission give a declining trend in urban poverty, as shown in Table 3.13.

Since poverty lines used for estimation of poverty are not consistent, it is not logical to draw a conclusion from these estimates about the poverty trends during the 1990s. Any conclusion about poverty trends in the 1990s needs to be qualified to be consistent with the poverty line used to estimate poverty throughout the period. Thus, there is a need to estimate poverty for 1986-87, 1987-88, 1990-1991, 1992-93 1993-94 and 1996-97, using the official poverty line adjusted for inflation for these years. This is critically important, because 1990 is the bench mark year for the millennium development goals (MDGS), as the country is required to half the poverty between 1990 and 2015. Table 3.13 also reports the headcount ratio for 2003 based on post-enumeration survey of PIHS (2001), which shows the decline in poverty between 2001 and 2003. It is worth clarifying that any conclusion based on such data would be as misleading, as the head count ratio for 2003, if it is not based on nationally representative sample survey. Furthermore, the consumption expenditure data of households is derived on a recall basis after a lapse of two years. The slower economic growth, together with freezing employment in the public sector and privatisation during the 1990s, restrained the economic capacity to generate employment, and has resulted in high unemployment rates. The overall unemployment rate declined initially from 6.2 percent in 1990-1991 to 4.8 percent

in 1993-1994, than rose to 6.12 percent in 1996–1997, 7.82 % in 1999-2000, and finally to 8.2 percent in 2002. However, urban unemployment is more seriously affected then the rural unemployment over the last 10 years and urban unemployment rose rapidly from 5.88 percent in 1992-1993 to 9.8 % in 2002. The slower economic growth, together with retrenchment in the public sector, also affected the unemployment rate substantially over the past few years. In the 15–19 years age group, for example, the youth unemployment rate increased from 12.0 % in 1997-98 to 15.2% in 1999-2000, and in finally to 16.2 in 2002. Evidently, the more educated, particularly graduates, in the period immediately after entering the labour force are disproportionately represented among the urban unemployed.

3.26 Implications of revival of growth for poverty and employment

While economic growth has accelerated between 2003 and 2005, exports have increased sharply and foreign reserves are at their highest ever level, it does remain to answer the questions whether these developments affect the low income and poor segments of population, and who is going to benefit from them. The next section attempts to answer these questions. The Previous section shows that a recovery in real GDP growth rates on account of faster growth in manufacturing and satisfactory growth in the services sector is on the way towards a long-term growth trajectory at 6 percent. However, it may be pointed out that growth in agriculture is partly explained by the lower base effect, since agriculture witnessed negative growth rates for the past consecutive two years, FY01 and FY02. In addition, since the agriculture sector is the main source of livelihood for a substantial proportion of the poor, poverty would thus remain unaffected by the high GDP growth rate. Foreign remittances also play an important role in reducing household poverty but there is a need of further empirical studies on this matter. Although industrial growth is reflected in higher exports, part of the industrial growth which stems primarily from a surge in aggregate demand arising from expansion in private sector credit, including personal consumption loans which rose substantially because of the easy monetary policy stands along with cuts in discount rate and decline in average lending rate. However, the growth in the large-scale manufacturing sector is mainly due to utilisation of excess capacity ranging from 30 to 40 percent created by large investment in the mid 1990s in thermal power generation through

power projects (IPPS), cement, sugar, automobile and consumer electronics. Furthermore, employment elasticity of the large-scale manufacturing sector is very low relative to other sectors,(see table 3.9). Thus, this pattern of growth, together with stagnant investment, does not seem to be pro-poor, since it is not likely to generate sufficient employment to off set the large increases in labour force over the years. Since the Karachi stock exchange index (KSE100 index) accelerated rapidly from 1770 points in FY02 to 4606 points in December 2003, it is more likely that a big chunk of private credit may have gone into speculative trading in the stock market: it may also have gone into the speculative property business as value of property has increased rapidly in the range of 30 to 50 percent over the past two years. These developments are not pro-poor, as they are not likely to generate employment, which is also reflected in the slower growth of the construction sector at 3.4 percent in 2003, despite the priority given by the government to the sector.

Different socio-economic groups are likely to benefit to a greater or lesser extent from this pattern of economic growth depending on their social and economic status, as this may involve winners or losers. The small group of winners include: 1. commercially engaged export-oriented farmers producing cotton and rice (mostly large and medium-scale); 2. manufacturers and exporters of cotton products; 3. investors involved in speculative trading in stock market and real estate, and 4. rich and upper-middle income groups benefiting from consumer loans. The larger group of loser encompasses: 1. Lower and lower middle class formal sectors fixed salaried employees mainly public sector employees who will suffer sizeable losses of real income through reduced real purchasing power through higher food inflation, and 2. unskilled labour, smallholder and petty traders in urban areas in the informal sector through reduced real wages, and subsistence farmers in rural areas through reduced real income through higher food inflation.

3.27 Conclusions

This chapter examined the recent macro-economic developments and poverty trends in Pakistan. Recent trends suggest a recovery in real GDP growth rates on account of faster growth in large-scale manufacturing, and satisfactory growth in the services sector. However, the pattern of growth is not likely to generate sufficient employment opportunities which should be a foremost priority, keeping in view the

high prevailing unemployment rate resulting from the large increases in labour force over the years.

Analysis of various dimensions of poverty suggests rising trends in all human dimensions of poverty. In the 1990s, due to sluggish growth rate, not only poverty and inequality increased but also progress in human development remained poor over the past fifteen years. It is noteworthy that the rising trends in poverty, inequality and in other human development dimensions over the past fifteen years may be attributed to the inappropriate sequencing of policies pursued in various economic reform programmes within the framework of IMF/World Bank.

Financial sector reforms were implemented before achieving macro-economic stabilisation in fiscal deficit reduction. To liberalise trade regime, tariff rates have been reduced rapidly before adapting to an alternate system of domestic taxation resulting in losses of public revenues and increase in government borrowings.

A persistent devaluation of the rupee against the US dollar demanded by the IMF to enhance exports raised the level of external debts and their servicing. Wide financial sector reforms raised the level of domestic debts in servicing the rising debt servicing, and declining public resources resulted in reduction in development and social service sector expenditure to reduce the budget deficits, which has seriously affected the physical infrastructure and human capital formation of the country, these policies led to a decline in economic growth rate of GDP during the 1990s. In addition, the declining real wages, ban on employment in public sector, cut in pro-poor subsidies, increases in sales taxes and utility charges, and declining remittances have reduced the income of the poor and middle segments of the population and led to increased poverty and income inequality over the past fifteen years. Similarly, the persistent attempt to reduce the fiscal deficits to achieve stabilisation within the framework of IMF and the World Bank has imposed a social cost on the economy, which has adversely affected not only the physical infrastructure but also human capital of the country. Nevertheless, a welcome development is the realisation of the negative effects of the IMF programs as the government has now decided to exit from them. Due to restructuring of external bilateral debt and increased capital inflows from abroad, the government now has larger fiscal space for increasing the development in social sector expenditure. The

government should move courageously on the provision of physical and social capital for the vulnerable groups and increasing the social safety nets for the poor.

While economic reform programmes during the past fifteen years were aimed at increasing efficiency and/or reducing poverty, the trends in almost all dimensions of poverty indicate that poverty has worsened in Pakistan. While progress in human development dimensions of poverty has been poor, (as the country's social indicator remains poorer than other South Asian countries), the income poverty has become much more of a serious problem than before in the wake of rising unemployment in Pakistan. Recent estimates show that more than 49 million people live below the official poverty line and 3.1 million persons are unemployed. Thus, to have the millions of people out of abject poverty and generate sufficient employment for the large pool of unemployed, the government should increase spending gradually on the education and health sectors from the lowest in the South Asian region at 2.4 percent of GDP in 2003 to 4.0% of GDP during the next five years, which would also help achieve the millennium development goals.

Poverty analysis shows that, over the past few years, the real wages in Pakistan have fallen substantially below the official poverty line, (defined in subsistence terms by the Government of Pakistan), which has threatened the survival of workers and their families, and which, in turn, is detrimental to economic growth. Thus, there appears to be a great need to revise the minimum wage legislation in Pakistan from Rupees 2500 per month to an adequate level for protecting the most vulnerable groups. Similarly, the salary structure of the public sector employees needs to be revised adequately so as to bring the low and middle-income public sector employees at least above the official poverty line defined in subsistence terms.

Although the recent unprecedented rise in foreign exchange reserves is seen as an achievement, maintaining the high level of idle foreign exchange reserves involves a heavy cost (WB2002). In this context, it may be pointed out that, recently, government officials made presentations at the Pakistan development forum to seek support of US $56 billions from the donors during the next five to fifteen years for infrastructure development in water, power and communication sectors. The per annum financial commitment is at US$ 4.0 billion. Given the fact that the cost of reserve holdings has been substantial, and the main source of capital inflows are overseas workers' remittances, the country does not require to maintain a high level

of reserves. The country is maintaining excess reserves equivalent to US dollars 8.9 billion which remains idle. It must be recognised that the foreign exchange reserves are the national savings which the nation has acquired through running current account surpluses over the past few years. Since the government intends to borrow from external sources for infrastructure development, the conventional argument that the utilisation of foreign exchange reserves would be inflationary does not hold. Instead of relying on foreign loans for infrastructure improvement, a self-reliance strategy would be useful thus the nations saving should be used efficiently by investing them in physical infrastructure and in human capital, which would not only save the country from the external debt trap, but also give impetus to foreign investment to generate employment for the unemployed youth of Pakistan.

While about 300 million in India and 49 million in Pakistan live in abject poverty, maintaining foreign exchange reserves at an unprecedented level, which involves a heavy cost of about 3% of GDP, is not an optimal use of meagre resources. Thus, savings of people should be invested in poor physical infrastructure, as well as in developing, human capital in these countries. Finally, as the Nobel laureate Amartya Sen, says, a country's prosperity and development can not be measured by GDP growth or the size of its economy alone (Sen 1991 & 2001). Similarly, a country's development cannot be measured by strong macro economic fundamentals alone. Development is freedom. It is about creating an environment where people can participate in deciding their economic and social future. It is also about creating opportunities for everyone to pursue their hopes and dreams. To raise the level of welfare of people, it is essential to create these conditions in South Asian countries.

Chapter 4

Empirical Methodology and model specification

4.1 Introduction

In this chapter we explain the co-integration and integration methods of Engle Granger (EG) (1987). used to test time-series data, utilised in our thesis, it is well recognised that ordinary least squares (OLS) diagnostics are problematic when data are nonstationary. Thus, the concepts and consequences in data are explained. A stochastic process is said to have *second order stationarity* if its mean and variance are constant over time, while the value of covariance between two periods is only on the interval between the periods rather than on the actual time at which this covariance is considered (Spanos (1986), Charemza and Deadman (1997).

This form of stationarity is also called *weak* or *wide-sense stationarity*. More stringently, the stochastic process is considered as strictly stationary when the joint probability density function (PDF) of any of the subset of time series, say whose indices (dates) are $t_1, t_2, t_3, \ldots\ldots\ldots t_n$, is identical to the joint PDF of any other subset formed by shifting the indices by a common amount θ , i.e. a subset with indices $t_1+\theta, t_2+\theta, \ldots\ldots t_n+\theta$ (Spanos 1986).

In the case of normal stationary process, when the moments of first and second order, namely means, variances and co-variances, fully represent the joint distribution, then second order stationarity is equivalent to strict stationarity. A stochastic process is non-stationary when it does not meet the above conditions.

4.2 Stationary and non-stationary time series

A variable which does not change its basic properties over time is called the stationary time series. On the other hand, a non-stationary variable has upward and downwards trends. For example, a nominal aggregate variable for an inflationary country is very likely to be non-stationary, but a real per capita version of the same variable in the same country might be stationary.

More formally, a time series variable, X_t, is stationary if :

1. The mean of X_t is constant over time,

2. The variance of X_t is constant over time , and

3. The simple correlation coefficient between X_t and X_{t-k} (also called an auto correlation function) depends on the length of the lag (k), but on other variable (for all k).

If one or more of these three properties is not met, then X_t is non-stationary. If a series is non stationary, that problem is often referred to as nonstationarity.

It is worth to discussing two related concepts before going on further. First, the auto correlation function (ACF).

To calculate an auto correlation function of lag k, compute the simple correlation coefficient between X_t and X_{t-k} over the $n-k$ such pairs in the data set:

$$ACF(K)=\frac{\Sigma(X_{t-k}-\bar{X})}{\Sigma(X_t-\bar{X})^2}$$

It is to be noted that most cases of heteroskedasticity in time series data involve error terms (and therefore residuals) can also be non-stationary. The major consequence of non stationarity for regression analysis is spurious correlation that inflates $\bar{R}^2$ and the t-scores of the non-stationary independent variables. This occurs because the regression estimation procedure attributes to the non-stationary X_t changes in Y_t that were actually caused by some factor (e.g. trend) that also affects X_t. Thus, the variables move together because of the nonstatioanrity, increasing $\bar{R}^2$ and the relevant t-scores. Since we analyse the macro economic time series data, this is especially important in macro-economic data analysis.To understand the problems associated with OLS diagnostics resulting from nonstationarity in data, consider that researchers would like to estimate the following model:

where Y_t, X_t and u_t are stationary, and X_t and u_t are independent of each other.

The estimated model is $\hat{Y}_t = \hat{\alpha} + \hat{\beta}X_t + \hat{e}_t \Rightarrow \hat{e}_t = \hat{Y}_t - \hat{\alpha} - \beta X_t$,

Where, the OLS estimator : is consistent and unbiased.

On the other hand, OLS estimators may be spurious when Y_t, X_t and e_t are non-stationary. The presence of nonstationarity in data may produce spuriously high R^2, t and

F-test results in the regression analysis, which generally reject the null hypothesis of no relationship when in fact none exists (Granger and Newbold 1974). However, all regressions with non-stationary data are not spurious if the variables in question move together, and hence the regression errors are stationary. The EG method of cointegration analysis argues that OLS estimates are (super-) consistent when two or more nonstationary variables are co-integrated (as given below) and estimated residuals from co-integrated regression are stationary, i.e. and however, even for non-spurious i.e. cointegrated, relationships, the small sample of properties of OLS may be weakened by, for example, endogeneity of the explanatory variables and serial correlation in the disturbances (Maddala *et al*(1998), and Banerjee *et al* (1993). Two strategies have been considered for dealing with this problem by modifying the initial choice of estimators. In the first case, initial models are specified including lagged regressors that proxy dynamic specifications omitted from the model in order to remove serial correlation. In the second case, initial estimators are modified to produce an alternative with better known distributional properties, and robust with respect to non-independently and identically distributed disturbances. The ARDL methods fall in the first group. The following section will explain integration, cointegration, and error correction analysis.

4.3 Testing for nonstationarity

To identify whether a time series is a nonstationary there are three ways do this;

1. To examine data visually. For many time series, a quick view of the data or a glance at a diagram of the data can tell us that the mean of the variable is increasing dramatically over time so the series is nonstationary.

2. To see the ACFs, if variable tends to zero as k (the length of lag) increases, using the t-test of r to see if the ACF is significantly different from 0, the variable is stationary. (see Studenmund 2000. 12.4.2.pp 426)

3. To use the Dicky-Fuller test, which examines the hypothesis that the variable in question has a unit root and, as a result, is likely to benefit from being expressed in first difference form. To run a Dicky-Fuller test, the following equation may be estimated:

$$\Delta Y_t = (Y_t - Y_{t-1}) = \beta_0 + \beta_1 Y_{t-1} + \varepsilon_t \qquad (4.1)$$

And run a one-sided t-test on the hypothesis that $\beta_1 = 0$.

$H_0 : \beta_1 = 0$

$H_A : \beta_1 < 0$

If $\hat{\beta}_1$ is significantly less than 0, then we can reject the null hypothesis of nonstationarity. In the case that we are not able to reject the null hypothesis, we still have not proven that Y is nonstationary.

However, the standard t-table does not apply to Dicky-Fuller tests (see Table.4.1) and lists asymptotic ($n \to \infty$) values for t_C. For smaller samples, critical t-values are about 60 percent higher (in absolute values) than those in statistical tables (table no.4.1). For example, a .025 % on- sided t-test of $\hat{\beta}_1$ with 50 degrees of freedom has a t-critical value of 3.22, compared to 2.01 for a standard t-test.

Table.4.1. Asymptotic critical values for the Dicky –Fuller Test

One sided significance level	.01	.025	.05	.10
t_C	3.43	3.12	2.86	2.57

4.4. Adjusting for nonstationarity

Some authors attempt to detrend an equation by including a time-trend variable (t = 1, 2, ...T) as an independent variable in regression (Charemza and Deadman 1993, pp.124-130) but some authors urge to get rid of nonstationary series by taking first differences (Charemza and Deadman 1993, Studenmund 2001) .

$$\Delta Y_t = Y_t - Y_{t-1} \qquad (4.2)$$

They appear to be suggesting to use ΔY_t in place of Y_t in the model. To convert economic data from nonstationary to stationary is usually satisfactory by taking first differences, but it is always desirable to test ΔY_t to make sure.

There are some drawbacks to using the first differences for this process:

1) Changes the inherent theoretical meaning of the differenced variable, and
2) Discards information about the long-run trend in that variable.

Keeping in view these drawbacks, it is suggested that first differences may not be used without weighing the costs and benefits (Studenmund, 2001).

An important alternative to using first differences to correct for nonstationarity is a concept called cointegration.

Cointegration consists of matching up the degree of nónstationarity of the variables in a model in a way that it makes the residuals of the model stationary and rids the model of any spurious regression results.

Consider the following model:

$$Y_t = \beta_0 + \beta_1 X_t + \varepsilon_t \qquad (4.3)$$

Suppose that both Y_t and X_t are nonstationary to the same degree, that is, suppose that ΔY_t and ΔX_t are both stationary. In such a situation, there is reasonable possibility that the nonstationarity in the two variables will cancel each other out, leaving (4.3) as a whole free of nonstationarity. An OLS estimate of (4.3) would not be spurious, given such a situation. By testing the residuals of the model for stationarity using the Dicky-Fuller test, one can identify whether if any nonstationarity in a model is cointegrated. If the residuals are stationary, then we have evidence that the nonstationary variables in the equation are on the same wavelength and that first differences are not necessary. In our example, this will mean estimating (4.3), solving for the residual e_t:

$$e_t = \hat{Y}_t - \hat{\beta}_0 - \hat{\beta}_1 X_1 \qquad (4.4)$$

and running a test for nonstationarity on e_t. Once again, however, the standard t-values do not apply to this application. Instead, adjusted critical t-values developed by Engle and Granger (1987) should be used.

4.5 Integration analysis

The above arguments suggest that before any sensible regression it is necessary to know whether variables are stationary and integrated of same order. A variable is said to be integrated of order d, I(d), when it becomes stationary after differencing d times. For example, a variable is I(I) if it becomes stationary after first difference. An appropriate and simple method which is very widely used and proposed by Dickey and Fuller (DF) (1979) is explained below. Suppose we have following first order autoregressive process:

$$Y_t = \alpha_0 + p\,Y_{t-1} + \varepsilon_t$$
$$\Rightarrow \Delta Y_t = \alpha_0 + \delta\,Y_{t-1}, where\ p = (1+\delta) and\ \Delta Y_t = Y_t - Y_{t-1}, \quad (4.5)$$

Where Δ in the first difference operator. The DF test applies OLS is to check the negativity of δ, i.e. $p<1$ in equation above. The rejection of the null hypothesis, $\delta = 0$, in favour of the alternative, $\delta < 0$, implies that $p<1$ and y_t is stationary, i.e. Y_t is integrated of order zero $i.e. Y_t \square I(0)$. Because Y_t is non-stationary under the null hypothesis $(p=1)$, Dickey-Fuller tests (Microfit 4.0) , as opposed to standard t-tables, provide the appropriate critical values. If the auto correlation process is more complex than equation , as noted in the introduction of this section we have choice of either modifying the OLS test statistics or modifying the regression model. The first choice motivates the Phillips- Peron unit root test, the second leads to the DF (ADF) test which has been used in our chapters (5 and 7). In this latter case, lagged differences are included to render the error term Gaussian. Thus, the ADF equation can be written as follows:

$$\Delta y_t = \alpha_0 + \delta\,Y_{t-1} + \sum_{i=1}^{n} \beta_i\,\Delta Y_{t-i} + \varepsilon_t \quad (4.6)$$

The number of lags, i.e the value of n, is selected according to the various information criterian, e.g. Shwartz Bayesian information (SBC) or Akiake information criterion (AIC). When $n=0$ in equation (4.6), if the null hypothesis that $\delta = 0$, i.e $Y_t \square I(1)$ can not be rejected, the variable is tested for second order integration, i.e. I (2).

The following equation can be used;

$$\Delta^2 Y_t = \alpha_0 + \delta_1 \Delta Y_{t-1} + \sum_{i=1}^{n} \beta_i \Delta^2 Y_{t-i} + \varepsilon_t$$

where $\Delta^2 Y_t = \Delta\Delta Y_t = \Delta(Y_t - Y_{t-1}) = (Y_t - Y_{t-1}) - (Y_t - Y_{t-2}) = (Y_t - 2Y_{t-1} + Y_{t-2})$ (4.7)

In equation (4.7), Y_t is integrated of order one, i.e. $Y_t \square I(1)$, if the null hypothesis $\delta_1 = 0$ is rejected in favour of the alternative hypothesis $\delta_1 < 0$, which implies that $p < 1$. On the other hand, the variable is tested for the third order of integration, I(3), if the null hypothesis that $\delta_1 = 0$ is not rejected. The above analysis can be generalized in following equation:

$$\Delta^d Y_t = \alpha_0 + \delta_{d-1} \Delta^{d-1} Y_{t-1} + \sum_{i=1}^{n} \beta_1 \Delta^d Y_{t-i} + \varepsilon_t \qquad (4.7)$$

In equation (4.7,) Y_t is integrated of order (d-1), i.e. $Y_t \square I(d-1)$, if the null hypothesis $\delta_{d-1} = 0$ is rejected in favour of the alternative hypothesis $\delta_{d-1} < 0$, implying. $p < 0$ On the other hand the variables one tested for the dth order of integration, I(d), when the null hypothesis that $\delta_{d-1} = 0$ can not be rejected.

4.6 Cointegration and error correction Model

The cointegration concept states that two or more nonstationary time series can be combined together (through a linear combination) into a series which is stationary. In other words, two or more (nonstationary) variables are sad to be co integrated if a linear combination of them is stationary. The deviation from the long- run relationship can be used to explain the short run behaviour of the variables. This procedure is known as error correction modelling, and is explained below. A necessary condition for cointegration of two variables is that both variables should be integrated to the same orders. Assume that there are two variables, X and Y in our model, where $X_t \square I(d)$ and $Y_t \square I(d)$. Cointegration implies that a linear combination X_t and Y_t i.e, where (α_1 and α_2 are parameters), is I(0).

The formal definition of cointegration of two variables can be written as follows (Charemza and Deadman (1997), Engle and Granger (1987):

Xt and Y_t are said to be co integrated of order d and b where $d \geq b \geq 0$, and can be

written as if: (i) both series are integrated for order *d*, and (ii) a linear combination of both variables

$a_1Y_t - a_2X_p$ is integrated of order *(d-b)*. The vector $[a_1 a_2]$ is called a cointegrating vector. This definition could be extended to the multiple variable case.

Assume that X_t implies an (n ×1) vector of variable represented by where (i) $X_{it} \square I(d)$ and, (ii) there exists an (n×1) vector α such that $X_t'\alpha \square I(d-b), \Rightarrow X_t'\alpha \square CI(d,b)$.

Until now, cointegration relationships among variables with the same order of integration have been described. There are possibilities of cointegrated relationships among variables with different order of integration. Assume that we have the following relationship:

$$Y_t = \alpha_0 + \alpha_1 X_{1t} + \alpha_2 X_{2t} + e_t$$
$$\Rightarrow e_t = Y_t - \alpha_0 - \alpha_1 X_{1t} - \alpha_2 X_{2t} \qquad (4.8)$$

where $Y_t \square I(0)$, $X_{1t} \square I(1)$ and $X_{2t} \square I(1)$. According to the above analysis, e_t is not I(0) variable. However, if the linear combination $\alpha_1 X_{1t} + \alpha_2 X_{2t}$ is I(0) this implies that with a co integrating vector $[\alpha_1, \alpha_2]$. This linear combination creates a cointegrating vector with Y_t consequently $e_t \square I(0)$. Assume further that $Y_{t-1} \square (1)$, $X_{1t} \square I(2)$ and $X_{2t} \square I(2)$ and the linear combination implying that with a co integrating vector $[\alpha_1, \alpha_2]$. Under such circumstances, $e_t \square I(0)$. Consider an other example below

$$Y_t = \alpha_0 + \alpha_1 X_{1t} + \alpha_2 X_{2t} + \alpha_3 X_{3t} + e_t \qquad (4.9)$$

where $Y_t \square I(1), X_{1t} \square I(2), X_{2t} \square I(2)$ and $X_{3t} \square I(1)$. The variables are not integrated of the same order. Thus, according to the necessary condition described above, they can not be cointegrated.

The above analysis implies that the necessary condition for a cointegrated relationship among variables which are integrated in different orders requires the following : (i) The order of integration of the dependent variables should be lower than the higher order of integration of the explanatory. variables; (ii) there must be at least two variables integrated in this highest order. Cointegration, as discussed in

Charemza and Deadman (1997, is carried out in two stages. Firstly, variables are tested for the order of integration and examined as to whether the necessary and essential conditions for cointegration explained above are met or not. Secondly, if the conditions are met at the first stage, tests are carried out to examine whether cointegration exists. There are several methods, including EG and FMLS methods, to carry out the second stage. Engle and Granger (1987) proposes a two step procedure for the second stage. The first step of the second stage involves a further two steps. They can be described in the following way: Step 2.1a, OLS regression analysis without dynamics is performed; Step2.1b, residuals of the estimated regression model are calculated and the integration analysis is carried out to test whether the residuals are stationary or not. If the calculated t ratio from the ADF test is lower than appropriate critical value for cointegration analysis, the long-run relationship is considered stationary, and vice versa. In the second stage of step two, the EG method proposes to verify the existing co integrated relationship by constructing an EC model. The co integration relationship is confirmed when the EC term is significantly negative. The two-step procedure for the second stage of cointegration analysis proposed by Engle and Granger (1987) is explained below.

The cointegrating vector is estimated by OLS. The residual of the estimated model is used to test weather variables have a long run co integrated relationship. Suppose that we have estimated a co integrating vector (from equation (4.2)
by OLS, the estimated residual can be written as follows:

$$\hat{e}_i = Y_t - \hat{\alpha}_0 - \hat{\alpha}_1 X_{1t} - \hat{\alpha}_2 X_{2t} - \hat{\alpha}_3 X_{3t} \qquad (4.10)$$

To test for the stationarity of residual $\hat{e}$,we use the following:

$$\Delta\hat{e}_t = \alpha_0 + \beta_1 \hat{e}_{t-1} + \sum_{i=1}^{k} \delta_i \Delta\hat{e}_{i-1} + \mu_t \qquad (4.11)$$

Both the lag selection and testing for the negativity of β_1 , i.e. the stationarity condition, are explained in the section above on Integration. If the estimated t-statistics are lower than the appropriate critical values for cointegration analysis, the variables are said to be co-integrated. Note that, unlike the integration tests, the critical value of student t-ratios depend on the number of parameters being estimated.

There is a rule of thumb proposed by Banerjee *et al.* (1986) which could be used for a quick evaluation of the cointegrating hypothesis. Suppose that we have the following cointegrated Durbin –Watson test statics (CIDW):

$$CIDW = \frac{\Sigma(\hat{e}_t - \hat{e}_{t-1})^2}{\Sigma(\hat{e}_t - \overline{e}_{t-1})^2} \qquad (4.12)$$

where $\overline{e}$ is the arithmetic mean of $\hat{e}_t$. This 'rule of thumb implies the possibility of the existence of the cointegrating relationship when $CIDW > R^2$, and vice versa. If this 'rule of thumb' provides $CIDW > R^2$, signifying that there might be a cointegrating relationship, a thorough investigation to examine for cointegration should be carried out.

4.7 Error Correction model

The Granger representation theorem (GRT), (Engle and Granger 1987) states that an error correction (EC) model exists as an equation (4.13), when variables are integrated and vice versa. That is, a parsimonious and stable long-run relationship between the variables exists, when λ in equation (4.13) is negative and significant.

$$\Delta Y_t = \pi_0 + \sum_{i=1}^{n} \pi_{1i} \Delta Y_{t-i} + \sum_{i=0}^{m} \pi_{2i} \Delta X_{t-i} - \lambda e_{t-1} + \nu_t \qquad (4.13)$$

where e_t are residuals from cointegrated regression. The number of lags, i.e the value of n and m, is chosen by following the general –to-specific methodology. There is an other well known method which tests for the existence of cointegrated relationships in the multivariate case: this is called the Johanson maximum likelihood (JML) method (Johanson 1988) Unlike the EG method, the JML method not only permits more than one cointegrating vector (CV) in a multivariate (VAR) process, but also offers a method for estimating how many CVs exist. However, the Johanson method requires maximum likelihood estimation of the complete VAR, with consequently many parameters, which is only feasible for data sets when the number of observations is larger than the number of parameter being estimated. The inferences based on this method would be unreliable due to the limited number of observations. We could have the JML method if we had a data set on quarterly frequencies, but again quarterly data involve many complexities and subjective

analyses. However, we do not have quarterly data on all the relevant variables e.g. poverty data. With annual data, we have used a single equation method, namely auto regressive distributed lag (ARDL) modelling approach to integrated analyses.
In next chapter we set up a co-integration tests method to prove our hypothesis. We use annual time series data for Pakistan from 1970-2000.

4.8. Conclusion

In this chapter, we discuss issues related to the stationary and non stationarity of time series data. After defining the concept of stationary and non stationary time series a section on the identification is discussed. There are three ways to test the non stationary time series. Following the identification process for the non stationary data, a section deals with some common ways to be used by the econometricians for the adjustment of nonstatioanry data. Some attempt to de-trend variable as an independent variable in regression but others urge to get rid of non- stationarity series by taking the first differences. Taking the first differences method may appear to be more satisfactory method to the economists but it also leads to loss of information. We have also discussed the other drawbacks of the first differencing method.
Following the integration analysis, the concept of co-integration states that two or more (non stationary) variables are said to be co integrated if a linear combination of them is stationary. The procedure of error correction modelling is explained as the deviation from the long run relationship that can be used to explain the short run behaviour of the variables. In multivariate case Johansen maximum likelihood (JML) is well known to test the existence of co-integrated relationships. Unlike the EG method JML method not only permits more than one co integrating vector (CV) but also offers a method to estimate the number of CVs which may exist. The JML method requires ML estimation of complete VAR with many parameters. Thus a data set required should be larger in number of observations then the number of parameters to be estimated. Limited number of observations could lead to unreliable inferences.

Chapter 5

Economic growth and Poverty Reduction in Pakistan

5.1 Introduction

During the 1990s, the global economy grew considerably. However, the debate is going on about the extent to which the poor have benefited from this growth. Some argue that all benefits accrue to the middle and upper classes. A different view is that the poor may benefit somewhat in absolute terms, but that they benefit proportionally less than the average household, so that inequality within countries is on the rise. Finally, there is shared prosperity among different classes of households due to economic growth. In this chapter, we investigate the link between income of the poor (defined as the bottom one-fifth of the income distribution) and overall average income (per capita GDP). We put together data on income of the poor and mean income for Pakistan covering three decades, linking growth income of the poor to growth in overall income. We use data from Pakistan to investigate the hypotheses about the growth-poverty nexus,

1. The general relationship between growth of income of the poor and overall economic growth e.g. Dollar and Kraay (2002) argue that there is a positive relationship between economic growth and poverty reduction.
2. Does policy-induced growth, through increased financial intermediation, benefit the poor proportionally or more or less than proportionally?

Section 3 provides details on the data and our econometric strategy for estimating the relationship between growth of income of the poor and the overall income. In that section, we also indicate how our work relates to the large literature on income distribution and growth.

Income of the poor has a very strong link with overall income. Evidence indicates that as overall income increases, on average incomes of the poor increase by the same amount. We relate growth of income of the poor over a period of 30 years in Pakistan (1970-2000) to overall economic growth of income of the poor over the same period. We use two approaches to measure the income of the poor, defined as the poorest of the 20% of the population, using an augmented version of the Deininger-Square (1996) data set. This data set reports Gini co-efficient for number of years, and five points on the Lorenz curve for a subset of these year observations.

We use distribution data set based on nationally representative sources identified as high-quality by Deininger and Squire (1996). We adjust the Gini coefficients and Lorenz curves for the remaining differences. This results in a set of distribution of household income for Pakistan. Wherever Lorenz curve data are available, we measure mean income in the poorest quintile directly, as the share of income earned by the poorest quintile times mean income, divided by 0.2. For those observations for which we have information on the Gini coefficient but not the Lorenz curve, we estimate mean income in the poorest quintile under the assumption that the distribution of income is lognormal. Given a lognormal distribution of income, it is possible to show that approximately:

$$y^p = -\gamma.G + y \qquad (5.1)$$

where y^p denotes the logarithm of per capita income in the poorest quintile of the population, G denotes the Gini coefficient, y denotes the logarithm of average per capita income in the entire population; and $\gamma = 0.036$ is a constant. While this log normal approximation is simple, it works very well. An OLS regression of this over time which smooths out measurement error in the income distribution data is probably over-stated. We therefore prefer to follow Ravallion and Chen (1997) who instead work with an irregularly spaced panel of distribution data, using the actual years. To avoid relying on adjacent annual observations or on growth over overlapping intervals, we filter the data as follows. For Pakistan, we begin with the first available distribution observation. Moving forward in time, we then choose the next observation, subject to the constraint that at least five years separate the observations, until we have exhausted the available data for that country. This

results in observations on mean income of the poor based on the Lorenz curve and the use of lognormal approximation of these data in our econometric estimation When we consider the effects of additional control variables, the sample is slightly smaller and varies across specifications depending on data availability.

5.2 Econometric estimation

Some researchers have estimated the different specifications of the following regression of the logarithm of per capita income of the poor on the logarithm of the average per capita income:

$$y^{P}_{t} = \alpha_0 + \alpha_1 . y_T + \alpha_2 ' X_T + \mu + \varepsilon_T \qquad (5.2)$$

where t is index of years, X_T is a vector of other determinants of mean income of the poor (e.g. financial intermediaries and inflation) and $\mu + \varepsilon_T$ is a composite error term including unobserved country effects. Many researchers are interested in two key parameters from equation (5.2). The first is α_1 which measures the elasticity of income of the poor with respect to mean income. A value of $\alpha_1 = 1$ indicates that growth in mean income is translated one for-one into growth in income of the poor. Estimates greater or less than one indicates that growth more than or less than proportionately benefits the poor. The second parameter of interest is α_2 which measure the impact of other determinants of income of the poor over and above their impact on mean income. Many of the variables in X we consider are known to be determinants of high income and/or growth in income across countries. Since mean income is already in the regression, the parameter α_2 measures any impact on income. Using equation (5.1), we can equivalently write equation (5.2) as a regression with the Gini coefficient (or some other measures of income distribution) as the dependent variable, and $(\alpha_1 - 1).y_t$ on the right-hand side. Finding and estimating of $\alpha_1 = 1$ is equivalent to finding that the level of inequality does not vary systematically with the level of income. In this respect, our work is closely related to the large literature on the determinants of inequality. Given the striking absence of any correlation between (changes in) income and (changes in) inequality

documented by, among others, Ravallion and Chen (1997) and Deininger and squire (1996), finding an estimate of $\alpha_1 = 1$ should not be very surprising.

Simple ordinary least squares (OLS) estimation of equation (5.2) is likely to result in inconsistent parameter estimates for (at least) three reasons measurement error, omitted variables, and reverse causation from incomes of the poor to mean income. We discuss each of these in turn.

5.3 Measurement error

It is well-known that classical measurement error in y or x can lead to biases that are difficult to sign except under certain very restrictive assumptions. A more important concern here is that measurement error in mean incomes of the poor may be correlated with measurement error in mean income, which can introduce further biases. A priori, this concern is quite reasonable after all, we are basing our estimates of mean income of the poor and the mean income on the same per capita GDP data, which is certainly prone to measurement error. Upon closer inspection, however, this need not concern us greatly, for two reasons. First, as discussed below, we estimate equation (5.2) using instruments that can in principle mitigate problems of measurement error. Second, even if we were simply to estimate equation (5.2) by OLS, under plausible assumptions measurement error in mean incomes of the poor and mean income cancel and OLS is still consistent. (see Ravallian and Chen 1997).

5.4 Omitted Variable Bias

In some empirical works, there is a fairly parsimonious specification of the determinants of income of the poor in the vector X_T. This raises the possibility that there are omitted variables that affect the income of the poor, and are also correlated with either mean income or with included variables in the vector X_T. Depending on the sign of this correlation, our estimates of the impact of these variables on incomes of the poor could be biased up or down. One can then solve this dilemma by implementing a system of estimators that combine information in

both the level and changes of the data. In particular, it is possible to take the first difference equation (5.2) to obtain growth in income of the poor over the period from t-k (t) to t as a function of growth in mean income over the same period, in the other X variables:

$$y_t^p - y_{tk(t)}^p = \alpha_1.(y_t - y_{t-k(t)}) + \alpha_2'(x_{t-k(t)}) + (\varepsilon_t - \varepsilon_{t-k(t)}) \qquad (5.3)$$

However, in our own model, we use the advanced cointegration analysis in the next section to analyze the growth, poverty reduction and financial intermediation in Pakistan from 1970-2000 at the macro level.

5.5 Poverty equation results

The augmented Dickey-Fuller (ADF) test results for the following series are given in Table 5.1: the natural log of head-count poverty (hc), the natural log of real GDP (g) the natural log of per-capita GDP (gpc) and the natural log of the nominal money, M2, to nominal GDP ratio (m2g). The test is conducted on the level and difference of each series with the number of lags used in the ADF test regressions indicated in parentheses the number of lags was chosen to minimise the Schwartz Information Criterion (SIC). The maximum sample period used for the tests was 1970 – 2000. The critical value is approximately –2.97. All four series are I(1), and so dynamic methods involving cointegration are appropriate for the log-levels of the series. However, the necessary condition for cointegration that all series are integrated of the same order is violated for the regression of the log-level of head-count poverty on the growth rate (difference of the log) of GDP or per-capita GDP (with or without the money to GDP ratio).

Table 5.1: ADF tests

Series	Level	Difference	Inference
hc	–2.268 (2)	–5.708 (0)	I(1)
g	–0.569 (0)	–4.362 (0)	I(1)
gpc	–0.123 (0)	–4.489 (0)	I(1)
m2g	–2.403 (0)	–6.536 (0)	I(1)

To determine whether head-count poverty cointegrates with the log-level of GDP or per-capita GDP we employ the Johansen procedure.[1] For GDP Akaike's Information Criterion (AIC) and SIC suggest 1 lagged level term (0 lagged differences) in the vector auto regression (VAR) and the cointegration test results are reported in Table 5.2. Since this VAR specification implies no adjustment other than from the error-correction term we also consider cointegration tests with two lagged level terms (one difference) in the VAR – see (Table 5.3). However, we note that there is no evidence of first or second order autocorrelation according to system tests for the model with only one lagged level term, hence inference from this model should be valid.

Table 5.2: Cointegrating Rank for GDP System with 1 Lagged Level Term

Hypothesized No. of CE(s)	Trace Probability	Max-Eigenvalue Probability
None	0.0644	0.0506
At most 1	0.4700	0.4700

From Tables 5.2 and 5.3, there is clearly no evidence of cointegration between hc and g at the 5% level (since all probability values exceed 0.05). However, there is evidence of one cointegrating vector at the 10% level, when one lagged level term is included in the VAR (see Table 5.2). Further, for this VAR specification, the adjustment coefficient for the error-correction term normalised on hc has a negative sign in the hc equation (which is consistent with valid error-correction behaviour toward hc), however, the t-ratio (–1.588) is insignificant.

Table 5.3: Cointegrating Rank for GDP System with 2 Lagged Level Terms

Hypothesized No. of CE(s)	Trace Probability	Max-Eigenvalue Probability
None	0.3073	0.3933
At most 1	0.1788	0.1788

For per-capita GDP, both AIC and SIC suggest 1 lagged level term (0 lagged differences) in the VAR; the cointegration test results for this specification are reported in Table 5.4. As with the system for GDP we also consider cointegration

[1] We specify all Johansen systems to have an unrestricted intercept and no time trend.

tests with two lagged level terms (one difference) in the VAR – see Table 5.4 However, we note that there is no evidence of first or second order autocorrelation according to system tests for the model with only one lagged level term, hence inference from this model should be valid.

Table 5.4: Cointegrating Rank for Per-Capita GDP System with 1 Lagged Level Term

Hypothesized No. of CE(s)	Trace Probability	Max-Eigen Probability
None	0.0401	0.0292
At most 1	0.5241	0.5241

From Table 5.4, there is evidence of one co-integration vector between hc and g at the 5% level, when the VAR system has one lagged level term. The adjustment coefficient for the error-correction term in the hc equation has the anticipated negative sign if the t-ratio (–1.551) is insignificant. In contrast, there is no cointegration when two lagged level terms are included in the VAR (see Table 5. 5).

Table 5.5: Cointegrating Rank for Per-Capita GDP System with 2 Lagged Level Terms

Hypothesized No. of CE(s)	Trace Probability	Max-Eigen Probability
None	0.3255	0.3666
At most 1	0.2491	0.2491

For both GDP and per-capita GDP, we only find (some) evidence of a cointegration (a single vector) in the VAR system with one lagged level term. Since this specification is favoured according to the AIC and SIC statistics in both cases, and there is no evidence of autocorrelation in these systems, we prefer our inference from these parsimonious VARs.

In Table 5.6, we report the unique cointegrating vector for the VAR with one lagged level term for both GDP and per-capita GDP.[2] The coefficients in both cointegrating

[2] These cointegrating vectors have no intercept because the VAR was specified to have an unrestricted intercept.

vectors are negative and significant (t-ratios are given in parentheses). In both cases, this is consistent with the hypothesis that poverty falls as GDP rises. We note that the elasticity is about one-and-a-half times larger in magnitude for the equation with per-capita GDP (–0.122) than the model with GDP (–0.081).

Table 5.6: Cointegrating Vectors for Head-Count Poverty Equations

	Johansen (1 lag level term in the VAR)	
	GDP	Per-Capita GDP
g	–0.081 (–3.309)	
gpc		–0.122 (–2.647)

We also employ the Johansen procedure to determine whether head-count poverty cointegrates with the log-level of GDP (or per-capita GDP) and the log of the money to GDP ratio. For the VAR including GDP and the VAR incorporating GDP per-capita, the AIC indicates that 4 lagged level terms (3 lagged differences) should be used while the SIC suggests only 1 lagged level term (0 lagged differences). Unreported system tests indicate that there is no evidence of first or second order autocorrelation for the VAR specifications with 1 or 4 lagged level terms, whether GDP of per-capita GDP is used. Thus, inference from all VAR specifications should be valid.

Table 5.7: Cointegrating Rank for GDP System with 1 Lagged Level Term (including the Money to GDP ratio)

Hypothesized No. of CE(s)	Trace Statistic	Max-Eigenvalue Statistic
None	27.548 (29.68)	19.503 (20.97)
At most 1	8.046 (15.41)	7.324 (14.07)
At most 2	0.722 (3.76)	0.722 (3.76)

The cointegration test results for the VAR including GDP (with 1 lagged level term) are reported in Table 5.7. The 5% critical values for the trace and maximum eigenvalue test statistics are given in parentheses. There is no evidence of cointegration at the 5% level, although one cointegrating vector is indicated at the 10% level. The adjustment coefficient corresponding to the error-correction term

That is, there is no intercept in the cointegrating vector, however, a constant does feature in the short-run dynamic equations of the system.

normalised on head-count poverty (hc) in the hc equation of the VAR is negative, which is consistent with a valid long-run equilibrium for hc.[3]

Table 5. 8: Cointegrating Rank for GDP System with 4 Lagged Level Terms (including the money to GDP ratio)		
Hypothesized No. of CE(s)	Trace Statistic	Max-Eigenvalue Statistic
None	61.600 (29.68)	39.455 (20.97)
At most 1	22.145 (15.41)	15.152 (14.07)
At most 2	6.993 (3.76)	6.993 (3.76)

Table 5.8 reports the cointegration test results for the VAR including GDP (with 4 lagged level terms). This suggests that there are three cointegrating vectors at the 5% level. The finding of full rank suggests that all three variables are *I*(0), which is inconsistent with our ADF test results. Since the Johansen procedure is known to have a tendency to indicate too many cointegrating vectors above one, and theoretically we only expect a single equilibrium, we interpret the results as finding one cointegrating vector between the three variables. However, because the adjustment coefficient corresponding to the error-correction term normalised on hc in the hc equation is positive, we do not consider that the vector found by this equation is a valid long-run equilibrium for hc.[4]

Table 5.9: Cointegrating Rank for Per-Capita GDP System with 1 Lagged Level Term (including the money to GDP ratio)		
Hypothesized No. of CE(s)	Trace Statistic	Max-Eigenvalue Statistic
None	29.208 (29.68)	21.405 (20.97)
At most 1	7.802 (15.41)	7.223 (14.07)
At most 2	0.579 (3.76)	0.579 (3.76)

The cointegration test results for the VAR including per-capita GDP (with 1 lagged level term) are reported in Table 5.9. The trace test suggests no cointegration at the 5% level (although one cointegrating vector is indicated at the 10% level) while the Maximum Eigenvalue statistic indicates one cointegrating vector. The adjustment coefficient corresponding to the error-correction term normalised on hc in the hc

[3] Adjustment coefficient insignificant with t-ratio of –0.956.
[4] The Adjustment coefficient is insignificant with t-ratio of 0.907.

equation of the VAR is negative, as would be expected of a valid equilibrium equation for hc.[5]

Table 5.10: Cointegrating Rank for GDP System with 4 Lagged Level Terms (including the money to GDP ratio)		
Hypothesized No. of CE(s)	Trace Statistic	Max-Eigenvalue Statistic
None	59.009 (29.68)	37.263 (20.97)
At most 1	21.746 (15.41)	14.762 (14.07)
At most 2	6.984 (3.76)	6.984 (3.76)

Table 5.10 reports the cointegration test results for the VAR including per-capita GDP (with 4 lagged level terms). Three cointegrating vectors are indicated, using a 5% level of significance. This suggests that all three variables are *I*(0), which is inconsistent with our ADF test results. As this may reflect the Johansen procedure's tendency to indicate too many cointegrating vectors above one, we interpret the results as indicating one equilibrium relation between the three variables, as expected theoretically. However, since the adjustment coefficient corresponding to the error-correction term normalised on hc in the hc equation is positive, we do not consider this vector to be a valid long-run equilibrium for hc.[6]

For both the three variable systems, we prefer the VARs with 1 lagged level term. This is for three reasons. First, although the evidence for cointegration is weak when one lagged variable is included in the VAR (it is generally only supported at the 10% level), the system incorporating 4 lags suggests that all three variables are *I*(0) and so its inferences need to be treated with caution. Second, there is no evidence of autocorrelation in the system with one lag and so the addition of extraneous lags is unnecessary to remove misspecification. Third, the cointegrating vectors uncovered by the 1 lag system are more plausible equilibrium equations for head-count poverty than those from the VAR with 4 lags, in terms of the sign of the adjustment coefficients.[7] Hence, we report the unique cointegrating vectors for hc, g (or gpc) and m2g for the VAR system with one lagged level term in Table 5.11.

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[5] Adjustment coefficient insignificant with t-ratio of –1.001.

[6] Adjustment coefficient insignificant with t-ratio of 0.907.

[7] Unreported results show that the single cointegrating vector uncovered by the VAR with 4 lags features a theoretically unexpected positive sign on the GDP (or per-capita GDP) variable.

Table 5.11: Cointegrating Vectors for Head-Count Poverty Equations including Money to GDP Ratio		
	Johansen (1 lag level term in VAR)	
	GDP	Per-Capita GDP
g	–0.061 (–2.525)	
gpc		–0.081 (–1.767)
m2g	–0.288 (–2.279)	–0.275 (–2.273)

The coefficients on all variables in both cointegrating vectors are negative and significant (t-ratios are given in parentheses), except for gpc which is significant at the 10% level. This is consistent with the hypothesis that poverty falls as both GDP (or per-capita GDP) and the money to GDP ratio increase. The elasticities for the GDP variables are broadly consistent with those reported in Table 5.6. That the money to GDP ratio enters with statistical significance suggests that it is an important determinant of head-count poverty in addition to GDP (or per-capita GDP).

5.6 Conclusion

To determine weather head-count poverty co-integrates with the lag level of GDP or per-capita GDP, we employed the Johansen procedure. However, for both GDP and per capital GDP, we find evidence of a co-integration (a single vector) in the VAR system with one lagged level term. Since this specification is favoured according to the AIC and SIC statistics, and there is no evidence of auto-correlation in these systems, we prefer our inferences from these parsimonious VARs. We find the unique co-integrating vector for the VAR with one lag for both GDP and GDP per capita. The co-efficient of both co-integrating vectors are negative and significant. This is consistent with the hypothesis that poverty falls as GDP rises. We also find that poverty falls as both GDP (or per capita GDP) and money to GDP ratio increase.

The test results show a clear relationship between growth and poverty reduction over all in Pakistan. Our results confirm that income of poor in Pakistan responded positively with relation to growth of GDP from 1970-2000. Thus our basic

hypothesis that growth in GDP per capita and financial depth could reduce poverty is substantiated.

Chapter 6

Poverty and Social Gaps in Pakistan

6.1 Introduction

Pakistan has enjoyed an annual rate of GDP growth of 2.2 percent on in between 1950-1999. The average per capita income was tripled in that period. From 1960 to 1998, after India and Egypt, Pakistan was one of the largest recipients of official development assistance. Lack of education and access to public health services are closely related to high levels of poverty concentration in rural areas. It is a well-established policy suggestion by the international donor organisations like UNDP, World Bank and Asian development banks to bridge the social gaps in gender and regional dimensions.

Social gaps in Pakistan are explained in three major dimensions: (1)Urban-rural, (2) Gender, and (3) Inter province. For instance with respect to female primary school enrolment, it is nearly of the same magnitude as the urban /rural gap in Sindh province, where only 25 percent of girls living in rural areas are enrolled, compared to 62 percent in urban areas. Similarly while female literacy stands at only 55 percent in urban Sindh, it is as low as 11 percent in rural NWFP (North West Frontier Province) and only 7 percent in Balochistan. Access to rural sanitation is not more than 25 percent, compared to other low income countries in South Asia.

In order to understand the magnitude and dimensions of poverty, this chapter investigates the social gaps of Pakistan to know to what extent the poor can benefit form economic growth and major determinants of capability of participation in economic development process.

6.2 Fiscal priorities and social gaps in Pakistan

Pakistan's fiscal policy does not show any special desire to improve social indicators. High spending on defense and debt servicing leaves no room for improving its social services' spending. For instance, per capita health expenditure is currently only $2, well below regional and international comparators (WB, 2002). The high debt servicing and unnecessary defense priorities seem to have a high opportunity cost in terms of social development. During the 1990s, overall government revenues fell from 17 percent of GDP in 1991 to around 16 percent in 1998 and 1999. Even though defense spending fell from 6 percent of GDP in 1991 to below 5 percent in 1999, the non interest component of the government budget fell from 22 percent of GDP to 15 percent. Indeed, devising fiscal remedies and securing new financing to enable the government to service its external and domestic debt and to cover its projected deficit, have preoccupied the successive administrations.

In the decade of 90s, development spending fell drastically from 6.4 percent of GDP in 1991 to 3 percent in 1999. Cross-country evidence indicates that social spending continues to remain insufficient. For example, education spending was 1.8 percent of GDP in Pakistan in 1998, but public investment was still 2.5 percent of GDP. In Sri Lanka, on the other hand, education spending was 5.3 percent of GDP, compared to public spending of 2.6 percent of GDP. This means Sri Lanka devoted twice as much resources to education as compared to Pakistan (WB 2002). Since social spending benefits the poor disproportionately, the lack of attention to social spending has had particularly adverse consequences for the poor in Pakistan. Tables 6.1 and 6.2 reveal that spending on primary education, in particular, is strongly pro-poor as it is seen from the per capita consumption quintiles 1 and 2.

Given that the aggregate social spending has been deficient in Pakistan, it will be particularly important to improve social spending in order to capitalize on its human resources.

Improvements in educational levels of low income population are particularly significant for poverty alleviation in Pakistan. Evidence shows a significant relationship between earnings and educational attainments in Pakistan (UNDP 2003, WB 2002). Before we discuss the poverty and social gaps in Pakistan, it will be helpful to have an overview of theoretical concepts of poverty, which will lead to a broad picture of extent of poverty in Pakistan.

6.3 Theoretical concepts of poverty

The concept of poverty has fired polemics among practitioners, policy makers and academics. Poverty can be viewed in absolute or relative terms. Absolute poverty refers to subsistence below minimum socially acceptable living conditions, usually established on the basis of nutritional and other essential requirements.

Relative poverty compares the lowest segments of society with upper segments, usually measured in income quintiles or deciles.

Absolute and relative poverty may move in opposite directions, for example relative poverty may decline while absolute poverty increases, if the gap between upper and lower strata of the population is reduced by a decline in wellbeing of the former, at the same time that additional households fall beneath the absolute poverty line.

Professor Sen (1984) says that poverty can be an absolute notion in the space of capabilities, though relative in that of commodities or characteristics. For example: households incapable of obtaining sufficient food for survival are considered absolutely poor. However, the costs and composition of the food basket may vary considerably between households across different groups, regions and countries.

Another aspect of relative and absolute poverty is related to the changes of circumstances, for example; if prices increase more than the increase in income ratios, wellbeing of some households may be jeopardized being classified in the existing level of relatively poor and may fall in absolute poverty.

A number of different factors could be accounted for in absolute poverty, with reference to "poverty defined as absolute notion in the space of capabilities":

1. It could be result of the goods and services either ceasing to be available or rising prices more than income as mentioned above.
2. Changes in conventions and laws
3. Psychological causes, being ashamed of not being able to afford what is necessary for social presentation in the society.

Poverty could be subjective or objective in nature. We further discuss the subjective and objective concepts of poverty.

6.4 Subjective and objective concepts of poverty

Poverty has subjective and objective perspectives. Objective perspectives are sometimes referred to as the welfare approach. The objective approach to poverty involves normative judgments as to what constitutes poverty, and what is required to move people out of their impoverished state.

The subjective approach, on the other hand, focuses on the peoples preferences on how much they value goods and services, hence it is concerned with the individual utility. Development practitioners traditionally based their work on the objective approach, with a traditional reason to encounter the obstacles when trying to aggregate multiple individual utilities across the population. The basic argument in favour of this approach is that individuals are not always the best judge of what is best for them. For example, the poverty measurement system which focuses on nutritional attainments. Although all individuals value food consumption, some may

place higher value on some specific foods either by type or by quantity, and that food type or quantity may not be best for their psychological wellbeing. Poverty measurement has traditionally been dominated by the objective approach. Only relatively recently have researchers and development practitioners shifted their interest to measure poverty from subjective perspectives. This is mainly because of the recognition and limitations of the objective indicators, and the value of understanding the perspectives of the poor in shaping policies and programmes. As a result, participatory poverty assessment methodologies have been gaining ground.

6.5 Poverty measurement in Pakistan: issues and methodology

Pakistan did not have any well recognied poverty line until 2000. The need for poverty line emerged more severely when the government of Pakistan, with its international donor partners (naming a fewer as WB, UNDP, ADB and the IMF) wanted to go for a long-term effective poverty reduction strategy with a comprehensive plan to achieve some valueable targets in terms of basic living standard indicators. In Pakistan, poverty is quite visible, its manifestations include lack of income and productive resources to ensure a sustainable livelihood, and lack of access to basic necessities of life, like clean drinking water, sanitation, basic education, and basic health services, etc.

The Government of Pakistan has been working on many plans for poverty reduction in Pakistan. A significant poverty reduction strategy plan undertaken in 2001 was part of the quest of the Government. A detailed plan of poverty reduction was planned in, 1-PRSP (2001) which aims to address the issue of slow economic growth, empowerment of the poor, access to physical and social services, and sustainability of natural resources and viable environment. To make that strategy work, a systematic and in-depth analysis of the determinants of poverty is required to provide inputs to policy makers and planners.

A number of studies have been carried out on the issues related to the extent of poverty in Pakistan (WDR , 2001, 2002, UNDP 2003, ADB 2000, 1-PRSP 2001, PIDE 2000) The focus of most of these studies remained on the analysis of poverty gaps between upper and lower income groups of the society, while few studies

investigate the technical and methodological issues related to poverty in Pakistan. The issue of the characteristics of poor in Pakistan is highly debatable. Thus measurement issues are also a matter of rigorous academic discussions How may individual welfare be measured ? What data set should be used? Is it appropriate to use income or expenditure data? What should be the scope of the consumption bundle? How should the poverty line be constructed and what poverty measures should be used?

We now offer a brief account of the methods and models recommended by the Planning Commission of Pakistan (2002) regarding the poverty measurement issues, to work out the official poverty base line for Pakistan to reduce poverty in both the short and long term. A method was developed to seek a broad consensus of academics and development practitioners on the issue of the selection of appropriate data, suitable indicators, and most importantly, the methodology to be used in the construction of the poverty line.

The following framework was established, under which various steps were taken to estimate the poverty measures in Pakistan (1-PRSP 2001):

1. Selection, and defining indicators of welfare
2. Defining poverty and choice of an approach for construction of poverty line.
3. Generating poverty measures.

6.6 Issue of welfare indicators of Pakistan

The welfare indicators of Pakistan emerged from the consensus of academics and development practitioners, as follows:

1. Income, 2. Basic needs, 3. Capabilities, 4. Mixed group of indicators

Before we discuss these indicators, we must understand the difference between well-being and economic welfare. There is a very thin line between the two. Economic welfare estimates the command of an individual over the commodities. The most common approach to measure economic welfare is based on household consumption expenditure or household income. A common problem with this approach is that the households under-estimate income and over-estimate expenditure. A common reason for that is to be understood that households are reluctant to disclose the real level of their income and taxation is believed to be the

one of the major reasons for such behaviour of the participating households. Some households may have a portion of income which may have been obtained through an illegal source, or some portion of income may be difficult to observe. For example, increase in value of property or livestock. It is generally believed that income fluctuates, while expenditure remains stable over time. The choice of welfare indicators can make a considerable difference when estimating certain characteristics of the poor, including their saving rates and their number. Failure to take account of the biases associated with an indicator can result in unreliable estimates and comparisons (Sudhir Anand, Christopher J. Harris 1994).

6.7 Income approach of poverty measurement

Poverty measurement traditionally has been dominated by the income approach, which assumes that individuals and households are poor if their income or consumption falls below a certain threshold.

Head count ratio: the head count ratio counts the number of poor as a proportion of the total population (n). Head count index or ratio is defined as

$$HCR = \frac{HC}{n} \qquad (6.1)$$

where HC is the number of people living with an income less than the accepted poverty line, and n is the total population.

This approach emphasizes material wellbeing and income as a mean indicator The most widely used income poverty indicators are the head count index and per capita GNP. The head count index is based on a poverty line or a set of lines which are established by costing a minimum basket of essential goods for basic human survival, using income, consumption or data of non-poor households. The incidence of poverty is then calculated as the percentage of the population whose income falls below the threshold. Income indicators can also be used to measure the depth and severity of poverty.

The poverty gap index measures the depth of poverty. It increases if there is a reduction in per equivalent adult expenditure in one poor household, even if the

number of poor in the household remains the same. The poverty gap ratio is defined as

$$PGR = \frac{\sum_{yi<p}(p - y_i)}{nm} \qquad (6.2),$$

where m is mean income. This measure is intended to provide some estimates of the average income shortfall from the poverty line, and thus indicates the severity of the poverty rather than just the number of poor.

An alternative version of (6.2) could be given by

$$P_\alpha = \frac{1}{n_{yi<p}} \sum \left(\frac{p - y_i}{p} \right)^\alpha \qquad (6.3),$$

which is the sum of individual poverty gaps expressed as a fraction of the poverty line, and then divided by the total population. The squared poverty gap (see. Eq:6.4) measures the severity, or extent of poverty It increases if there are transfers from one poor household to another that is relatively better off, but still qualifies as poor, even if the average welfare of the two households remains the same.

In the absence of household data, income poverty is sometimes measured in per capita GNP terms. However, there is a general consensus among development economists that this latter indicator is a crude measure, and can often be misleading, since it is possible for per capita GNP to increase while personal income remains static, or even decline, among a particular population group. The drawbacks associated with income indicators of poverty have been associated with the price and commodity differentials, the exclusion of non-cash, and free items, i.e. public goods and services (Streeten 1989).

Although practitioners agree on inherent limitations of this approach, it nevertheless continues to be the most widely used means of measuring, because of relative abundance of data and its simplicity.

6.8. Basic needs approach

The basic needs measure of poverty defines poverty as the deprivation of requirements, and it is concerned mainly with the basic material of human needs. This approach attempts to address some of the limitations of the income indicator, by distinguishing between private income, publicly provided services, and some

forms of non-monetary services income. This approach to poverty measurement includes access to such necessities as food, shelter, schooling, health services, portable water, and sanitation facilities. The employment opportunities and opportunities in community participation are also included in this approach of poverty measurement.

Basic needs indicators are often classified in the 'means' category. Basic needs indicators add a wide range of dimensions to income measures. The big advantage over the income measure of poverty is that they measure goods and services directly in terms of human welfare; for example, rise in housing and essential transportation prices would be counted in decline in wellbeing using basic needs indicators, while on the other hand, per capita GNP would record this as an increase. A wide range of development practitioners seem to be criticising this approach (Srinivasan 1994, Anand,1994) due to the difficulties associated with the basic need measure of poverty. There are no ways of aggregating them meaningfully for the purpose of a country analysis, and they are usually expressed in terms that do not trigger the same kind of familiarity as monetary ones (Streeten 1989, Ghatak, S 1995).

6.9 Pakistan government's strategy for poverty reduction

Pakistan was faced with a twin challenge of reviving growth and poverty reduction by the end of 2000. To address these challenging targets, a clear policy was needed. The fact that Pakistan had no official poverty line shows that Pakistan had not been targeting poverty with a sharp focus. A serious effort by the Pakistan government only started after 2000 with the preparation of 1-PRSP (Poverty reduction strategy paper) with the help of the World Bank and other donors. However, Pakistan had shown an imperative to address the poverty issues by the end of 1999, with the announcement of a plan to tackle the poverty issue in December 1999. As a part of strategy, four goals were set to be achieved.

1. Engendering growth
2. Implementing broad-based governance reforms
3. Improving income-generating opportunities
4. Reducing vulnerability to shocks.

6.10. Characteristics of poor in Pakistan

If governments are to reduce poverty or to judge how economic policies affect poverty, they need to know a lot about the poor. For example, information on how the poor earn and spend their incomes can help policy makers to assess how changes in relative prices will affect real income.

Policy targeted directly on the poor can hardly succeed unless governments know who the poor are and how they respond to the policies and to their environment (WDR 1990). The characteristics of the poor in Pakistan are not different from those in the less developed world. In order to analyse the poverty reduction policies, we must first know about the characteristics of the poor of Pakistan. The main attributes which characterize poor in Pakistan are as follows:

1. Low education
2. High unemployment
3. Low assets and sources of income
4. Demographic characteristics
5. Vulnerability

We will discuss these characteristics of the poor in Pakistan and find out how they shape their lives.

6.11. Education

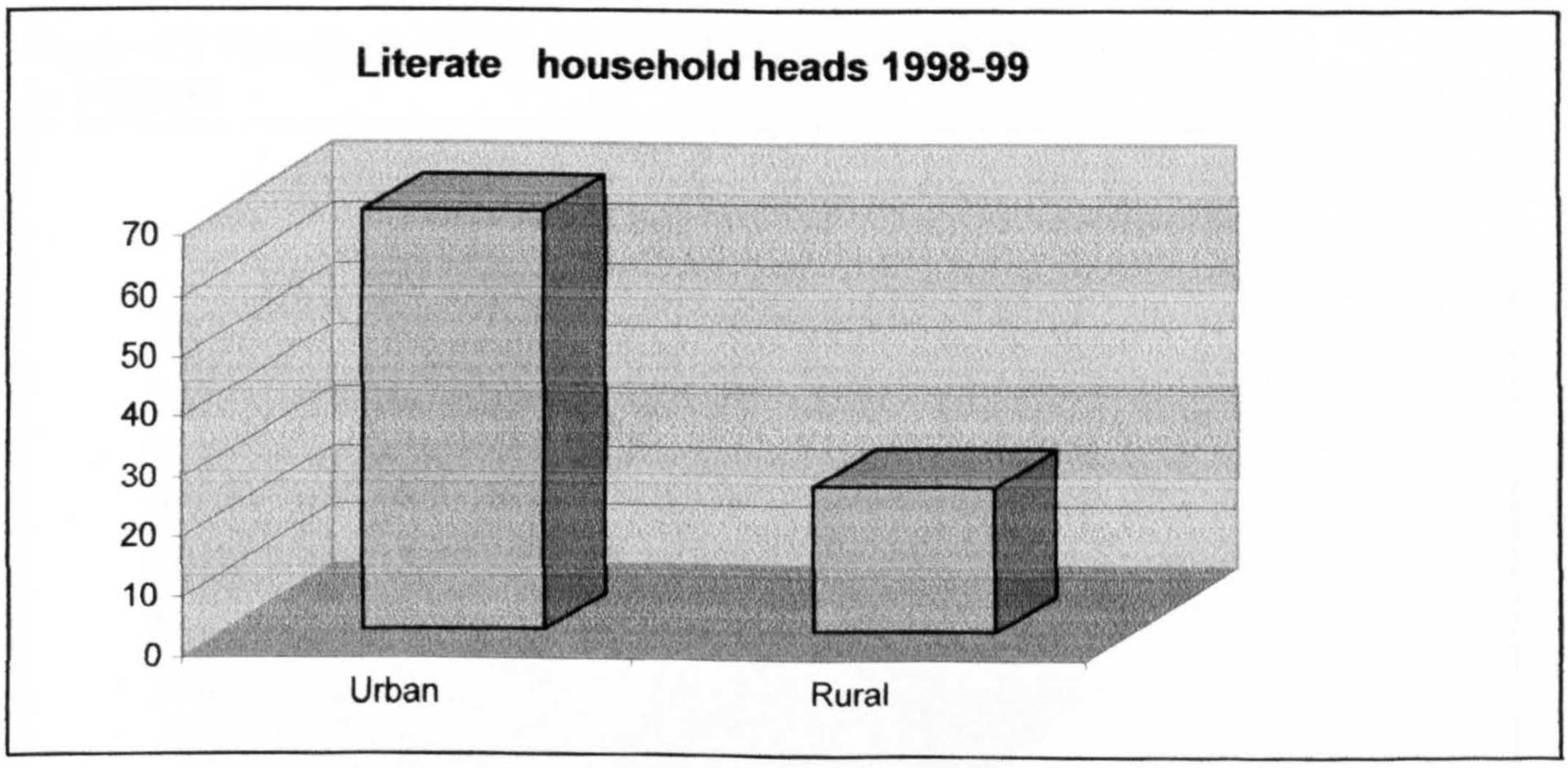
Among all other characteristics, perhaps education is the most important and very common characteristic of the poor in Pakistan. Low level of education or literacy appears to be a major determinant of their poverty. Various studies on poverty assessment in Pakistan provide evidence of a strong correlation between illiteracy and incidence of poverty. (WB 1990, WB 2000, 2001, ADB 2000, Ghatak 2005).

Table 6.1. Percentage literate household heads in Pakistan (poor and non poor) in 1998-99

	Non Poor	Poor
Punjab (U)	69.23	35.44
Punjab (R)	41.78	24.23
Sindh (U)	72.06	43.74
Sindh (R)	50.4	33.09
NWFP (U)	58.77	26.49
NWFP (R)	36.79	19.27
Balochistan (U)	59.33	38.95
Balochistan (R)	37.41	26.20
Over all (U)	69.51	36.66
Overall (R)	24.42	24.89

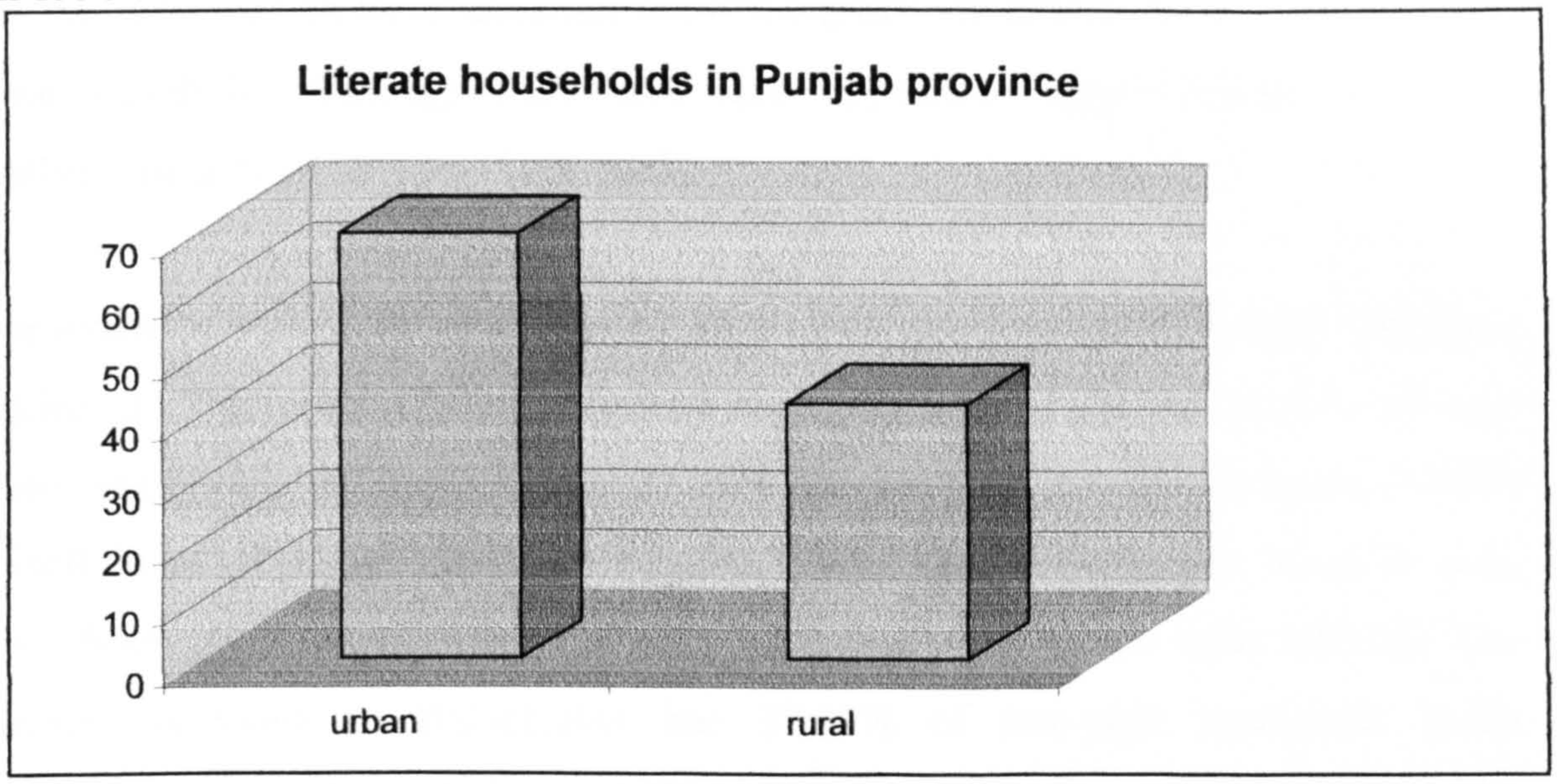
Source: Federal Bureau of Statistics, Islamabad, Pakistan, (2002).
Key: U= Urban, R= Rural

Figure 6.1 Percentage non poor literate household heads Sindh province (non-poor)



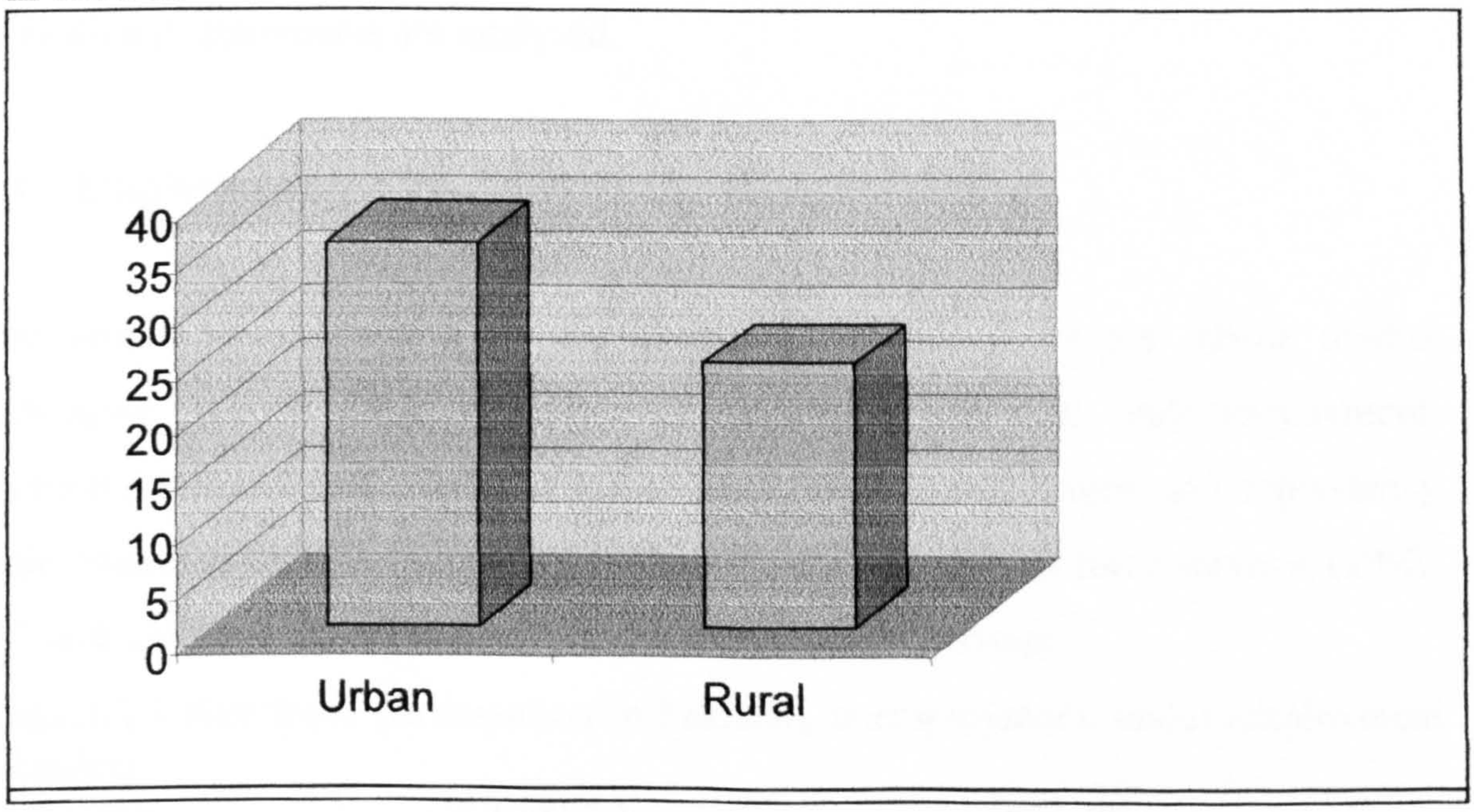
Source: Federal bureau of statistics (2002) Islamabad

Figure 6.2 Percentage Literate household heads Punjab province (non-poor) in 1998-99



Source: Federal bureau of statistics (2002) Islamabad

Figure 6.3 Percentage literate household heads in Punjab (poor) in 1998-99



Source: Federal bureau of statistics (2002) Islamabad

looking at the data in figure 6.1, 6.2, 6.3 inferences could be drawn that low education is highly correlated to the incidence of poverty. Figures for overall urban and rural Pakistan show that in 69.51% of non-poor household heads were

educated, as compared to 36% of poor household heads. Though the figure on overall rural urban basis does not show a significant difference in poor and non-poor household heads, again the same figure appears to suggest a clear message if analyses on a provincial level are made.

For example, Punjab province has 41.78% of non-poor house hold heads educated against 24.2 percent of poor household heads, in Sindh Province, 50.4 % of non-poor households as compared to 33.09% in non-poor household heads. NWFP (North West Frontier Province) has 36.79% of literate household heads in non-poor households, as compared to poor rural household heads with 19.27%. The western province of Balochistan has 37.41% of non-poor household heads compared to poor house hold heads 26.20 in rural areas with education. Studies like Arif (2001) suggest that households whose heads were without any formal education was three times more likely to have incidence of poverty than those with 10 years or more education. In the later part of this chapter, social gaps in educational attainments are analysed.

6.12. Employment

The employment situation in the country is examined by six labour market indicators: labour force participation, unemployment and underemployment, sectoral distribution of employed labour force, average real wages, and dependency ratio. Statistics on these indicators are based on the two labour force surveys, (1992-93) and (1996-97) from Federal Bureau of Statistics, Pakistan.

Table.6.2.Labor force participation in Pakistan, unemployment, under employment (Gender)

Indicator	**1992-93**	**1996-97**
Labor force participation	42.35	43.01
Male	69.24	70.01
Female	13.15	13.63
Unemployment rate	4.73	6.12
Male	3.76	4.21
Female	10.32	16.76
Underemployment rate	12.81	12.04
Male	7.62	7.27
Female	42.27	42.27

Source: Pakistan labour force survey (1992-93) and (1996-97).

After two decades of fair economic growth in the decade of the 1990s, Pakistan's economy showed poor performance, which was well translated in all economic indicators, the employment indicators not being an exception. The survey results of 1992-93 and 1996 show that total participation of the labour force in 1992-93 was 42.35 percent, which did not show any significant improvement in the 1996-97 survey result. While a small increase in employment was gained, it never increased the female share in employment; indeed, the 1996-97 survey shows a big increase in the rate of unemployment in the female labour force, from 10.32 percent 1992-93 to 16.76 percent in 1996-97.

6.13 Labour force participation

The labour force participation rate is the percentage of persons in the labour force of the total population 10 years and above. In 1996-97, 43 percent of total population in Pakistan (10 years and above) was in the labour force There were substantial differences between male and female in terms of their participation in the labour force. About 70 percent of the male population was in the labour force in 1996-97, while the corresponding rate for female was only 13.6 percent. The remaining 86.4 percent of the female population was either involved in house-keeping activities, studies, or was not available for work. Thus it is clear that from 1993-94 to 1996-97 there was no significant change in labour force participation rates for both males and females. However, comparing the participation rates of 1996-97 to those of 1984-85, a declining trend of labour force participation can be clearly found.

On regional basis, the labour force participation was higher in rural areas compared to urban areas. The provincial trend shows that in 1996-97 , Punjab province had the highest male and female participation in the labour force, as compared to other provinces. The lowest male participation labour force was observed in NWFP, while the lowest female participation was reported in Balochistan. It is important to note that female labour participation in Punjab province increased from 15.6 percent in 1992-93 to 17.5 percent in 1996-97, while it decreased in NWFP and Balochistan. There was no change in Sindh province in both male and female labour participation during this period.

6.14 Unemployment and Underemployment

Unemployment rate is defined as percentage of unemployed persons (10 years and above) among the total labour force (FBS 96-97). According to the 1996-1997 labour force survey, the total unemployment rate was 6.1 percent. It was 4.2 percent for males and 16.8 percent for females. Between the 1992-93 and 1996-97 periods, the level of unemployment increased for the total population (10 years and above) from 4.7 percent to 6.1 percent. For males it increased from 3.8 percent in 1992-93 to 4 percent in 1996-97. The level of female unemployment increased remarkably from 10.3 percent in 1992-93 to 16.8 percent in 1996-97. The increase in the level of unemployment is largely a consequence of the relative slowdown of the economy during the 1990s.

In Pakistan, the level of unemployment has been always higher. The unemployment level in rural areas was 5.6 percent, while in urban areas unemployment was 7.2 percent of the labour force. Within urban rural sectors, there were substantial differences in unemployment rate by gender. In 1996-97, 5.1% of the urban male labour force were unemployed, whereas the corresponding percentage for females, was 15.2%. The analysis of province data shows that the level of unemployment was higher in NWFP compared to the other three provinces of Pakistan. Interestingly male unemployment in Sindh province was the lowest among all provinces, where a decline was also registered between the 1992-93 and 1996-97 periods. In all other provinces, an increase in unemployment rate was observed for both males and females.

Table.6.3 Labour participation in Pakistan rural Urban wise

Indicator	Rural	Rural	Urban	Urban
	1992-93	1992-93	1992-93	1996-97
Labor force participation(Total)	44.64	45.01	37.47	38.92
Male	71.29	71.82	64.93	66.50
Female	15.86	16.26	7.34	843
Unemployment rate(total)	4.28	5.65	5.88	7.17
Male	3.38	3.78	4.63	5.11
Female	8.67	14.56	17.99	25.15
Underemplyment (Total)	15.02	14.18	7.13	7.06
Male	8.80	8.54	4.60	4.57
Female	41.56	44.49	35.67	34.86

Source: Pakistan Labor force survey 1993-94 and 1996-97 (FBS).

Underemployment is defined as the proportion of persons working less than 35 hours per week to total employed labour force. More than one tenth of the total employed labour force was underemployed in 1996-97. Among women, the level of under employment was highest, just above 43 percent. This level was approximately six times the level of male underemployment. In rural areas, almost half (45%) of the female employed labour, were working less than 35 hours per week in 1996-97. In short, there is substantial gender inequality in terms of participation in the labour force as a percentage of unemployment and underemployment. A dramatic improvement will have to await big increases in income levels for fundamental changes in socio-cultural norms.

6.15 Assets and sources of income

The poor usually lack assets as well as income. In Pakistan, where the majority of labour is engaged in agriculture, land has a determinant effect on poverty. Poverty is highly correlated to land ownership in South Asia (WDR 1990). A very small portion of the poor could be land owners in rural Pakistan. When the poor owns land, it is a difficult task to irrigate that plot. The majority of peasants are landless in Pakistan, and as the peasantry do not provide any collateral for credit, the poor can not improve it or take a better yield from it.

The ownership of assets directly affects income opportunities; without assets such as land, the poor are forced to hire out their labour, and without adequate skills they are confined to the unskilled work therefore they can not increase their income.

6.16 Source of income

Agriculture is a major source of the poor in Pakistan. The majority of population of the living in rural areas derive their income through agricultural sources. The agriculture production methods are based on primitive methods, due to which the poor are unable to maximise their income. Due to low level of skills and without any savings, the poor in Pakistan are compelled to work as cultivators, hunters and gatherers, small artisans , petty traders and wage labourers at various times.

The daily running expenses of life to buy household items , such as soap, salt, clothes, cooking oil, medical expenses and school costs, need cash. Due to these costs the poor in Pakistan often need paid work, otherwise they have to sell part of their agricultural produce. In the absence of such paid work or produce the poor are often forced to sell their assets, which again drags them into a vicious circle of poverty (WDR1990, ADB 2000).

In terms of occupation the incidence of poverty is the highest among household heads with rudimentary occupations, which include day labourer in agriculture, construction, trade and transport, and which are precarious and contain a lot of disguised unemployment. Incidence of poverty was higher among the self-employed, which include street vendors, in urban areas, which was 55 percent in 1998. Access to employment reduces poverty incidence by another 18 percent. (ADB 2000). This indicates that micro-finance and community works programmes in the short and medium term can be effective instruments for addressing poverty in rural areas. In urban areas, access to employment reduces the incidence of poverty by 45 percent, while education and physical assets contribute another 12 percent and 9 percent reduction, respectively (ADB 2000).

6.17 Demographic characteristics of poor in Pakistan

The population of Pakistan was estimated 138.1 million in 2000, and 141.5 million by 2001. At growth rate of 2.4 percent, the population of Pakistan has quadrupled since the census of 1951. Households with the lowest income per person tend to be large, with many children or economically-dependent members. In Pakistan in 1984, the poorest 10 percent of households had an average of 7.7 members, of whom 3.3 were children under age of 9 years (WDR 1990) From 1991 to 2001, the population growth rate came down from 3 percent to 2.4 percent, but the total rate of fertility (4.8) was still the highest in Asia (1-PRSP 2001). Population increase was highest in the rural areas of Pakistan. The rural-urban composition of the population reflects the differences in the natural rate of growth of population in the rural and urban areas of Pakistan. A couple's decision to have many children is for many reasons: economic, social and religious. The most powerful motivation is perhaps the economic reason. One of the main features of Pakistani society is that in

old age parents depend on their children or their other close relatives. The family structure must be stable over time to take over the old age responsibilities of its senior members. However, in low income groups, it becomes very difficult task to mange such a large family. Lack of a fit family member could lead a family to destitution, because there are very thin chances for a woman to take a paid employment to feed her family, due to the prevailing social structure. Historically, the entire social system of Pakistan has not been favourable to women in creating enough opportunities for their employment.

Child labour is common in those families where there is no bread-earning male head; such a family depends on child labour for survival, which in turn decreases the chances of schooling of such children. As a result, such a particular group is pushed into the vicious circle of poverty. With reference to our discussion section on education and poverty we have already established (section 6.11) that such children who can not get enough education due to their incapacities are unable to be employed in well-paid jobs, or due to illiteracy, such people are unable to manage their other occupations more productively. The opportunity cost of sending children to school outweighs the future benefits, especially for girls, whose economic value is underestimated. Large family size is believed to be one of the main reasons for poverty of households in Pakistan. Government efforts to control the population have never proved to be successful in the past. However, in 1-PRSP, the Government of Pakistan claims that they have achieved significant results in population control, with a contraceptive use rate of 28 percent.

6.18 Vulnerability

In general, vulnerability implies the lack of capacity of the poor to access public entitlements, particularly in terms of public goods and services which determine human development. The WDR (1990) defines the various terms related to the use of vulnerability. There is a difference in the terms security and vulnerability, since both "describe the response to change over time".

Insecurity is exposure to risk, while vulnerability is defined as the resulting possibility of decline in wellbeing. Risk exposure and vulnerability are related

terms, but not synonymous. Risk refers to uncertain events that can damage well-being; e.g. the risk of illness or a risk of occurrence of drought. The uncertainties can pertain to the timing or magnitude of the events, for example, seasonal fluctuations in the form of income could be known in advance, but the event is not always unpredictable. Risk exposure measures the probability that a certain risk will occur. Vulnerability measures the resilience against a shock. The likelihood that a shock will result in a decline in wellbeing, vulnerability is primarily a function of a household's assets endowment and insurance mechanism.
(Sen & Dreze 1989, WDR 1990, Morduch 1994 and ADB2000).

6.19 Vulnerability and institutional failure in Pakistan

Studies on poverty in Pakistan stress that the poor in Pakistan rarely speak of lack of income, rather they tend to focus on those constraints which they have faced to manage their assets, whether human, material, social, or political. In addition, highlighted in the poors perception of poverty are increasing insecurity and vulnerability.

These situation are often arising from sectarian violence, communal clashes, and the poor performance of law and order. More specifically, vulnerability manifests itself in four ways in Pakistan.

1 Everyday harassment, under-performance, exclusion, and denial of basic human rights by institutional authorities and the upper strata of the society which are partners in power sharing in Pakistan.

2. The local authorities responsible for regulating the economic activities are engaged in extracting illegal money from informal sector workers for licensing and other necessary facilitations. This kind of rent-seeking activity is common in government institutions in Pakistan. The chances for the government officials only become possible when illegal and unnecessary regulatory controls are imposed on the livelihood of citizens. More interestingly, it is accepted budgetary practice. For example costs incurred in criminal investigations in rural areas have to be met partly by the victim, party by the investigation.

According to the National Human Development report (UNDP 2003), on average the poor have to pay Rs. 22,648 as a bribe, in the case of the involvement of police in any dispute.

This money could be for vehicle rent for the fuel, in case the police station is provided with a vehicle from the government department, or for other expenses to be incurred on investigation. The magnitude and frequency of institutional harassment is higher in rural Pakistan compared to the urban areas. Thus the majority of rural areas are oppressed by law and enforcement agencies.

3. The corruption of local officials has become a well known problem to make education, health, land management and other public goods inaccessible to the poor. For example, it is common in Pakistan that the poor prefer to visit a private health facility, rather than visiting a local government facility, even if the private health facility is more expensive.

4 Failure of the state institutions to provide law and order and security is a function of police, legal and judicial structures. Thus vulnerability is deeply affected by the performance of the public institutions which act to influence or control the conditions under which the poor can secure and sustain assets which determine their vulnerability. Many studies suggest that the poor remark more frequently on the impact of a brutalising police force and corrupt judiciary than is apparent from official indicators and causes of poverty.

Delivery of higher quality public services and goods is a necessary condition for the development of financial capital and other assets. Thus these conditions are necessary to be met by the government if they want to see their poverty reduction strategy work.

6.20 Poverty trends in Pakistan

A significant body of literature is available on poverty assessment in Pakistan.

Most of the studies that estimated poverty trends in Pakistan have used a head count measure under an arbitrarily defined poverty line. Therefore it becomes difficult to ascertain the trends in poverty. Amjad and Kemal (1997) and Ali and Tahir (1999) have developed a consistent time series on rural, urban and total poverty, Amjad and Kemal estimated the trends by using the data set of 8 surveys (HIES), while Ali and Tahir (1999) used 14 surveys, from 1963-64 to 1993-1994. These two studies seem not to define a new poverty threshold. Rather, they used the income poverty line defined by Malik (1988) as a bench mark, and adjusted

according to inflation. Interestingly, for the period of 1963-64 to 1987-88, the results of these two studies confirm the outcomes of previous studies based on different methodologies and poverty lines. For this period three main conclusions are drawn: 1 Poverty levels increased between 1963-64 and 1969-70 . The increase in poverty level is confirmed overall as well as in rural areas. 2. The next decade, 1969/70-1979, witnessed a decline in poverty in both rural and urban areas. 3.This declining trend in poverty continued till 1987-88. The major differences in the results as regards trends in poverty are between 1987-88 and 1993-1994. For this period, some other studies have estimated the trends in poverty. Gazdar (1994) shows a decline in poverty overall, as well as in rural-urban, but a slight increase in urban poverty. Jafri (1995) has also estimated the levels of poverty for five years, i.e 1986-87, 1987-88, 1988-89, 1990-1991, 1992-93 and 1993-1994, by using two methods: caloric intake and basic needs. He shows that the declining trend in food poverty in the 1980's continued till the early 1990s, with a slight increase in poverty between 1992-93 and 1993-94. In contrast Malik, (1994) shows a rise in poverty between 1987-88 and 1990-91, overall as well as in urban and rural comparisons. Amjad and Kemal (1997) also show a 5 percent increase in poverty between 1987-88 and 1992-93, overall, as well as in rural areas. In the case of urban areas, according to their estimates, it first increased from 15 percent in 1987-88 to about 19 percent in 1990-91.In 1992-93, it declined to a level of 15.5 percent. Ali and Tahir (1999) also show an increase in poverty between 1987-88 and 1992-93 over-all, as well as for rural and urban areas. According to their estimates, the level of over-all urban poverty declined slightly between 1992-93 and 1993-94, (Table 6.6) but it increased in rural areas. It is evident from the review of the studies which have estimated poverty for the 1990s, that no consensus is found among the economists regarding the poverty trends after 1987-88.

Table 6.4 Poverty trends in Pakistan in 1990s.(percentage of population in poverty)

Year	Amjad&Kemal 1997	Ali &Tahir 1999	Jafri 1999	FBS 2001	Arif 2001
1990-91	22.1	23.0	26.1	-	-
1992-93	22.4	28.1	26.8	26.6	27.2
1993-94	-	27.9	28.7	29.3	27.4
1996-97	-	-	-	26.3	29.9
1998-99	-	-	-	32.2	35.2

Source: Amjad & Kemal 1997, ALi and Tahir 1999, Jafri1999, Arif 2001.

Quireshi and Arif (1999) have estimated poverty for two periods, 1993-94 and 1998-99, using the same poverty line as used by Jafri (1999), but different methodology from that used in previous studies. According to Jafri, the incidence of food poverty in 1993-94 was 21 percent, however, Qureshi and Arif show a rather significant difference in the incidence of food poverty.

According to their results from 1993-94, 24 percent of households were below the food poverty line, and the incidence of poverty increased about 33 percent in 1998-99. The incidence of food poverty was higher in rural areas, as much as 35 percent as compared to urban areas, 26 percent. In 1998-99 the overall poverty was highest in the western province of Balochistan, followed by Sindh, Punjab, and NWFP.

UNDP (2003) shows the highest level of poverty in rural Sindh followed by Balochistan, NWFP, and Punjab, while UNDP-HDI (2003) shows the highest living standard in urban Sindh, followed by Punjab, NWFP and Balochistan. The World Bank (2002) poverty estimates for Pakistan for the same period, i.e 1990s have been constructed using household income and expenditure survey (HIES) data for the year 1993-94, and the Pakistan integrated household survey (PIHS).

According to head count measures at the end of the 1990s, 32.6 percent of the Pakistan population was living in poverty. Despite significant interventions during the following decade, the figure remains still more or less the same as it was in the 1990s. The depth and severity of poverty remains more or less constant. The remarkable change happened in widening gapes in city and countryside and inter-provincial gaps are also persistent features.

In order to get a complete picture of poverty in households, it is important to look at all three indices of poverty: Head count ratio counts the number of poor as a proportion of the total population. Head count index or ratio is defined as $HCR = \frac{HC}{n}$, (6.1) where HC is the number of people living with an income less than the accepted poverty line, and n is the total population.

The poverty gap index measures the depth of poverty. It increases if there is a reduction in per equivalent adult expenditure in one poor household, even if the number of the poor in the household remains the same. The poverty gap ratio is defined as $PGR = \frac{\sum_{yi<p}(p - y_i)}{nm}$ (6.2), where m is mean income, p is the poverty line and y is the actual income of the poor. This measure is intended to provide some estimates of the average income's shortfall from the poverty line and thus indicates the severity of the poverty rather than just the number of poor.

An alternative version of (6.2) could be given by $P_\alpha = \frac{1}{n_{yi<p}} \sum \left(\frac{p - y_i}{p} \right)^\alpha$ (6.3), which is the sum of individual poverty gaps expressed as a fraction of the poverty line and then divided by the total population.

The squared poverty gap measures the severity, or extent of poverty, It increases if there is transfer from one poor household to another that is relatively better off, but still qualifies as poor, even if the average welfare of the two households remains the same.

A combinatorial, index , which combines the head-count and the poverty gap into one is called the *Foster-Greer-Thorbecke* index, and is defined as

$P_\alpha = \frac{1}{n_{yi<p}} \sum \left(\frac{p - y_i}{p} \right)^\alpha$ (6.4) .If α is equal to zero, this reduces to the head-count index, while as α rises beyond 1, larger poverty gaps are given greater weight and the measure becomes increasingly sensitive to these gaps. (Lynn 2003)

The national poverty head-count ratio of Pakistan in 1998-99 was estimated at 32.6 percent, close to the 34 percent estimated for 1990-91 (WB 1995). This was in sharp contrast to the decade of the 80s, which has a positive record of poverty decline, particularly between 1984-85 and 1987-88.

Historical poverty trends in Pakistan could be divided into two periods spread over four decades. The first period covers from year 1964 to 1988, while the second covers the period from 1988 to 1999 and beyond.

During the first period (1964-1988), until 1970, poverty was in decline in urban areas, while rising in rural areas. During this period the green revolution had a remarkable impact on Pakistan's economy, coupled with a boom in the construction industry which boosted employment to a significant level.

The period under study witnessed a rapid expansion of the public sector. The oversea's workers remittances contributed a very significant amount of foreign exchange. Due to Korean war and other favourable conditions in international trade, Pakistan's balance of payments remained not only stable, but was in surplus.

Various studies (Amjad 1997, Ali and Tahir 1999, Jafri 1999, Arif 2001, FBS 2001,) indicate that the incidence of poverty increased from 22 to 26 percent in 1991 to 32-35 percent in 1999. The level of poverty seems to have increased significantly from 1990 to 1999 . A rapid rise in poverty is observed between 1997 to 1999, a period of slow growth and macro-economic instability in the country. Since 1999, growth has slowed even further, as the fiscal squeeze has intensified, development spending declined, and the country has experienced severe drought.

Table 6.7 shows poverty estimates by the world Bank (2002).

The recent HDI developed by UNDP (2003) shows a further increase in poverty, with a high concentration in rural areas, with a significant drop in rural living standard, coupled with a further fall in household income.

A general conclusion can be drawn that poverty in Pakistan remained unchanged by the end of the 1990s decade. Poverty seems to be increasing rapidly in the later part of the decade. Such findings are broadly consistent with almost all major studies mentioned above, which employed different poverty lines and methodologies.

Table 6.7 shows poverty estimates of (WB 2002) which also confirm the trend of poverty on HCR 1984-85, 46.0 to 32.6 in 1998-99, poverty gap also shows trend from 11.1 in 1984-85 to 7.0 in 1998-99, same years show decrease in sensitivity of poverty from 3.8 in 1984-85 to 2.2 in 1998-99.

Table 6.5 Poverty estimates for Pakistan (% of population in poverty)

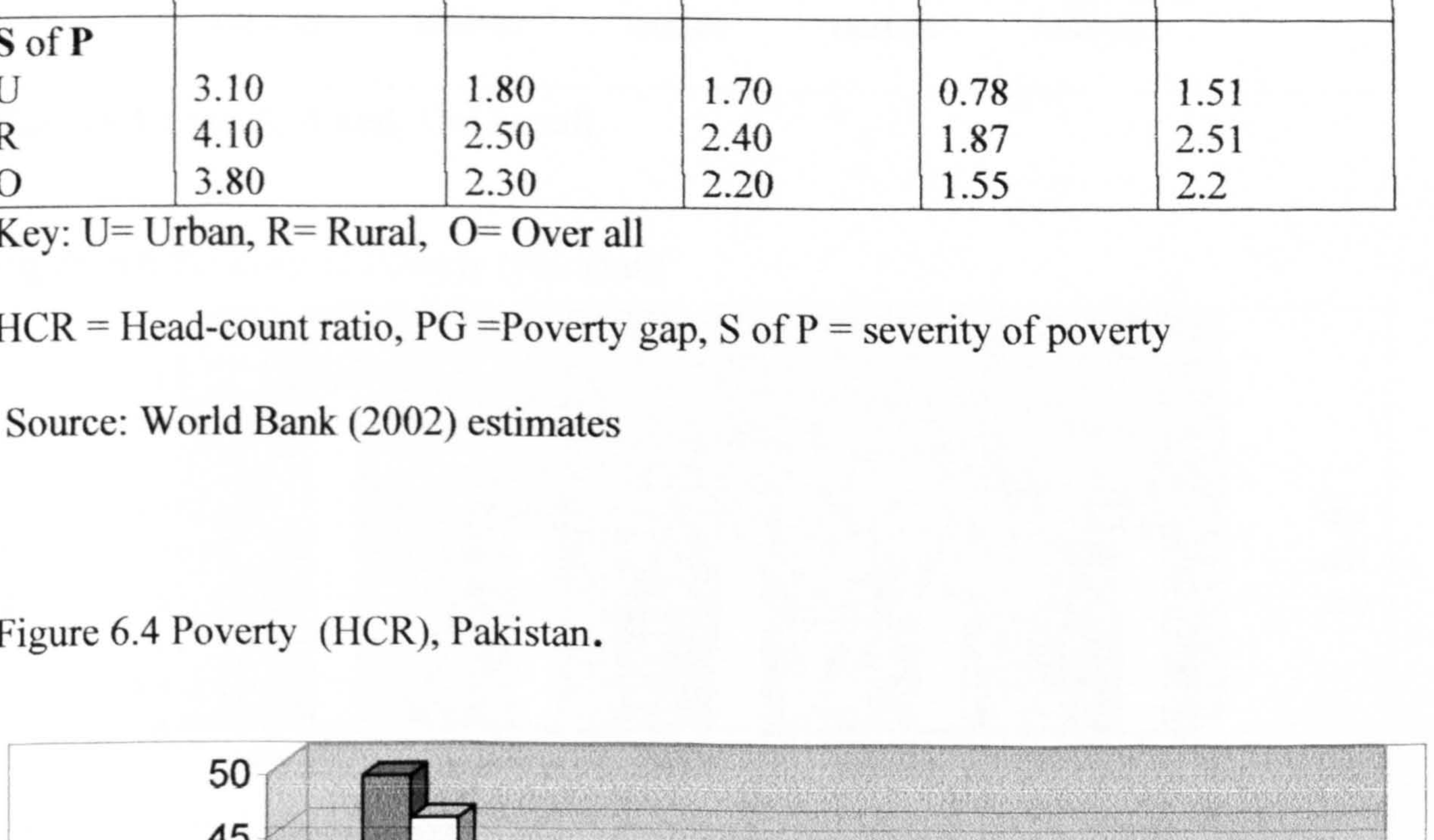
	1984-85	**1987-88**	**1990-91**	**1993-94**	**1998-99**
HCR					
U	38.2	30.7	28.0	17.2	24.2
R	49.3	40.2	36.9	33.4	35.9
O	46.0	37.4	34.0	28.6	32.6
PG					
U	9.2	6.1	5.7	3.0	5.0
R	11.9	8.3	7.8	6.4	7.9
O	11.1	7.7	7.1	5.4	7.0
S of **P**					
U	3.10	1.80	1.70	0.78	1.51
R	4.10	2.50	2.40	1.87	2.51
O	3.80	2.30	2.20	1.55	2.2

Key: U= Urban, R= Rural, O= Over all

HCR = Head-count ratio, PG =Poverty gap, S of P = severity of poverty

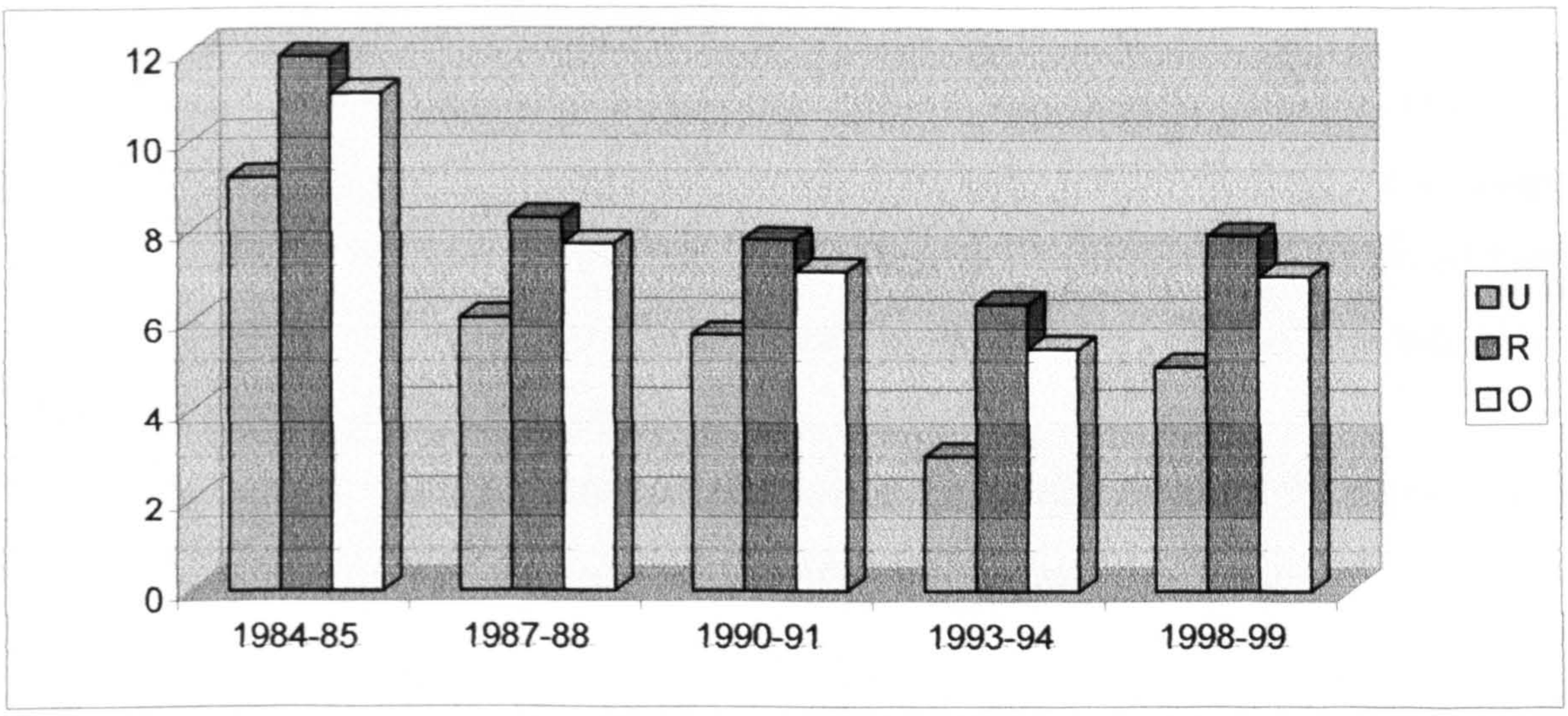
Source: World Bank (2002) estimates

Figure 6.4 Poverty (HCR), Pakistan.



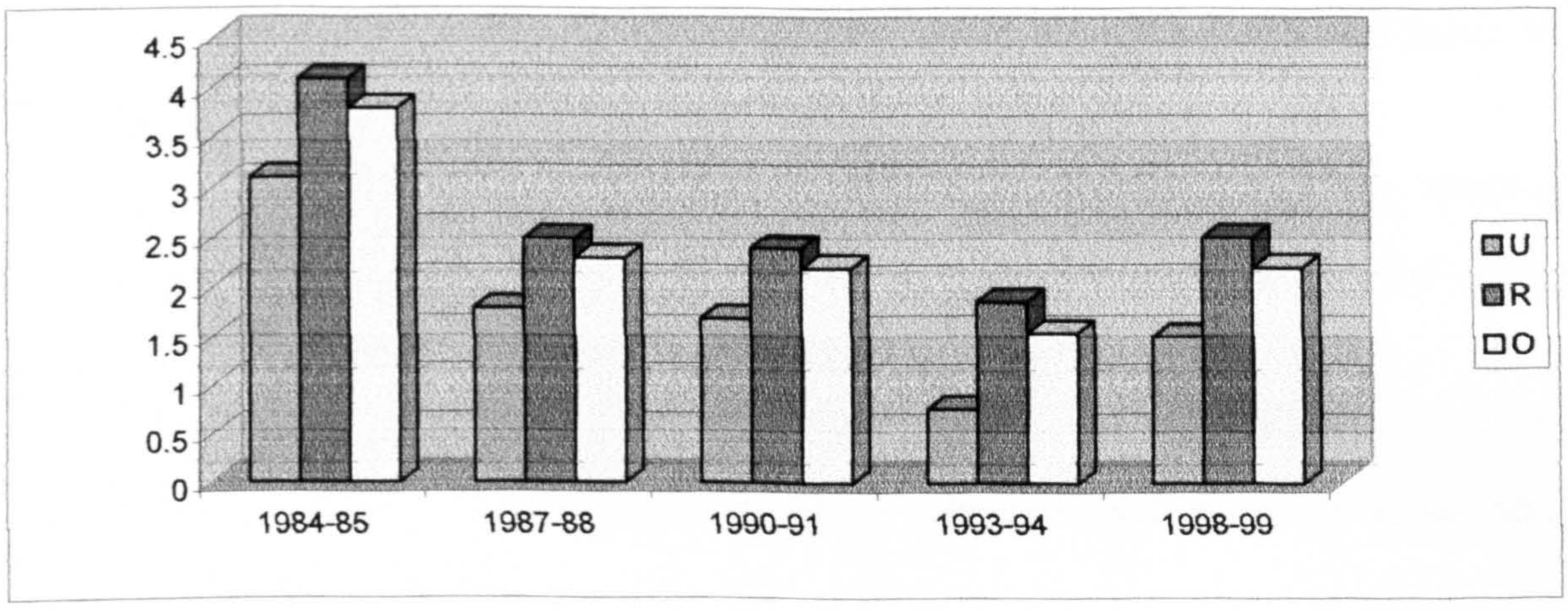
Key: U=urban R=rural O=over all

Figure 6.5. Poverty Gap Pakistan



Key: U=Urban, R=Rural, O=Overall

Figure 6.6 Severity of Poverty (Pakistan)



U=Urban R=Rural O=Over all

Source: WB (2002)

6.21 Regional Differences in poverty composition in Pakistan

Various studies indicate that, rural poverty is found to be much higher than urban poverty in Pakistan. Comparing 1990-91 and 1998-99, it also seems that while urban poverty has fallen, rural poverty has remained stagnant, with the result that the rural-urban gap has increased somewhat over the decade.

The Human Development Index (HDI) has been constructed by the UNDP since the 1990s as an indicator of living standards. The HDI ranks countries based on their scores in (1) Health, for which life expectancy is taken as a reasonable gauge, (2)

Knowledge, expressed as combination of literacy rates and average years of schooling, and (3) Per capita income. Originally they are based on the highest and lowest values measured throughout the world.

The HDI (2003) for Pakistan developed by UNDP (2003) shows a greater difference in rural and urban scores within provinces of Pakistan. UNDP (2003) shows Sindh province urban areas with the highest HDI, while it shows the lowest HDI in rural areas in the same province. Similarly, other provinces also show a high degree of disparity in urban-rural development levels.

This urban-rural disparity is deeply rooted in the political history of Pakistan. Since the inception of Pakistan, the rural areas have been underrepresented.

Mean per equivalent adult expenditures at constant prices seem to be consistent with the stagnation in poverty that is observed (Figure 6.9) remaining almost unchanged from 1990-91 to 1998-99. Consistent with the poverty trends in urban and rural areas, mean expenditure has increased in urban areas more than in rural areas. In rural areas, it actually fell slightly from 1990-91 to 1998-99.

The lack of growth in rural consumption and poverty reduction during the 1990s is in sharp contrast to rapid growth in rural consumption in the later part of the 1980s, a period which also observed a sharp fall in rural poverty.

Moreover, the 1990s also saw growth in value added in agriculture to the tune of a compounded average of 4.5% annually, which compares well with the agricultural growth in 1980s.

This raises an important question as to why agricultural growth in the 1990s did not lead to the kind of growth in rural consumption and reduction in poverty as it did in the 1980s. Increasing inequality in rural Pakistan in the 1990s could provide an explanation for this phenomenon. A later section will show, inequality in consumption, as measured by Gini-coefficients did not decrease in fact in rural Pakistan in the 1990s.

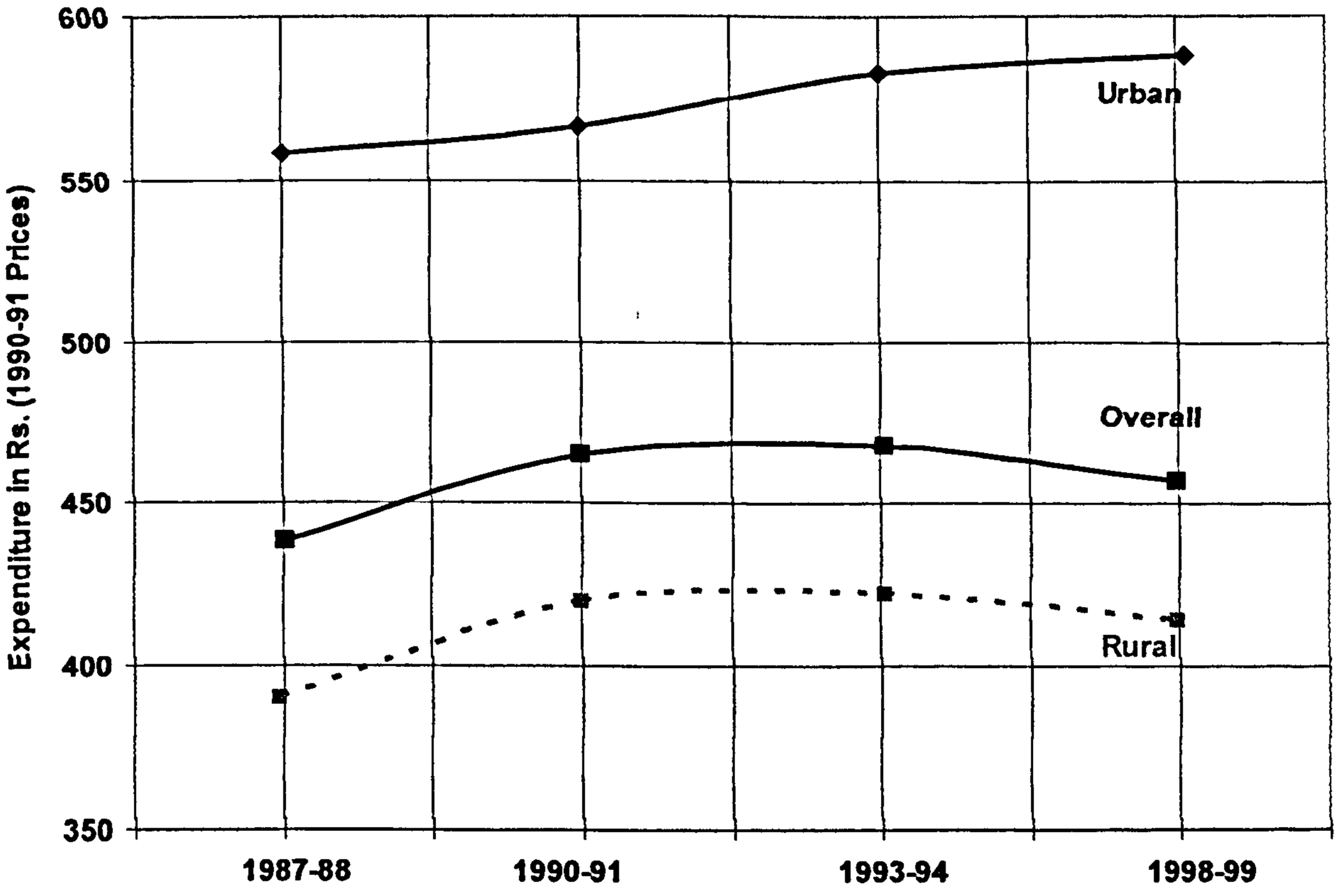
Poverty is all pervasive, and a significant number of studies on the subject (ADB,2000, WB,2002, UNDP,2003) point out that the under-representation of rural areas in political institutions of Pakistan has led rural areas into the worst poverty as compared to urban centers.

We will further investigate the relationship between rural poverty and other social services in Pakistan.

Considering three variables as the main reasons of poverty concentration in rural Pakistan, we further investigate rural poverty and its relationship with

1. Land ownership
2. Educational attainments
3. Political under-representation

Figure 6.7 Mean per Equivalent adult consumption (constant 1990-91 prices)



Source: World Bank 2002

6.22 Land ownership and poverty

Land is the basic asset in the rural economy. But in Pakistan, almost a half of the rural households do not own their piece of land for cultivation.

A number of studies establish a significant relationship between assets ownership and poverty in rural areas (ADB 2000, WB 2002, I-PRSP-2001,) The poor in rural areas of Pakistan share lack of assets as a common feature.

In rural Pakistan, social status is co-related to the land ownership. The poor in Pakistan lack the ownership of the land or they are unable to manage their piece of land. A large proportion of labour, engaged in agricultural farming does not own land.

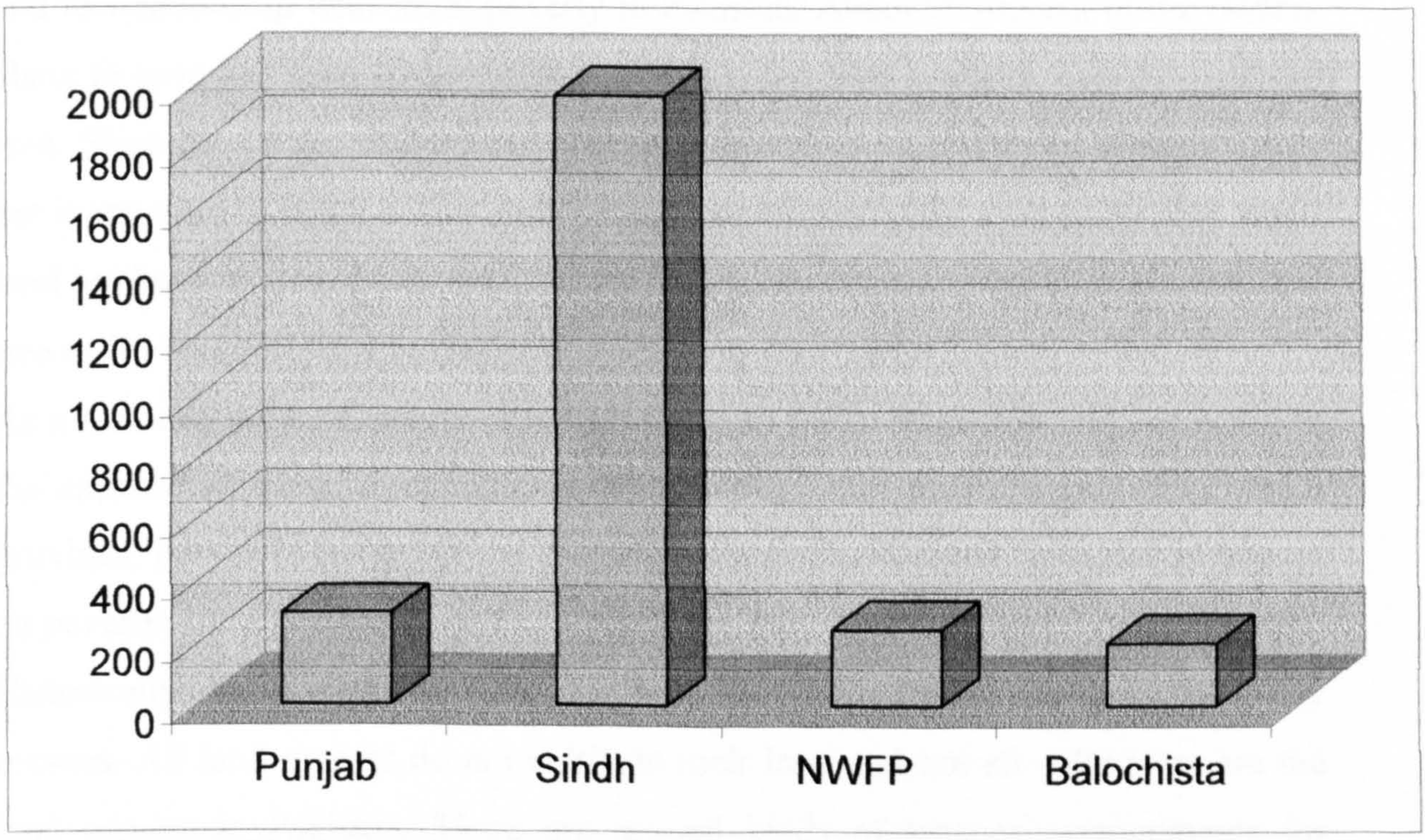
Table 6.8 shows the more poverty ridden province of Sindh has the highest concentration of land ownership.

Table.6.6. Land owning inequality by provinces (acres)

Land owned acres	Central Punjab	South Punjab	Barani Punjab	Sindh	NWFP	Balochistan	Average
Maximum	295.0	122.9	245.9	1967	245.9	201.6	513.1
Mean	2.3	1.8	3.2	6.7	2.7	3.8	3.4
Standard deviation	6.8	5.5	13.8	51.1	11.3	8.7	16.2
Coefficent of variation	3.0	3.0	4.3	7.6	4.2	2.3	4.7
Gini	0.82	0.80	0.87	0.91	0.85	0.75	0.83

source: World Bank (2002)

Figure 6.8 Maximum land holding by provinces in Pakistan



Source: World Bank (2002)

The Figure (6.8) shows a large variation in maximum land holding in provinces of Pakistan, and the higher the concentration of land ownership, the higher the level of rural poverty.

As regards of Provincial land ownership differences the highest concentration of land ownership is found in the Province of Sindh which has also the highest rural poverty in the country.

Table 6.8 shows that around 2 percent of households own more than 40 acres of land, and control 44 percent of the land area. Large farmers control 66 percent of all cultivated land in rural Pakistan. These inequalities are reflected by the Gini coefficient of land concentration of 0.78, which is even higher than Pakistan's overall Gini for land in 1990, which was 0.65 (WB 2002).

A World Bank Study (WB 2002) shows the distribution of households in different land size categories across various consumption quintiles. While 64 percent of the poorest households are landless, and own only 10 percent of land area, households in the highest consumption quintiles comprising small and medium farmers, own 32 percent of cultivable land of Pakistan. However landless households constitute more than half of households in the second and third consumption quintiles.

The Asian development bank (2000) finds similar facts about land concentration and its relationship with rural poverty in Pakistan. About 96 percent of the owners claim to have less than 10 hectares on average, but own less than two-thirds of the area. Since the 1960s, the process of land distribution seemed to have taken place, but it appeared to be on a very slow path. The ownership and area under very small land holdings increased as a result of the law of inheritance, population growth, and two major land reform programmes.

As a result of the land reforms acts of 1959 and 1972, small holdings increased at the expense of very large holdings. The medium-size holdings gained in Sindh province, but could not go to the desirable extent which could have had an impact on poverty in the province.

Historically, land ownership has not been favourable to the peasants for many reasons. All land owners do not cultivate their land and not all cultivators are the land owners in Pakistan. There are several kinds of tenancy arrangements for cultivation purposes in force. Access to land for cultivation is reflected in distribution of operational holdings (farm) by size and tenure. The average farm size has declined from 5.3 hectares to 3.8 hectares, but the average size of the large farm has increased. The number of farms increased from 3.75 million in the early 1970s to just over 5.0 million in early 1990s. The share of small farms increased slightly from 67 to 71 percent in number but declined in area from 52 to 39 percent. These changes reflect the large relative increase in the number and area of very small holdings, and while the share of large farms has fallen in number from 11 to 7 percent, their share in the area fell only slightly from 43 to 40 percent (ADB 2000).

The land ownership concentration first declined in all provinces during the 1960s, but since then, has have gone up in Sindh and Punjab provinces.

The Pakistan poverty reduction strategy paper (1-PRSP 2001) proposes fundamental changes in rural land holdings to address the issue of rural poverty through the accelerated distribution of state-owned land to small farmers. The same paper strongly recommends the distribution of 3 million acres of state owned land to the small farmers with provision of a fully supported infrastructure package.

6.23 Human capital investment in Pakistan

Education takes the centre stage in development strategy. Thus education is a key determinant to create a sustainable and conducive investment climate of any country. Firms, wether domestic or foreign, are more eager to invest when they know that they will be able to draw on a skilled workforce to make their investment productive. Universal education is the basic condition for the decline in inequality in LDCs which ensures that all segments of the society benefit from macro-economic growth.

Correlation between education and household income is well established by the World Bank and UNDP studies (ADB 2000, UNDP 2002, 2003 and WB 2002) These studies confirm that the productivity benefits of education are so large that just one additional year of education can increase productivity in waged employment by 10 percent, even after controlling for other factors. In a dynamic and uncertain environment of rapid technical change, more highly educated workers have a big advantage. More education and skills allow people to adopt and profit from new work opportunities and new technology.

In addition to that, there are strong complementarities between human capital and other forms of investment. In settings where average educational levels are as low as those in Pakistan, the full returns are to physical investment, and Pakistan has missed important opportunities that its neighbouring countries (India, Bangladesh and Sri Lanka) have seized.

Pakistan's educational system has not proved any better at promoting inclusion. Micro-evidence shows huge discrepancies among social groups in access to education.

The enrolment statistics reveals three major social divides:

1.Wide gap between school enrolment rates for children living in cities and rural areas. In Sindh Province, for example, enrolment rates for urban children are nearly twice as high as those for rural children.

2. A gap between rich and poor children can be seen clearly in a widening gap in all aspects of future opportunities. The enrolment rate in primary education was only 40 percent by 2000, among the poorest 10 percent of the population, or 60 percentage points lower than for the richest 10 percent, who have virtually universal enrolment. The size of the rich-poor gap varies across Pakistan's provinces, but everywhere the same pattern emerges.

Due to weak institutional mechanism and lower investment in the schooling system, it is a widely accepted fact that a large proportion of school-going children are not acquiring the fundamental knowledge and skills that would enable them to participate fully in their country's economic, social, and political development.

3. The major social divide in enrolment is along gender lines. Pakistan's educational system has historically been gender biased.

Girls' education was reported as only 50 percent by the end of 2000, highest in Punjab among all other provinces of Pakistan, while in Balochistan only one third of the girls who should be in primary school are enrolled although enrolment rates for boys are also not high. Girls' education play an important role in development.

The primary gross enrolment ratio (GER) is one of the indicators for measuring the success of initiatives undertaken in the education sector.

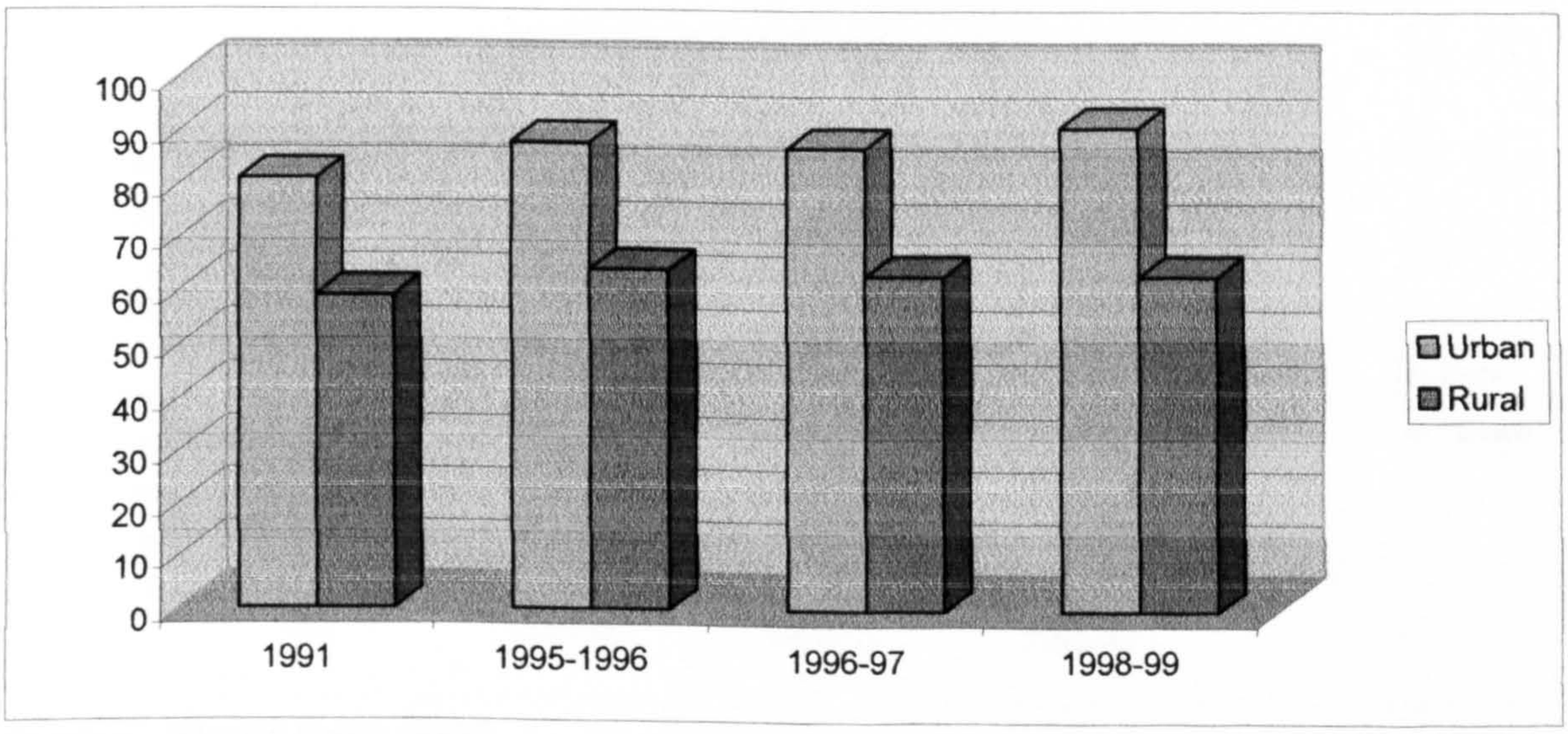
The PIHS data collected during the 1990s (1991,1995-1996,1996-1997 and 1998-99), as shown in table 6.9 below, indicates that primary enrolment, as measured by the GER, showed some improvement for the country as a whole between 1991 and 1995-96, but none thereafter. The World Bank (2002) establishes that enrolment rates were closely related to the poverty, and while the gender gap decreased, this was partly because male enrolment fell overall. Schooling was lower among the poor, and the poor also had relatively higher dropout rates. During the decade of the 1990s in urban regions, the trends for both males and females have generally been positive, but in rural regions, enrolments among males showed a decline during 1998-99, while those of female have remained stagnant since 1995-1996 Table 6.9 shows that while primary GER increased from 81 percent to 91 percent in urban areas, it fell to 61 percent between 1991 and 1998-99, after having risen from 59 percent to 64 percent since 1991.

Table 6.7. Primary Gross Enrolment Rates (%) GER

	1991	1995-96	1996-97	1998-99
Punjab	..	73	73	76
Sindh	..	70	64	56
NWFP	..	66	68	67
Balochistan	..	63	58	58
All four above	..	71	70	69
Azad J & K	..	..	..	101
Northern areas	..	..	..	75
FATA	..	..	..	39
Pakistan-urban	81	88	87	91
Pakistan-rural	59	64	63	61
Pakistan-Male	78	81	78	78
Pakistan-Female	53	60	61	60
Pakistan –Aggregate	65	71	70	69

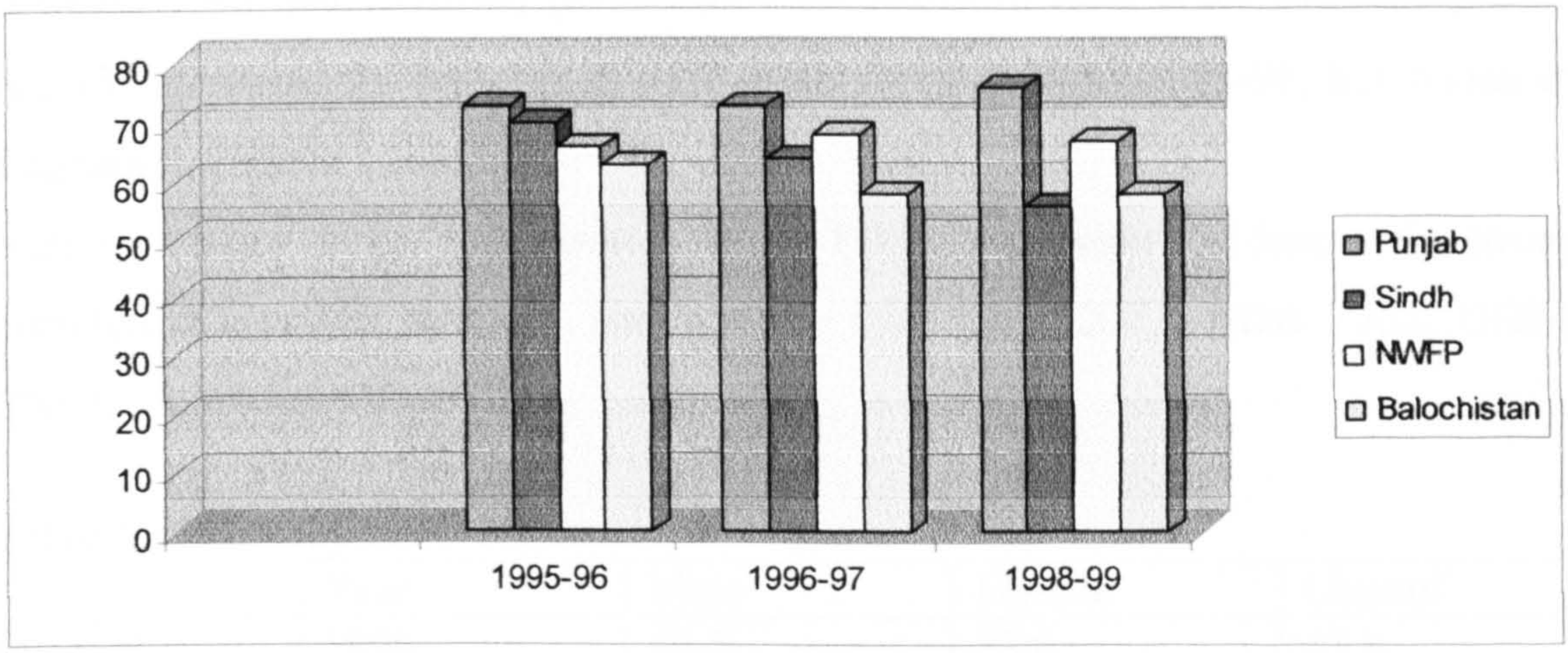
Source: World bank 2002

Figure 6.9 Primary gross enrolment rate(%) rural-Urban differences



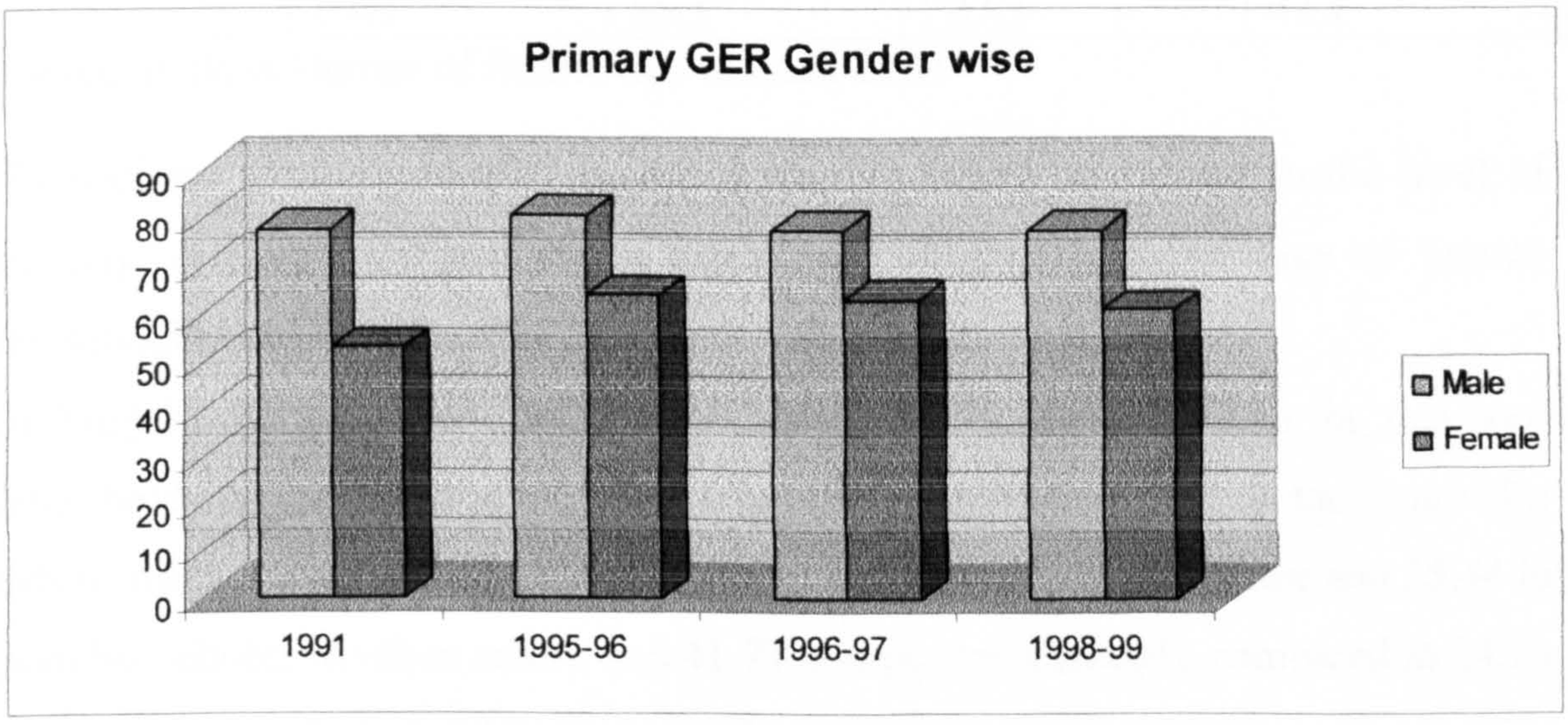
Source: World bank 2002

Figure 6.10 Primary gross enrolment rates, provincial differences



Data source: World Bank 2002

Figure 6.11 Primary gross enrolment rates, by Gender



source: World Bank 2002

Another indicator is the literacy rate of the population which determines the ability of its population to participate in the economic development process. According to the 1998 census, the literacy rate in Pakistan increased for both men and women during the census period (see Table 6.10) However, wide disparities still exist between male and female, with a significant difference between rural and urban populations. Though figures show a slight improvements in the case of the rural population, gender gaps still prevail to a great extent. Primary GER for females showed little change throughout the 1990s, followed by stagnation. Looking into male and female enrolments separately, for urban and rural areas (Table 6.9), it

turns out that primary GER (1) increased for both males and females in urban areas between 1991 and 1998-99, (2) declined for males in rural areas over the period, and (3) increased for females in rural areas from 1991 to 1995-96, but remained stagnant thereafter.

Various studies on poverty assessment for Pakistan provide evidence of a strong correlation between illiteracy and poverty (WB2001, 2002, ADB 2002, UNDP 2003).

Table 6.8. Literacy rates Pakistan

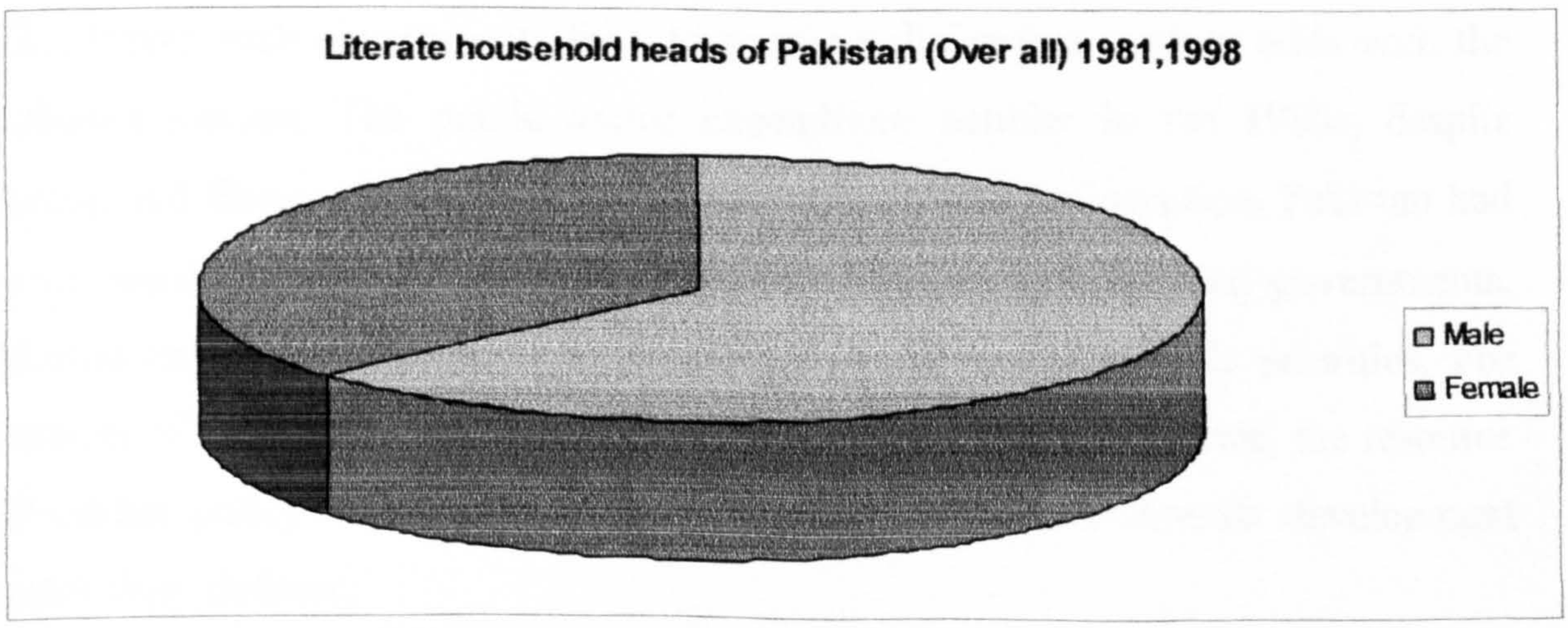
	Year	Male	Female	Overall
Over all	1998	56.5	32.6	45.0
	1981	35.0	16.0	26.2
Rural	1998	47.4	20.8	34.4
	1981	26.2	7.3	17.3
Urban	1998	72.6	55.6	64.7
	1981	55.3	37.3	47.1

Source: Federal Bureau of Statistics, Pakistan, 2002

Educational attainments of households are also highly correlated to the level of poverty, in both rural and urban areas. In 1998-99, the percentage of literate households in Pakistan was 27.18 (Fig.6.12)

In Punjab, the percentage of literate household heads was 50.43 in non-poor households, as compared to the 26.58 of poor household heads, while the figures for urban and rural comparisons are quite dramatic, with 69.23 in non poor and 35.44 in poor households in urban areas,, and 41.78 non-poor households, compared to 24.23 percentage poor household heads in rural areas.

Figure 6.12 Literate household heads, Pakistan (1981, 1998)



Source: Federal Bureau of Statistics, Pakistan 2002

In northern urban areas, the situation is particularly evident where 82% of non-poor house-hold heads were literate, as compared to the 27 percent of poor household heads. Similarly, those households whose heads had no formal education had about three times the incidence of poverty, as compared to those household heads with 10 years of formal education (Arif 2001).

In Sindh province, urban non-poor household heads' literacy rate was 60.92% compared to the 35.70% of the poor household heads. The same province rural areas show an even widening gap between poor and non poor household heads' educational attainments. Almost the same situation emerges from the figures of poor and non-poor households in NWFP and western province Balochistan, though rural and urban gaps seem to be narrowing in these two provinces.

6.24. Governance and poverty reduction

"While we must acknowledge the importance of democratic institutions, they can not be viewed as mechanical devices for development. Their use is conditioned by our values and priorities, and by the use we make of the available opportunities of articulation and participation. The role of organized opposition group is particularly important in this context"
(Sen 1994)

Pakistan has a history of non-elected and martial law governments. The key feature of non-elected governments is the inability of citizens to hold them accountable. This leaves such governments freer to pursue policies that were at odds with the citizen's interest. The public sector expenditure policies in the 1980s, despite foreign aid flows, were kept at a very low pace. Since its inception, Pakistan had more martial law governments compared to democratically-elected governments. Martial law and democratic governments differ in their economic priorities, For instance if there had been a democratic government in the first place, the resource allocation policy would have been more likely to lean towards development rather than defence.

Table 6.9. Chronology of various governments in Pakistan in last three decades.

	Government	Form of Government	Years in Power
1.	General Ayub Khan	Martial Law	1958-1969
2	General Yahya Khan	Martial Law	1969-1971
3	Zulfiqar Ali Bhutto	Democratic	1971-1977
4	General Zia-U-Haq	Martial Law	1977-1988
5	Banzir Butto	Democratic	1988-1990
6	Nawaz Shareif	Democratic	1991-1993
7	Banazir Bhutto	Democratic	1993-1996
8	Nawaz Sahrif	Democratic	1997-1999
9	Genral Parvez Musharaf	Martial Law	1999-to date

In 1965, under the Ayub Khan martial law, Pakistan had a war with the neighbouring India. Another followed in 1971 when Bangladesh formerly part of Pakistan (West Pakistan) was fighting for its right of self-determination. These two wars and the ongoing dispute on the Kashmir issue with India created a pretext to have nuclear weapons. Since then, Pakistan has been allocating resources to the expensive defence sector.

Comparing the defence expenditure of Pakistan with Neighbouring India and Sri Lanka, it is clear that Pakistan has been allocating more resources to defence, as shown in the table 6.12,6.13, and 6.14.

An empirical study by Aturpane, Glewwe and Isenman (1994) also shows that from 1960- 1990, Sri Lanka has been doing very well in improving her social indicators as compared to Pakistan, despite a lower growth rate than Pakistan in the same period.

Table 6.10 Allocation on Defence, Education and Health as percentage GDP of Pakistan

Year	Defence	Education	Health
1972	39.9	1.2	1.1
1988	29.5	2.6	0.9

Source: WDR (1990)

Table.6.11 .Allocation on Defence, Education and Health as a percentage of GDP of India

Year	Defense	Education	Health
1972	26.2	2.3	1.5
1988	19.2	2.9	1.8

Source: WDR 1990

Table.6.12. Allocation on Defence, Education and Health (as % of GDP) of Sri Lanka.

Year	Defense	Education	Health
1972	3.1	13.0	6.4
1988	9.6	7.8	5.4

Source: WDR1990

This provides a possible explanation why social gaps in Pakistan have been widening over the last three decades. Table 6.11 shows the years of government in power in Pakistan. The given years from 1958-2005 is a chronology of governments, which clearly establishes that during these 47 years for as much as 30 years, Pakistan has been under martial law governments, while only for 17 years has Pakistan enjoyed democratic governments. Even these democratic governments were highly destabilized by internal politics during the 1990s. The frequency of Government changes during the 1990s was almost every two years, while Pakistan's Parliament has a five-year tenure. The decade of the 1990s ended with an other Martial Law takeover. This political turbulence may well have contributed into a sharp rise in poverty (Chapter 6, section 6.19 on poverty trends in Pakistan).

Table 6.11 shows the cumulative years of martial law and democracy, clearly, Pakistan was run by unrepresentative martial law authorities for 30 years, against a short period of 17 years of democratic governments. Those elected representatives were not involved in the decision-making process for 30 years, otherwise there could have been significant impact on poverty reduction. Sen, in his work, Development as Freedom (1999) writes, "There are three different considerations that take us in the direction of general preeminence of basic political and liberal rights.

1 Their direct importance in human living condition associated with basic capabilities (including that of political and social participation).

2 Their instrumental role in enhancing the hearing that people get in expressing and supporting their claims to political attention (including the claims of economic needs).

3 Their constructive role in conceptualizing of needs, including the understanding of "economic needs" in a social context".

Thus he insists on political and civil rights because, in a democratic society, these play an instrumental role which draws attention forcefully to general needs and to demanding appropriate public action. The government response to the suffering of the people often depends on pressure through political rights to be exercised in a form of voting, criticizing, protesting, and so on. (Sen, 1999). Pakistan's economic performance, unfortunately, is lacking a right path due to predominantly authoritarian political regimes.

The 'Freedom house index' for measuring democracy ranks countries according to their degree of competition and participation, and the provision of civil and political liberties, on an index which ranges from 1 (fully democratic) to 7 (outright authoritarian). Countries ranked between 1 and 2.5 are classified as 'free'. Those ranked between 3 and 5.5 are classified as 'partly free' and those ranked between 5.5 and 7.0 are classified as 'not free'.

Table.6.13 Freedom House ranking for Pakistan and India 2006

Country	PR	CL	Freedom Rating
Pakistan	6	5	Not free
India	2	3	Free

Source: Freedom House, annual global survey of political rights and civil liberties (2006)

We shall further examine the governance factors in Pakistan.

6.25 Human rights and poverty

Distress is the outcome of a loose social set up where crime and other human right violations take place at large. The poor are more vulnerable in such a state, where social goods are not provided by the state and public services provision is limited. The under-funded law and enforcing agencies can not perform required services.

In Pakistan, law enforcement is so weak that the over-loaded justice system has failed to deliver justice to common citizens, and in case of poor, it becomes more expensive and thus out of their reach. In the face of such a state of affairs, the poverty-ridden stress is shaping the lives of the poor with increased violence and other crimes. The 1990s' decade of poverty created a new phenomenon of suicide in Pakistan. While the data on suicides are inadequate, source of such data is only press and are not systematically reported in the Pakistani press, a very small set of data which could not be taken as a representative of the whole decade is however taken from the Human Rights Commission of Pakistan and international organisation reports.

Table 6.14 Number of poverty-related suicides by cause, by social group, and by gender in Pakistan (1999)

Reported cases	M(m)	F(m)	T(m)	M(p)	F(p)	T(p)	O
Family tension related with economic pressure	64	13	77	220	255	475	552
Mental stress related with unemployment/under employment	21	0	21	152	0	152	173
Mental stress resulting from economic pressures associated with ill health	5	4	9	17	8	25	34
Total	90	17	107	389	263	652	759

Source: Compiled from news papers of Pakistan, cited in UNDP (2003)
Key: (m)= middle class, (p)=poverty , O= overall M=male F=female, T= Total

Table 6.16 shows trend of suicide committed by citizens of Pakistan. Directly or indirectly these suicides were related to economic pressures. The overall figure for 1999 shows that 759 suicides were committed in the country which were direct result of economic tensions. Fewer suicides are shown for females, which is due to fact that women's suicides are not widely reported by family and community, as often it is regarded as a matter of honour. However, it is evident that the number of reported suicides among the female poor compared to the female middle class is much higher. The male number of suicides among the poor is much higher compared to the middle class. The total number of reported suicides which stands at 759, even though thought to be under-reported, is significant. The trend of economic stress and unemployment problems continues to date on an even higher frequency in Sindh Province.

Table 6.15 Human rights violations in Pakistan 2000

Province	**Murder**	**Kidnapping**	**Rape**	**Burn cases**	**Sexual Harass-ment**	**Child abuse, selling & kidnapping**	**Total violations**
Punjab	605	590	467	223	132	127	2144
Sindh	184	53	14	47	2	7	307
NWFP	71	10	2	4	0	1	88
Balochistan	11	0	0	0	0	0	11
Total violations	871	653	483	274	134	135	2550

Source: Human Rights Commission of Pakistan (2000)

Table 6.17 shows the human rights violations in different crime categories in Pakistan for 2000. The highest crime rate in all categories appears to suggest that Punjab province has been a hot crime spot among all other provinces, with overall crimes 2144, followed by Sindh 307, NWFP 88, and 11 in Balochistan. It is notable that crime categories related to women are shown at zero level in Balochistan and NWFP. As mentioned above crime against women is widely unreported because it seems to be a hidden social contract of the communities in question. Family and community see reporting such crimes as dishonourable for their community or family. However, despite limited freedom of the press, due to growth of the media sector in Pakistan, such cases have started to be reported, though on a small scale. The increasing crime is a clear indication of the state of governance in Pakistan, which is highly correlated to the capacity of people to participate in the economic process.

6.26 Conclusion

This chapter attempted to investigate the social gaps and poverty in Pakistan. Prevailing social gaps in Pakistan explain that, despite reasonable economic growth, the poor may not have benefited from economic growth from 1970-2000 in Pakistan. The chapter explores that poverty in Pakistan mainly exists in three dimensions. The discussion of poverty dimensions is followed by the theoretical and conceptual discussions on poverty. Lack of education, unemployment or underemployment, assets and meagre sources of income, demographic characteristics and vulnerability are the main attributes which characterise the poor in Pakistan.

This chapter investigates poverty indices on a gender, rural-urban and inter-province basis. Various studies on poverty indicate that the incidence of poverty increased from 22%, to 26% in 1991 to 32 -35% in 1999. The general level of poverty significantly increased from 1990 to 1999, and particularly, a high rise in poverty is observed between 1997 and 1999, a period of slow growth and macro-economic instability in Pakistan.

A general conclusion can be drawn that poverty in Pakistan remained unchanged in 1990s. Such findings are broadly consistent with almost all major studies, which used different methods of poverty measurement, in Pakistan. This chapter also

investigated poverty concentration in three dimensions, gender, rural-urban, and inter-province. Studies indicate that poverty has been concentrated in rural areas, in 1990-1999, and while urban poverty has fallen, rural poverty has remained stagnant, resulting in increased gaps in rural urban poverty over the decade.

Ranking on HDI shows that rural HDI has been lower than in urban areas. Among Provinces, Sindh Province shows the lowest HDI among all other provinces and the Punjab province has the highest HDI in Pakistan.

Mean per equivalent adult expenditure seems to be consistent with poverty figures which remained unchanged from 1990-1999. Consistent with the poverty trends in urban and rural areas, mean consumption expenditure (per adult equivalent) has increased in urban areas, more than in rural areas. In rural areas, it actually fell slightly in same period.

Agricultural growth, which recorded an increase in the 1980s, had an impact on poverty reduction, in contrast to that of the decade of the 1990s which did not follow the poverty reduction trend.

We further investigate the relationship of poverty with educational attainments, land ownership, employment, and other indicators which determine the poverty level. Political under-representation is also investigated as one of the many causes of poverty.

Land is the primary asset of the rural poor. The rural poor in Pakistan lack the ownership of land, or they are unable to manage their piece of land productively. A large proportion of agricultural workers do not own their land . The maximum land holding shows that the Sindh province has the highest concentration of land ownership in Pakistan, and the highest rural poverty.

Universal education is one of the basic condition for meeting worsening inequality in LDCs which ensures that all segments of society benefit from macro-economic growth.

Poverty is highly correlated to the educational attainments in Pakistan; low level of education in households appears to be highly correlated with poverty. Analysis in all four provinces of Pakistan also indicates that incidence of poverty is significantly correlated with the educational attainments. Poverty seems higher in the households with lower educational levels, compared to the households with higher levels. These educational levels vary in all three dimensions: gender, regional (urban-rural), and inter-provinces. Among Provinces the Punjab shows the highest achievement in overall education, while in urban-rural differences, Sindh has the highest education in urban areas. The female education levels are much lower in all provinces, and females have been lagging behind in educational attainments compared to males.

Unemployment is widely regarded as a characteristic of poverty. In Pakistan, two employment survey results show that in Pakistan, total participation of the labour force in 1992-93 was 42.35% which remained almost stagnant in the second labour force survey of Pakistan in 1996-97. The labour force participation of females has been very low compared to male participation.

The figure shows that about 70 % of the male labour force was participating, against 13.6 percent of female labour participation in 1996-97. On a regional basis, though labour force participation was found higher in rural areas compared to urban areas and there has been a higher number of underemployed labour force in rural areas compared to the urban centres of Pakistan. In Provinces, Punjab province had the highest labour force participation, while the lowest male labour force participation was recorded in NWFP, and the lowest female participation was in the western province of Balochistan. There was no change in the labour force participation in Sindh Province during the survey periods the poor are often characterized often by the lack of assets.

In Pakistan, a large proportion of the rural poor is landless and the maximum land-holding size is higher in the Sindh province compared to all other three provinces. Large family size is also a common trend in poor families in Pakistan; the trend of a larger family size is more common in rural areas compared to the urban centres. A weak institutional framework makes the poor vulnerable. The poor in Pakistan have little access to the public goods. which is a direct outcome of institutional failure.

Investigating further into the institutional failures, we establish that the poor are more vulnerable in such a weak institutional framework to access public goods like law and policing services which often cost more to the poor.

An attempt is made to relate poverty to the governance and democracy in Pakistan. It is established that since 1958 till date, out of 47 years of government, Pakistan has been ruled for 30 years by martial law governments compared to the 17 years of democracy. The democratic period of 1990 was a turbulent political era of Pakistan, which left devastating effects on the economy as a whole. The human rights situation of Pakistan has been viewed as a part of good governance. In Pakistan, a poverty-driven suicidal trend is found to be increasing in 1990s, and a high number of such suicides draw a shocking picture of social distress, which could be explained as an indicator of poverty driven social distress. Although, at the aggregate level, results show poverty is reduced as growth increases, regional data for Pakistan show major differences in degree of poverty reduction. This could be explained by inequality in land holding, human capital investment, and gender differences in Pakistan.

Chapter 7

Financial Repression and Economic Growth in Pakistan. A Cointegration Analysis

7.1 Introduction

The financial liberalization (FL) issue has attracted a major attention in development economics. The debate is still continuing with reference to less developed countries' (LDC's) policies regarding the impact of financial liberalisation on the economy and the level of poverty. The advocates of the FL school consider the rise in real interest rates in LDCs as an essential tool to promote savings, investment and the output growth rate. But the structuralists point out that such a rise in real interest rate could lead to higher inflation and lower output when such rates account for a major proportion of total production costs. Further funds could be diverted from unorganized (UMM) to the organized money market (OMM) see, e.g. Fry (1978, 1989), Ghatak (1981), McKinnon (1973, 1976), Shaw (1973), Taylor, (1983) Van Wijnbergen, (1982, 1983a, 1983b), Jaymaha (1989).

In this chapter, we argue that it is not possible to decide in favour of any one of these two conflicting theories on purely theoretical grounds without a proper empirical investigation. Thus, we set up a simple model to examine the validity of two conflicting theories in the light of the experience of Pakistan. Then we report the econometric estimates of our model. The final section draws some conclusions regarding the impact of economic and financial liberalization in Pakistan.

7.2 Some remarks on the financial liberalization schemes

The major arguments in favour of financial liberalization for promoting economic growth of a LDC are now well known. It is assumed that savings is a positive, and investment is a negative function of real interest rates. Assume that in a financially repressed regime, the real interest rate (γ) γ is very low as it is administered rather that market determined and so generates only relatively small savings. Investment is savings-constrained in a financially repressed regime and investors generally depend on self-financing. Thus they try to build up a conduit of funds to finance their investment projects. With financial liberalization, γ will rise and both savings and investment should rise The market is fully liberalized when the real rate of interest is raised to a level where savings and investment are at equilibrium. As real interest rate rises, some inefficient forms of investment will not be implemented but the quality of investment (along with its quantity) will improve. Allocation of resources will be better and the growth rate of output will be stimulated (Fry 1988).

However, there are limits to liberalization. If the expected rate of inflation (π^e) in a LDC is very high, then to keep the real rate of interest positive central banks must keep nominal interest rates (d) still higher, i.e. $d-\pi^e>0$. Such a high d has many undesirable consequences. For instance, small firms will be particularly vulnerable to high interest rates if a high proportion of working capital depends on borrowed funds. Thus, a high d may actually reduce the level of investment and output (Wijnbergen 1983). Second, the sequencing of the liberalization is quite important. It implies that the liberalization of the money market should be followed rather than preceded by the liberalization of the trade sector. Otherwise, the economy may suffer from severe balance of payments problems.

Third, in a system of mark up pricing where d is an important element of total cost, financial liberalization can easily lead to accelerating inflation. Further financial liberalization policy without fiscal control of the budgetary or external account could easily raise a question mark over policy credibility.

Finally, the liberalization school pays little attention to the role that unorganized money markets can play in LDCs. If funds flow between organized and unorganized money markets, an increase in interest rate in the organized money market will drive up the interest rate in the unorganized money market. Given constraints on lending in the organized money market, firms which borrow largely from the unorganized money market will be forced to cut back production and employment because of the increase in the cost of borrowing, and as a consequence output will have to fall (Ghatak, S. 1997).

Structuralists, however, assume that the unorganized money market works efficiently (Wijnbergen 1983a,1983b, 1985). The actual validity of this statement is really an empirical issue. Further, changes in the interest rates of the unorganized money markets, caused by changes in rates in the organized money markets, could critically depend on the flow of funds between the two markets. The nature of links between the two types of markets is a testable hypothesis. In the case of India empirical evidence shows that the link is positive but rather weak (Ghatak 1975).
A rise in investment and output because of a rise in the interest rate generally implies a substitution effect on investment, which may or may not be valid.

Finally, the positive effects of liberalization can only be observed in the long run. The exact length of lag depends upon the nature of the financial intermediation, the interaction between the real and monetary sector and the supply response, all of which may vary from one to another country's monetary system. This chapter will examine empirically the experience of Pakistan in her quest to stimulate economic growth through economic liberalization policies. In the following section, we will discuss a simple model to capture the effects of financial liberalization on economic growth in a LDC. It will be followed by an econometric estimation of the impact of changes in real interest rates and investment on output growth in Pakistan from 1970 to 2000.

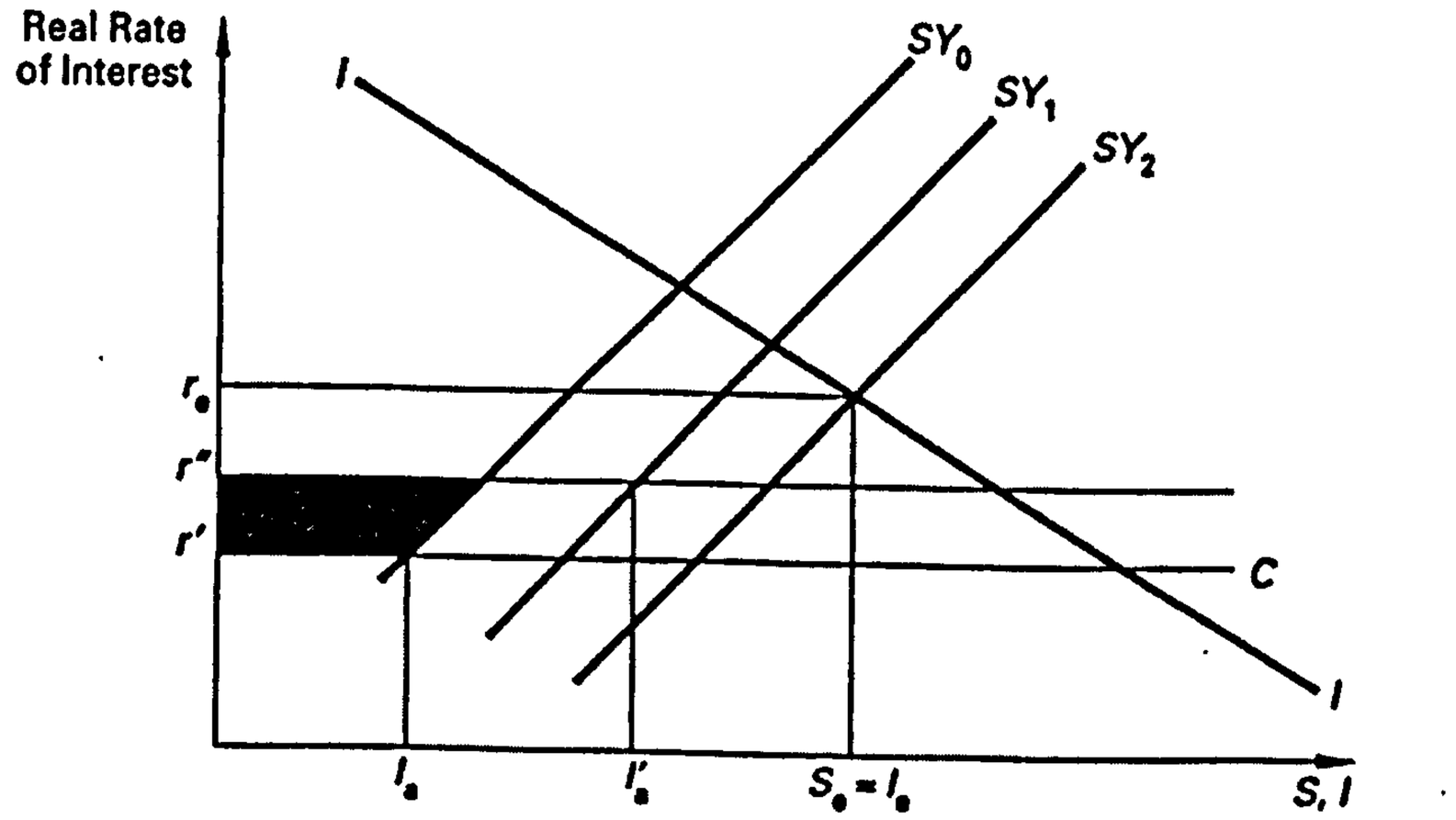
7.3 Financial repression and economic growth : the McKinnon and Shaw model

The basic features of the McKinnon and Shaw (1973) model can be illustrated with the help of Figure 7.1. Let the real rate of interest be measured on the vertical axis

and investment and saving on the horizontal axis. Let savings (S), at the different income levels (Y_0, Y_1, Y_2.....), be a function of the real rate of interest. Let investment (I) be an inverse function of the real rate of interest. In a free market without any financial constraints, γ_e will be the equilibrium real interest rate where $S_e = I_e$. But because of financial 'constraints or repression' the institutional interest rate is given by γ' which is less than the free market equilibrium real rate, γ_e.

The amount of actual investment is constrained to I_a because of the limited saving that is available at γ' If the monetory authorities decide to ease the financial 'repression' and raise the real rate from γ' to γ'' both savings and investment will rise. The low yielding investment activities, as indicated by the shaded area in Figure (7.1) will be eliminated, and the overall efficiency of investment (ICOR) will increase. This will lead to a rise in income and savings. The savings curve will shift to the right to SY_1. Actual investment will rise to I_a. If the monetory authorities are bold enough to abolish financial repression altogether and decide to dispense with the ceiling on interest rates, then the level of actual savings and investment will rise further, leading to an expansion of income. The model thus implies that an increase in the real rate of interest will induce the savers in LDCs to save more and invest more. This will raise the rate of growth of the economy. It is in this context that Shaw (1973) contends that saving, investment and financial intermediation would be sub-optimal when the real rate of interest is arbitrarily fixed at a point which is much lower than its equilibrium level.

Figure .7.1.



Source: Ghatak. S. (1995)

Financial intermediaries in this context, render a valuable service in raising the real rate of return to savers and in lowering the real costs to investors by providing liquidity and information. They also reduce this risk by diversifying the asset structure. Different types of dynamic mechanisms between changes in credit supply and changes in the growth rate of real output have been proposed by Blinder (1987) and Buffie (1984) for developed countries by Desai (1981), for LDC's, by Fry (1988), Kapur (1976), Metheison (1980), Taylor (1983) and Van Wijnbergen (1982,1983). The expansion of output is assumed to be dependent entirely, or in part on the cost and /or availability of credit (Keller, 1980: see also, Vanderkemp (1975) and Ghatak and Deadman (1989).

7.4 Econometric Estimation

The discussion in the previous section suggests the following long-run formulation of the growth of income in conjunction with real interest rates and the money supply (all variables are in natural logarithms):

$$g_t = \alpha_0 + \alpha_1 m_t + \alpha_2 \gamma_t + \xi_t \ldots\ldots\ldots\ldots (7.1)$$

Where g_t = growth rate of nominal income

m_t = rate of growth of money (M1)

γ_t = real interest rate

ξ_t = error term

The expected signs of the parameters α_1 and α_2 are positive, while the constant α_0 could be either positive or negative. The real interest rate is defined as

$$\gamma_t = d_t - \pi^e_{t+1}$$

where d_t is the nominal interest rate, and π^e_{t+1} is the rate of inflation expected in time period $t+1$.

The short-run equation of a model based on annual data is usually formulated in first differences, and involves an error correction mechanism (see e.g. Currie 1981), Hendry, et al (1984), Salmon (1982). In our case, however, the short run equation should also include the price expectations-adjustment mechanism, which does not appear in the long run equation (7.1), since in the long-run $P_t = P^e_t$, where P^e_t is the price growth expected in time period t-1 for period t.

In the short-run, however $P_t = P^e_t$, hence the short run equation for the GDP growth rate incorporating the error correction mechanism is the following:

$$\Delta g_t = \beta_2 \Delta m_t + \beta_3 \Delta \gamma_t + \beta_4 [g_{t-1} - \alpha_0 - \alpha_1 m_{t-1} - \alpha_2 \gamma_{t-1}] + \varepsilon_t \ldots\ldots\ldots\ldots\ldots (7.2)$$

where, β_2 and $\beta_3 > 0$ and $\beta_4 < 0$ ε_t is an error term . Engle and Granger (1987) suggest estimating equation (7.1) first, then using the estimated values of $\alpha_0, \alpha_1,$ and α_2 to compute the error- correction mechanism which is subsequently lagged and substituted into equation (7.2). This procedure requires that all the variables which appear in equation (7.1) are integrated to order 1 i.e. they are stationary after first differences. Moreover the parameters $\alpha_0, \alpha_1,$ and α_2 must be the co-integrating coefficients, in the sense that the error correction mechanism is itself stationary, despite the fact that the variables g_t, m_t and γ_t may not be stationary. Since all variables which appear in an equation have to be integrated of the same order, the variable $P_t = P^e_t$, which appears in equation (7.2) together with the stationary first differences and the error correction mechanism, should also be stationary.

For testing the level of integration (unit root) of the variables g_t, m_t and γ_t and p_t, researchers apply the augmented Dicky-Fuller (ADF) test (see Dicky and Fuller 1981 see also Ghatak.S.1997). For Pakistan, we apply a different specification to the data, between 1970-2000, the results are summarized in Tables 7.1 -7.6 below.

7.5 Theory

McKinnon and Shaw (1973) argue that

1. Money and physical capital are complementary rather than substitutes in LDCs.
2. Investment is savings constrained and orthogonal to changes in real rates of interest. It is the availability rather than the cost of credit that determines investment.

It is also argued with evidence that countries which follow the shallow finance (a policy of keeping the real rate of interest very low) failed to grow rapidly in LDCs. To develop quickly, countries with higher real rates of interest achieved higher savings, investment and growth. This whole process is regarded as financial deepening. It is further suggested that higher real rates would achieve higher savings and growth and eventually reduce poverty.

7.6 Empirical tests

Equation (7.3) tests the McKinnon –Shaw hypotheses.

$M/P = f(Y, I/Y, \gamma_t)$ ..... (7.3)

If the coefficients of Y (income), investment /income, I/Y, and γ_t deposit interest rate –rate of inflation are all positive, then M/S will be validated.

$$\frac{d(M/P)}{d(I/Y)} > 0 \qquad d(I/Y) > 0$$

We run the following co-integration regression:

$$M/P = \alpha_1 + \beta_1 y + \beta_2 I/Y(iy) + \beta_3(\gamma_t)$$

We first examine the empirical results of this money equation.

7.7 Money equation results

The augmented Dickey-Fuller (ADF) test results for the following series are in Table 7.1: the natural log of M1 (denoted M1), the natural log of M2 (M2), the natural log of GDP (Y), the natural log of the investment-income ratio (iy) and the real interest rate (γ). The test is conducted on the level and differences of each series, with the number of lags used in the regressions indicated in parentheses, the number of lags being chosen according to the minimum Schwartz Information Criterion (SIC). The critical value is approximately –2.96. All five series are I (1), and so dynamic methods involving co-integration are appropriate.

Table 7.1: ADF tests

Series	Level	Difference	Inference
M1	–0.421 (0)	–4.546 (0)	I(1)
M2	–0.054 (0)	–4.076 (0)	I(1)
y	–0.160 (1)	–5.568 (0)	I(1)
iy	–1.690 (0)	–4.832 (0)	I(1)
γ	–2.584 (0)	–4.915 (0)	I(1)

To determine whether money cointegrates with income, the investment-income ratio and the real interest rate, we employ the Johansen procedure.[1] We do this for both M1 and M2. For M1, Akaike's Information Criterion (AIC) suggests 2 lagged level terms (1 lagged difference) in the vector autoregression (VAR), while the SIC suggests 1 lagged level term. We are inclined to prefer the AIC for the Johansen system to avoid an overly parsimonious specification which could bias the cointegration test results. Although we found evidence of one cointegrating vector using two lagged level terms in the VAR, the adjustment coefficient was positive and significant in the money equation of the VAR.[2] This would suggest that we had not uncovered a valid equilibrium money equation. This was confirmed when we attempted to build a short-run dynamic model employing an error-correction term

[1] We specify all Johansen systems to have an unrestricted intercept and no time trend.

[2] The trace (maximum eigenvalue) test statistic for the null of no cointegrating vectors was 65.347 (41.726) compared to a 5% critical value of 47.21 (27.07).

based upon this long-run relation: the adjustment coefficient was positive and significant.

Table 7.2: Co integrating Rank for M1 System		
Hypothesized No. of CE (s)	Trace Probability	Max-Eigen Probability
None	0.0024	0.0015
At most 1	0.3054	0.4968
At most 2	0.3338	0.4921
At most 3	0.1231	0.1231

The only model we could find that did yield a valid long-run money equation was when four lagged level terms were included in the VAR. The Maximum Eigenvalue (Max-Eigen) and Trace (Trace) test probability values that test for the number of cointegrating vectors using the Johansen procedure are reported in Table 7.2 for the VAR with 4 lagged level terms. Since the null is hypotheses only rejected when the hypothesised number of cointegrating equations is zero (since the probability value is less than 0.05), this implies that there is one cointegrating vector (the cointegrating rank is one).

Table 7.3: Cointegrating Vectors for Money Equations				
	M1		M2	
	Johansen	DOLS	Johansen	DOLS
Constant	–5.451	–3.366	–6.938	–7.157
y	1.071 (80.493)	1.038 (46.140)	1.051 (46.940)	1.058 (44.160)
iy	–0.143 (–2.755)	–0.068 (–0.682)	–0.300 (–3.263)	–0.304 (–3.863)
γ	–1.914 (–7.160)	–0.899 (–2.090)	0.262 (1.031)	0.165 (0.487)

The estimated equilibrium relationships for the money equations are given in Table 7.3 with t-ratios in parentheses (there is no t-ratio for the intercept because the constant is calculated to give the error correction term a zero mean). For the M1 cointegrating vector estimated using the Johansen procedure, the coefficient on income is positive and significant, which is consistent with the McKinnon-Shaw hypothesis. However, the coefficients on both the investment-income ratio and the

real interest rate are negative and significant which is not consistent with the McKinnon-Shaw hypothesis.

The cointegrating vectors identified using the Johansen procedure have been criticised in the literature. One reason is that an arbitrary normalisation is used to identify them. Thus, as a robustness check, we also estimate cointegrating vectors using dynamic OLS (denoted DOLS) upon the assumption of a unique cointegrating vector which, in this case, the Johansen procedure indicated. In our DOLS regressions, we find that one lag, current and lead term is sufficient to remove autocorrelation and misspecification in general (we test for first and second order autocorrelation, non-linear functional form, heteroscedasticity and non-normality).[3] This method is also robust to simultaneity bias. The DOLS results for M1 (also reported in Table 7.3) are qualitatively similar to those for the Johansen procedure. That the coefficient on income is positive and significant is consistent with the McKinnon-Shaw hypothesis. However, that the coefficient on the investment-income ratio is insignificant and the real interest rate is negative and significant is not consistent with the McKinnon-Shaw hypothesis.

We next consider testing for cointegration using M2 as the measure of money. Both the AIC and SIC suggest one lagged level term (zero lagged differences) in the VAR. Since this implies no adjustment other than from the error-correction term we select a lag length of two level (one difference).[4] The results of the Johansen test are reported in Table 7.4. Both Trace and Maximal Eigenvalue statistics indicate that there are two cointegrating vectors. However, because the Johansen procedure is known to have a tendency to indicate too many cointegrating vectors when more than one is suggested, and our prior belief is that there is one equilibrium relation, we impose our prior belief of one long-run equation. We also note that only one cointegrating vector is indicated at the 1% level.

[3] We employ heteroscedasticity and autocorrelation consistent (HAC) coefficient standard errors in calculating t-ratios to ensure that our DOLS results are robust to these forms of misspecification

[4] Using only one lagged level term in the VAR yields the same inference regarding the number of cointegrating vectors as using two lags.

Table 7.4: Cointegrating Rank for M2 System		
Hypothesized No. of CE(s)	Trace Probability	Max-Eigen Probability
None	0.0024	0.0778
At most 1	0.0156	0.0152
At most 2	0.3383	0.2806
At most 3	0.6293	0.6293

The estimated Johansen equilibrium relationship for M2, given in Table 7.3, indicates that the coefficient on income is positive and significant, which is consistent with the McKinnon-Shaw hypothesis. However, the coefficient on the investment-income ratio is negative and significant and on and the real interest rate is insignificant. Both of which are inconsistent with the McKinnon-Shaw hypothesis. The qualitative results for M2 using DOLS are exactly the same as those using the Johansen procedure: the income coefficient is consistent with the McKinnon-Shaw hypothesis while the investment-income ratio and real interest rate parameters are not (see Table 7.3).[5]

Table 7.5 reports four short-run dynamic models that incorporate the four equilibrium relationships discussed above in four error correction terms (denoted ecm). Each equation also incorporates the contemporaneous first differences (indicated with the prefix Δ) of the income, investment-income ratio, and interest rate variables. All four models (except the Johansen specification for M1) are free from evident misspecification at the 5% level, according to the reported probability values for first and second order autocorrelation (PFA1 and PFA2), non-linear functional form (PFFF), heteroscedasticity (PFH) and non-normality (PCN).[6] The Johansen model for M1 features evidence of heteroscedasticty (but no other misspecification). However, because we employ heteroscedasticty and autocorrelation consistent (HAC), standard errors in the calculation of t-ratios the results are considered as valid for inference.

[5] In our DOLS regressions, we found that one lag, current and lead term was sufficient to ensure our model was free from first and second order autocorrelation, non-linear functional form, heteroscedasticity and non-normality.

[6] All are F-versions of test statistics, except for the normality test.

For all four dynamic models, the error-correction term's coefficient is negative, although it is only significant for three specifications (the exception is the Johansen model for M1), hence the models are broadly consistent with valid error-correction behaviour for money. The coefficient on the income growth term is positive in all four models (if only significant in one), which provides some tentative support for the McKinnon-Shaw hypothesis. The coefficients on the investment-income ratio and real interest rate are negative and are generally significant (the exceptions are for the investment-income ratio in both equations for M1, where the coefficients are insignificant). This is not consistent with the McKinnon-Shaw hypothesis.

Table 7.5: Dynamic Error-Correction Models for Money Equations

	M1		M2	
	Johansen	DOLS	Johansen	DOLS
Constant	–0.004 (–0.134)	0.015 (0.600)	0.050 (2.895)	0.049 (2.749)
ecm_{t-1}	–0.308 (–1.451)	–0.677 (–4.569)	–0.713 (–7.487)	–0.742 (–7.027)
Δy_t	1.028 (2.056)	0.661 (1.582)	0.059 (0.229)	0.082 (0.314)
Δiy_t	–0.320 (–1.332)	–0.281 (–1.554)	–0.382 (–5.127)	–0.400 (–5.151)
$\Delta \gamma_t$	–1.195 (–4.131)	–1.294 (–6.603)	–0.649 (–6.646)	–0.683 (–6.794)
Adj R^2	0.367	0.584	0.737	0.736
s	0.072	0.059	0.043	0.043
SIC	–2.037	–2.455	–3.078	–3.076
PFA1	0.641	0.475	0.353	0.383
PFA2	0.397	0.743	0.156	0.161
PFFF	0.316	0.243	0.303	0.267
PFH	0.003	0.339	0.719	0.738
PCN	0.624	0.788	0.249	0.209

7.8 Interpretation of McKinnon - Shaw Hypothesis results

We have tested the data for the McKinnnon –Shaw hypothesis for Pakistan (1970-2000). The economic model implies that an increase in the real rate of interest will induce the savers in the LDCs to save more, which will enable more investment to take place. This will raise the rate of growth of the economy. Results of our cointegration tests from 1970-2000 for Pakistan have not confirmed this aspect of the McKinnon-Shaw hypothesis. In particular, savers in Pakistan do not respond to

a higher real rate of interest, and the complimentarity hypothesis between investment and real money balances is also invalidated empirically. There are many factors to be considered for that.

Domestic savings do not correspond to the investment level, which is the basic condition in the McKinnon –Shaw model. We analyze these phenomena in historical macro economic perspectives of Pakistan.

The economic strategy undertaken by the Ayub regime (1958-69), while it accelerated GDP growth, sharply accentuated interregional inequalities.

During the 1960s, import substitution industrial growth in the consumer goods sector was more systematically encouraged by the Government. In the 1960s, Pakistan's main industries were producing negative value added, which was mainly due to unjustified incentives to the industrialists, bonus vouchers scheme was an examples. The bonus voucher scheme essentially constituted a mechanism for enabling domestic manufacturers to earn large rupee profits on exports, which brought no gain to the economy in terms of foreign exchange. A study by UNDP (2003) shows that in the 1960s Pakistan's main industries (when input costs and output values are both measured in dollar terms) were producing negative value added. The concentrations of narrow base export of Pakistan and absence of proper economic liberalization led to the debt problem which has continued from decades and did little to encourage investment in labour intensive technologies and alleviate poverty.

7.9 Bhutto Regime (1973-77)

The decade of 1970 was a remarkable political era of Pakistan under the democratically elected government of Zulfiqar Ali Bhutto. The Bhutto regime started to nationalize the economy. In first set of nationalization 43 major industries were given away to the nationalization process in 1972. The nationalization process continued further with the objectives to total nationalization of small and big industrial units. While the first set of nationalizations had an impact on the 'monopoly capitalist', the second set in 1976 hit the medium and small-sized entrepreneurs negatively. The regime's economic policies had some major impact on investment, growth, and the budget deficit. Private investment as a percentage of GDP in the Bhutto period (1973/74 to 1977/78) declined from 8.2 percent in 1960-

1972 to 4.7 % in 1973 to 1977. The nationalization process shook the confidence of the private sector and is widely believed a reason for the decline in private investment in Pakistan.

The continued process of nationalization in Bhutto regime seems to reinforce the trend throughout. These included a devaluation of the exchange rate which placed large and small scale industry at par with respect to the rupee cost of imported inputs (i.e. indirect subsidy provided to large-scale manufacturing industry through an overvalued exchange rate was withdrawn). The direct subsidies to manufacturing sector were with drawn significantly, import duties on finished goods were reduced. The regime was actually more aimed to break the monopolistic structure of economy which was built by the previous governments. Anti-monopoly measures along with price controls, were instituted. The domestic manufacturers bred on government support responded by further reducing investment. It is relevant to mention here that the decline in private sector manufacturing as a percentage of GDP had already begun eight years before the Bhutto period, as a result of the 1965 Indo-Pak war. The nationalization process simply intensified the reduction in investment.

The decline in private sector investment in the post-1965 period as a whole (as opposed to its sharp deceleration during the nationalization phase), can be attributed to underlying factors:

1. Foreign capital inflows fell sharply after the 1965 war,
2. The manufacturing sector in a situation of declining domestic demand was unable to meet the challenges of high production costs in traditional industries.
3. Entrepreneurs did not diversify into non-traditional industries where there was considerable growth potential.

While the Bhutto period registered a decrease in private investment, public sector investment rose in the same period. The overall investment /GDP ratio during this period reached 15.5 %, which was slightly higher than in the preceding period (Table 7.6). Yet, despite registering an increase in public sector investment, the overall growth rate of GDP declined. The average growth rate in the Bhutto period

was 5 % as compared to 6.3 % in the earlier period (1960-73), This indicates that the incremental output /capital ratio was not increasing.

Table.7.6. Period Average of Gross Investment as Percentage of GDP

Period	GFCF (Total) as % of GDP (Current Prices)	GFCF(Private)as % of GDP (Current prices)	GFCF(Public) as % GDP (Current prices)
1960-1973	15.28	8.21	7.26
1973-1978	15.50	4.79	10.71
1978-1988	16.77	7.10	9.66
1988-1993	17.95	9.22	8.73
1993-1998	16.31	9.32	7.36
1998-2000	13.26	8.10	5.31

Source: Federal Bureau of Statistics, Islamabad, Pakistan.(2000)

It is easy to find out that the cause of diminishing capacity of investment to generate growth was associated to the concentration of investment into the public sector and a major portion was being allocated into the unproductive projects. Defence and administration were growing at the fastest rate of growth at 11.4 % but the commodity producing sector was growing at only 2.21 % during the period.

Even in the productive sector, the large share of public investment went into the steel mill project, beginning in 1973. The Steel mill project involved a technology which was both capital intensive and inefficient. Consequently, the tendency of declining productivity of investment was exacerbated.

There was a sharp decline in the rate of return on investment, due to poor management of existing units and inappropriate establishment of new units based on political considerations, thus the lowering of GDP growth despite an increase in investment in the Bhutto period occurred because of two sets of factors

1. Concentration of public sector investment in the unproductive sectors of defense and administration.
2. Economically inefficient investment decisions in the public sector industries based on political considerations, with respect to technology choice, geographic location, and productive management.

Coupled with increased expenditure on defence and administration, the budget was burdened by the additional losses of public sector industries. The deficits in these industries were generated by their poor performance on one hand, and the pricing policy on the other. The manufacturing sector was under official pressure to suppress price increases. Despite rising costs, these units were recovering not much more than their operating costs. Internally generated funds were unable to meet the financing needs of these public sector units. The internal funds were financing only 7 % of the investment undertaken, thereby necessitating heavy borrowing from the government.

As government expenditures increased, the ability to finance them from tax revenue was constrained by the two factors

1. The slow-down in GDP growth.
2. The government's inability to improve the coverage of direct taxation.

Consequently, the deficit increased rapidly. The government attempted to control the rising budget deficit by reducing subsidies on consumption goods and increasing indirect taxation. All these policies failed to encourage savings and promote higher investment and growth.

7.10. Zia Regime (1977-88)

The Zia regime shows a complete shift from socialist policies adapted by the Bhutto regime to the market economy. A slow-down in GDP growth coupled with a rising debt-servicing burden would have a crippling effect on fiscal situation. However, during the Zia regime, two major reasons accounted for its survival:

1. Generous financial support received from the western capitalist countries;
2. Acceleration in the inflow of remittances of overseas Pakistani workers.

Following the events of eased budgetary pressures, the country had a good luck in harvesting seasons. Construction industry was picking up momentum. On the whole economic activity resumed with consumption boom associated with foreign remittances. Economic growth was stimulated from 5% (1973-77) to 6.6 % during the Zia period (1978-88). This growth in GDP was induced to some extent by increased investment. The gross fixed capital formation, as a percentage of GDP, increased from 15.5 % in the Bhutto period to 16.8% in the Zia period. (Table 7.6).

The strategic shift from the socialist policies of nationalization and the large public sector in the Bhutto period to economic liberalization and decentralization accelerated the growth process.

The Zia regime offered a number of incentives to the private sector, such as duty-free imports of selected capital goods, tax holidays, and accelerated depreciation allowances. These inducements, combined with high aggregate demand associated with consumption expenditures from Middle East remittances, and increased investment in housing, created a better environment for new investment. Private sector gross fixed investment increased from 7.1% of GDP in the Bhutto period to 9.2% under the Zia regime. The public sector gross fixed capital formation as a percentage of GDP, however, declined slightly from 10.7 % in the preceding period to 9.7 % under Zia. The share of public sector investment in Zia period was concentrated in urban areas which had a remarkable impact on increasing social gaps between urban and rural areas in years to come.

The data on the manufacturing sector are also consistent with these findings and show a substantial acceleration in the growth of overall manufacturing from 5.5 % in the 1970s to 8.2% in the 1980s. In terms of the composition of investment in the large-scale manufacturing sector, there is a significant acceleration in the investment in the intermediate and capital growth sectors whose percentage share in total manufacturing increased from about 43% at the end of the Bhutto period to about 50% in mid-1980s. This is consistent with the boom in the construction sector, and the secondary multiplier effects in the intermediate and the capital goods sectors. Although the GDP growth rate during the Zia period did increase, this higher growth rate could not be expected to be maintained because of continued poor performance of three strategic factors that sustain growth over time:

Table 7.7: Total investment in various industries as percentage of total investment in all industries in large-scale manufacturing.

Years	Investment in all consumer goods	Investment in intermediate and capital goods	Investment in textile & related goods	Investment in all other industries
1964-65	22.7	25.2	41.4	11.1
1966-67	28.7	30.8	37.3	3.1
1970-71	31.8	27.3	38.0	2.9
1976-77	31.2	22.1	17.9	28.8
1977-78	23.6	43.2	23.7	9.6
1982-83	18.0	49.7	21.5	10.7
1983-84	24.5	57.2	17.9	0.3
1987-88	29.4	21.8	37.4	11.4
1990-91	28.7	24.6	44.4	2.2

Source: Federal bureau of Statistics Pakistan, (2000)

1. The domestic savings rate continued to remain below 10% compared to a required rate of over 20%

2. Exports as a percentage of GDP continued to remain below 10% and did not register any substantial increase.

3. Inadequate investment in social and economic infrastructure.

At the end of the Cold War, when a heavy foreign aid debt relief was pulled off by the West, the underlying structural constraints to GDP growth began to manifest themselves. Debt servicing pressures resulting from the relatively low savings rate, high borrowings, and balance of payments deficits related with low exports growth and poor infrastructure combined to pull down the GDP growth into a economic recession in the 1990s.

7.11. Decade of 1990s

The 1990s was a decade of political turbulence in Pakistan. The worsening economic situation and deteriorating law and order situation had adverse effects on private investment, economic and financial liberalization, and GDP growth. The political instability further accelerated an unfavorable environment for savings and investment. The failure of the successive governments to address the needs of infrastructural investments and emerging financial crisis led to a further decline in investment. The total investment as a percentage of GDP fell from 17.9% in the period 1988-93 to 16.3% in the period 1993-1998. The decline in overall investment was due to the fact that while the private sector investment did not increase (it

remained around 9%), the public sector investment declined sharply from 8.7% at the end of the 1980s to 5.3% at the end of 1990s. The decline in the public sector investment was to an extent due to 'budgetary constraints' and successive governments, being unable to reduce their unproductive expenditures, but choosing instead to reduce development expenditures which fell from an average of 7.4% of GDP in the Bhutto period (1973-77) to only 3.5% of GDP in the last Nawaz Sharief Regime (1997-98 and 1999-2000).

In sum, it seems that due to inadequate economic / financial liberalization policies, low savings and investment rates, and the structural constrains, a high rate of economic growth rate could not have been sustained for Pakistan for a long period.

7.12 Critique of financial liberalization hypothesis

Two strands of literature exist on competitive credit markets and their operations,

1. One stemming from the seminal works of McKinnon and Shaw (1973) (the MS model),
2. The other stemming from the Stiglitz and Wiess (1981) (SW) class of models .

What sets these two models apart is the assumption on information and certainty of loan returns, Roughly, the MS model assumes perfect information and certainty of loan returns, while the SW model takes the starting point of uncertainty of loan returns and asymmetric information. In relation to financial reforms in developing countries in the recent decades, the MS model had much influence, and indeed, provided the very theoretical foundation, whereas the SW model has as yet made little inroad into discourse. In this section we provide a brief review of these types of model. It is shown that in situations where returns on loans are certain and information is perfect, the MS model does provide a reasonably valid picture of the working of the competitive credit market, with the result that it achieves first best efficiency in funds allocation. However, in the more common case of uncertain loan returns and information asymmetry, the SW model provide the more valid alternative, with excess credit demand as a possible out -come and socially non - optimal investment. The question of how a competitive credit market actually operates and what efficiency can be expected from it is of crucial importance. For it

can ultimately guide us in setting appropriate financial reform objectives and forming realistic expectations of what a liberalized financial system can achieve in the future in Pakistan.

7.13 MS model and competitive financial market

The limitations of the MS model due to a loss of efficient outcome in the face of asymmetric information and uncertainty can be easily shown. Let there be an economy whose financial institutions are characterized by banks, and let there be many agents of whom a proportion are entrepreneurs who are potential loan applicants, each with a single potential project. The remainder are depositor. The return on projects differs, but is certain. There is perfect information (banks as well as the entrepreneurs know the true, certain return on each project). If banks do not know the true return from the project, then the result is a loss of efficiency.

We can prove the above proposition as follows. Let the loan contract be a standard debt contract whereby a borrower /entrepreneur repays the bank the principal K, at interest rate r, if the return on the project. (R) is greater than or equal to total repayment (1+r) K. Otherwise, the borrower announces bankruptcy and repays the bank nothing (there is limited liability), in which case the bank collects whatever project return is there.

For simplicity, it is assumed that the borrower does not invest any of his own money in the project (he has no equity ownership) and that there is no collateral. It is easy to see that, in this case, if banks do not know the true return from the project, than there is no stopping those borrowers from applying for loans which have project returns less than the loan interest factor $(1+r^*)$, where r^* is as defined as the point where the marginal social cost and marginal social benefit of investment are equal. These entrepreneurs make a non-negative profit, and any loss will be borne by the lending bank. Now, if these entrepreneurs do succeed in obtaining loans, then there is an efficiency loss. Moreover, since banks make negative profit overall (r^* is to be passed on to depositors as deposit interest), they then need either to reduce the deposit interest rate or increase the loan interest rate, or both. In either case, this

further means an adverse effect on efficiency, and the first best efficiency promised by the MS model cannot materialize.

Of course, banks may, and usually do attempt to screen off less profitable projects. However, there is then a screening cost, and this again has implications for efficiency of the market equilibrium. Often banks just cannot obtain the right information to screen off less profitable projects.

The foregoing case of certain returns might seem unrealistic, since entrepreneurs with an average project return below the loan interest factor only make a zero-profit and, therefore, there are no compelling reasons why they would borrow from the banks. Below, we consider the more realistic case of uncertain returns. A simple one is where each project i has only two possible outcomes, success with probability $p_i = (0,1)$ and a return R_i^s, and failure with a return zero. All projects require the same investment K, and have the same mean return

$$ER = \bar{R}, \text{i.e } R_i^s = \bar{R}, \text{ for all } i. \qquad (7.4)$$

By holding projects' expected returns constant, equation (7.4) helps to single out the risk factor for consideration. Information is asymmetric such that although entrepreneurs are assumed to know only the characteristics of the distribution of p_i, they do not know the true distributions of returns. Both banks and entrepreneurs are assumed to be risk- neutral.

To understand the theory, we need to establish a rule for determining the marginal social benefit of investment under uncertainty. From the social viewpoint, the benefit of an investment should be judged in terms of its effect on the welfare of each and every person in society, and this is equivalent to the problem of a government evaluation of the benefits of a public project or investment. By the Arrow-Lind theorem (Arrow and Lind, 1970), because any risk of a project would be spread over a very large number of people (the whole population), even if each individual in society is risk-averse, the cost associated with the risk would be negligible to each person. The government can therefore evaluate the benefit of a public project simply in terms of its expected returns. In our case, this means that the marginal social benefit of a project is equal to its expected return $\bar{R}/K$, and the

socially optimal level of investment is where the loan and deposit interest factors are both equal $\overline{R}/K$.

However, this can not be a viable market outcome.

Allowing the earlier notations, the expected profit to entrepreneur i from project i is

$$E(\pi_i) = p_i\left[R_i^s - (1+r)K\right] \qquad (7.5)$$

And the entrepreneur will undertake the project if and only if $E(\pi_i) \geq 0$. Now, if the loan interest factor (1+r) is set equal to $\overline{R}/K$,

$$E(\pi_i) = p_i(R_i^s - p_i R_i^s) > 0 \qquad \text{for all } i.$$

All projects yield a positive expected profit and, therefore, all apply for loan. However, at that loan interest rate, and if the deposit interest factor is also equal to the loan interest factor, banks clearly make a loss on all projects (even in the absence of the transaction costs). The expected profit made by a bank on project i is

$$E(\pi_i)_b = p_i(1+r)K - (1+b)K \qquad (7.6)$$

where b is the deposit interest rate. It is clear that if $(1+r) = (1+b) = \overline{R}/K$,

$E(\pi_i)_b < 0$ for all i.

To be economically viable, banks will have either to reduce the deposit interest rate, or increase the loan interest, or both. The first best efficiency outcomes therefore cannot be achieved.

7.14 Information asymmetry and Market equilibrium

We now examine the MS model's prediction that the credit market always equilibrates supply and demand. Here we follow closely Stiglitz and Weiss (1981) who demonstrate that where information is imperfect and asymmetric and where project returns are uncertain, the credit market may not at all equilibrate supply and demand. Central to their analysis is the adverse selection effect associated with a loan interest rate rise. We first show this.

7.15 Adverse selection

Stiglitz and Weiss (1981) consider projects with continuous random returns whose probability distributions are mean-preserving spreads of the safest projects. To

simplify matters we shall, as above, use a two-outcome case. To demonstrate the adverse selection, we first derive from equation (7.1)

$$dR_i^s / dp_i = -R_i^s / p_i$$

By totally differentiating equation with respect to p_i and substituting the above result into the expression, we obtain

$$dE(\pi_i) / dp_i = -(1+r)K < 0 \qquad (7.6)$$

that is, projects with lower success probabilities yield greater profits to entrepreneurs.

Intuitively, this is explained by the simple fact that while the expected project returns $p_i R_i^s$ are the same for all projects, expected repayments of a project, p_i(1+r) K depend on its success probability p_i. The lower p_i, the lower is the expected payment. Indeed, in the limiting case where p_i approaches zero, $E(\pi_i)$ approaches the expected return $\overline{R}$.

Next, we define a critical value of $p_i, \overline{p}$, where $E(\pi_i)$=0. Then, only entrepreneurs having projects with success probabilities no greater than $\overline{p}$ apply for loans. After totally differentiating equation (7.2) at $E(\pi_i) = 0$, we find

$$d\overline{p} / dr = -p_i /(1+r) < 0 \qquad (7.7)$$

This says that as the interest rate rises the mix of loan applicants in terms of the probability of success of their projects becomes successively worse. That is, there exists an adverse selection of loan applicants associated with a loan interest rate rise.

7.16 Excess demand and credit rationing

Proposition 1: *Where information is imperfect and asymmetric and project returns are uncertain, the credit market may not equilibrate supply and demand and excess demand and credit rationing may be the equilibrium outcome The MS model where the market equilibrates supply and demand is but a special case.*

Having shown the adverse selection effect of a loan interest rate rise, proof of proposition 1 is straightforward. The fact that the average quality (average success probability) of loan applications become successively worse as the loan interest rate

rises obviously has a negative impact on banks' profits. At the same time, other things being equal, an increase in γ also means additional revenues to the banks. It is likely that the latter positive effect initially dominates, but after a point, is offset by the former negative effect. Where this is the case, there is then an optimal loan interest rate which banks can choose, at which the average return on loans is at a maximum.

Hillier and Ibrahimo (1993) provide a formal proof of the non-monotonicity of the p(γ) schedule under asymmetric information in the context of the simple model . With an excess demand, some borrowers would be willing to offer a rate higher than (equilibrium) γ^*. However, banks would not accept this higher rate for the reason that it would attract only more risky projects, making total profits fall rather than increase. Since there are no forces for the non-market clearing outcomes to disappear, the market demand is in equilibrium with credit rationing.

Clearly, equilibrium non-market clearing arises because of imperfect and asymmetric information. If information was perfect and symmetric, adverse selection would not occur, and the p(r) function could not be non-monotonous. In the case of perfect and symmetric information, the credit market would indeed equilibrate supply and demand as the MS model predicts, but that is special case.

7.17 Information asymmetry and Social efficiency

Information asymmetry could lead to social inefficiency since where information is imperfect and asymmetric, there exists an adverse selection of projects when the loan interest rate rises; market equilibrium will then be characterized by socially sub-optimal investment, whether or not the market clears. The formal proof of this theorm is provided by Hillier, B & Worrall (1994).

7.18 Other cases of asymmetric information

Having examined the case of adverse selection and the implication for market clearing and first best efficiency, we review in this section some other important extensions on the credit market involving information asymmetries. In particular, we show that adverse selection need not be the only consequence of information asymmetry, and a "favorable selection" of projects may arise depending on the nature of projects' random returns. First, however, we extend the discussion to moral hazard.

7.19 Moral hazard

It is straightforward to see that, with only some minor adoption to the model above, asymmetric information can also lead to moral hazard problems, which should be likely to give rise to possible non-market clearing and socially sub-optimal investment. For example, instead of an entrepreneur having a single potential project in which to invest the borrowed money, let him have more than one potential project (but he only has enough borrowed money to invest in one project). Crucially, let these projects differ in risk. The entrepreneur himself knows the risk characteristics of each project, but the lending bank does not (as before, it only knows the distribution of the success the probability). Then, changes in the loan interest rate γ can affect the entrepreneur's choice of project. Just as in the adverse selection case, the project with lower success probability will be chosen. The rest of the story follows that of adverse selection.

Both the moral hazard and adverse selection problems dealt with above only relate to what is called in the literature *ex ante* information asymmetry, that is, a borrower has superior information than the bank about the risk characteristics of his project(s) before the choice of the project is made and the project is undertaken, [see , Hillier and Worrall, (1994).

Ex post information asymmetry can take diverse forms. For example, the actual returns of a project may depend not only on the state of nature realized, but also on

the borrower's effort. Or the success probability may depend on the borrower's effort. Where a lender has difficulty in monitoring the true state of nature, and hence in knowing the correct returns of project, this opens up the opportunity for a borrower to take actions detrimental to the success probability and or the returns of a project (whether or not the project is successful), so long as he has private incentives to do so.

7.20 Favourable selection

The case of "favourable selection" is due to De Meza and Webb (1987). In their model, as in the two-outcome adverse selection mode looked at above, banks are again assumed to know only the distribution of the success probability of their project. However, instead of using equation, De Meza and Webb assume that each project has the same success return. Hence, projects differ only in success probability p_i. They further assume that all entrepreneurs have the same initial wealth endowment $W^i = W$, which they either invest entirely in their own project if they undertake one, or deposit with the banks at a safe deposit interest rate p-1. An entrepreneur undertaking a project borrows B=K-W, and it is assumed that $R^s > (1+r)K > 0$. De Meza and Webb(1992) assume a common failure return $R^f > 0$. Below, we set $R^f = 0$. They show that, in such a case, market equilibrium is characterized by market clearing and socially over-optimal investment.

The key to their results is a "favorable selection" of projects. The theory of De Meza and Webb suggests that where information is imperfect and asymmetric, there exists a favorable selection of projects; market equilibrium is characterized by (a) market clearing, and (b) socially over-optimal investment.

7.21 Development of financial institutions in Pakistan

A sound financial sector is a prerequisite for macro-economic stability. However, it is essential that ingredients of macro-economic stability should be supportive of the financial sector. A bi-directional causality between economic stability and sound financial sector will lead to sustainable growth. Lack of financial institutions has been the major cause of slow investment growth in Pakistan. Our results for the

McKinnon and Shaw test show that there is a weak relationship between savings and investment in Pakistan. One of the reasons to explain this could be Pakistan's weak financial institutional framework.

Since many studies (SBP 2000, 2002, 2003, 2004, Pakistan economic survey 2001,02) confirm that Pakistan's weak financial structure was unable to translate the domestic savings into efficient investment, we investigate the width and breath of financial sector of Pakistan to explore the possible causes of our model's (McKinnon and Shaw 1973) being not substantiated in case of Pakistan. We analyse the financial sector of Pakistan through the last three decades under study, i.e. 1970s, 1980s, and 1990s.

7.22 Financial sector of Pakistan

The development of financial institutions in Pakistan has not been up to the required level to boost economic progress. After the inception of Pakistan in 1948, there were only two Pakistani scheduled banks, with only 23 branches operating in the country. There were 36 foreign banks, including Indian Banks, which were operating with 172 branches already in the country. The total number of scheduled banks operating in Pakistan by the July 1948 was only 38 with their total 195 branches. Pakistani banks did not have any branch abroad between July 1948 to December 1986 (Mustafa 2003). At the end of December 1986, there were 25 scheduled banks in Pakistan, 9 of which were of Pakistani origin. The financial landscape of the country was significantly altered in the early 1970s. During the Z.A Bhutto regime, all banks were nationalized, and a number of public sector development finance institutions (DFIs) were launched in Pakistan. It was quite clear by the 1980s that the development goals through economic growth were not being met, and the main problem was being seen as the presence of public sector institutions' dominance in the banking and non-banking financial institutions. The public sector finance institutions were increasingly becoming responsible for inefficiency (SBP, 2000).

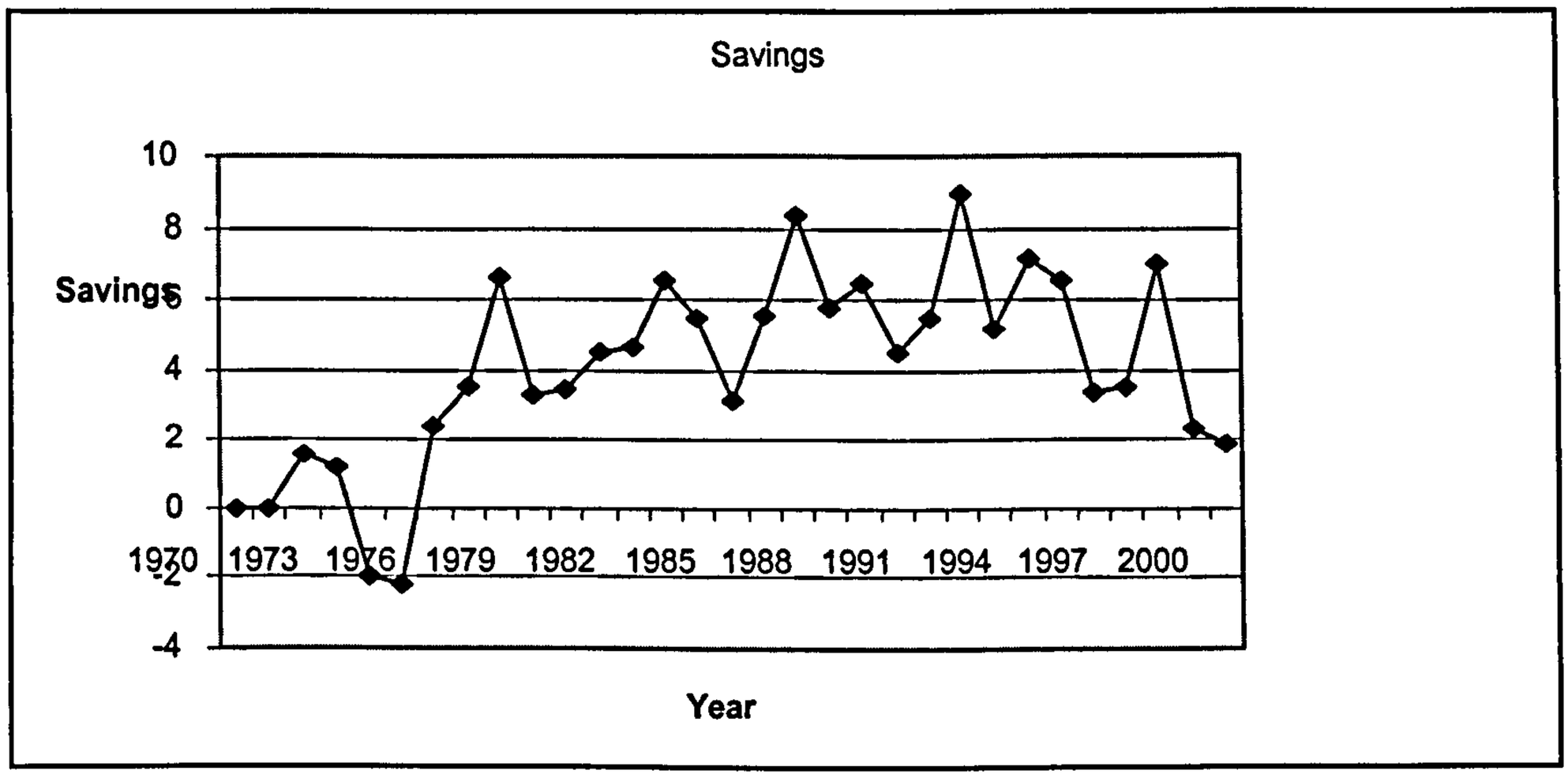
7.23 Economic growth and national savings

National savings play important role to boost the economic growth. Low growth rate causes weak debt servicing capacity of the domestic borrowers. Pakistan's growth rate in real GDP terms decreased from 6.1 to 4.4 percent during the 1990s. Sluggish economic performance often affects the repayments, increasing credit risk. Pakistan's loan default was increased tremendously during the 1990s. The sectoral performance of GDP also plays very important role in growth. A slump in some sectors will have a negative impact on financial system, threatening its over all viability. The manufacturing sector in Pakistan was largely financed by the banks and financial institutions during the 1990s. The flow of credit to the manufacturing sector slowed down during the last decade. The slump in the manufacturing sector was the result of shallow financing to the manufacturing sector. The sectoral slumps deteriorated the quality of financial institutions, affecting portfolio and profitability margins, besides lowering their cash flows and reserves.

7.24 National Savings

Savings in Pakistan in the last three decades do not show any significant growth. The decade of the 70s performed very poorly, the following 1980s showed a comparatively better picture, but instability remains the main feature of the savings rate in 1980s (see graph.7.2) The 1990s recorded a significant decline in domestic savings . National savings which were 14.8% of GDP during the 1980s declined by one percentage point to 13.8% during the mid-1990s which dropped further in the later part of that decade (SBP 2002). However, public sector savings also reduced significantly during the second half of the decade of the 90s.

Figure.7.2.

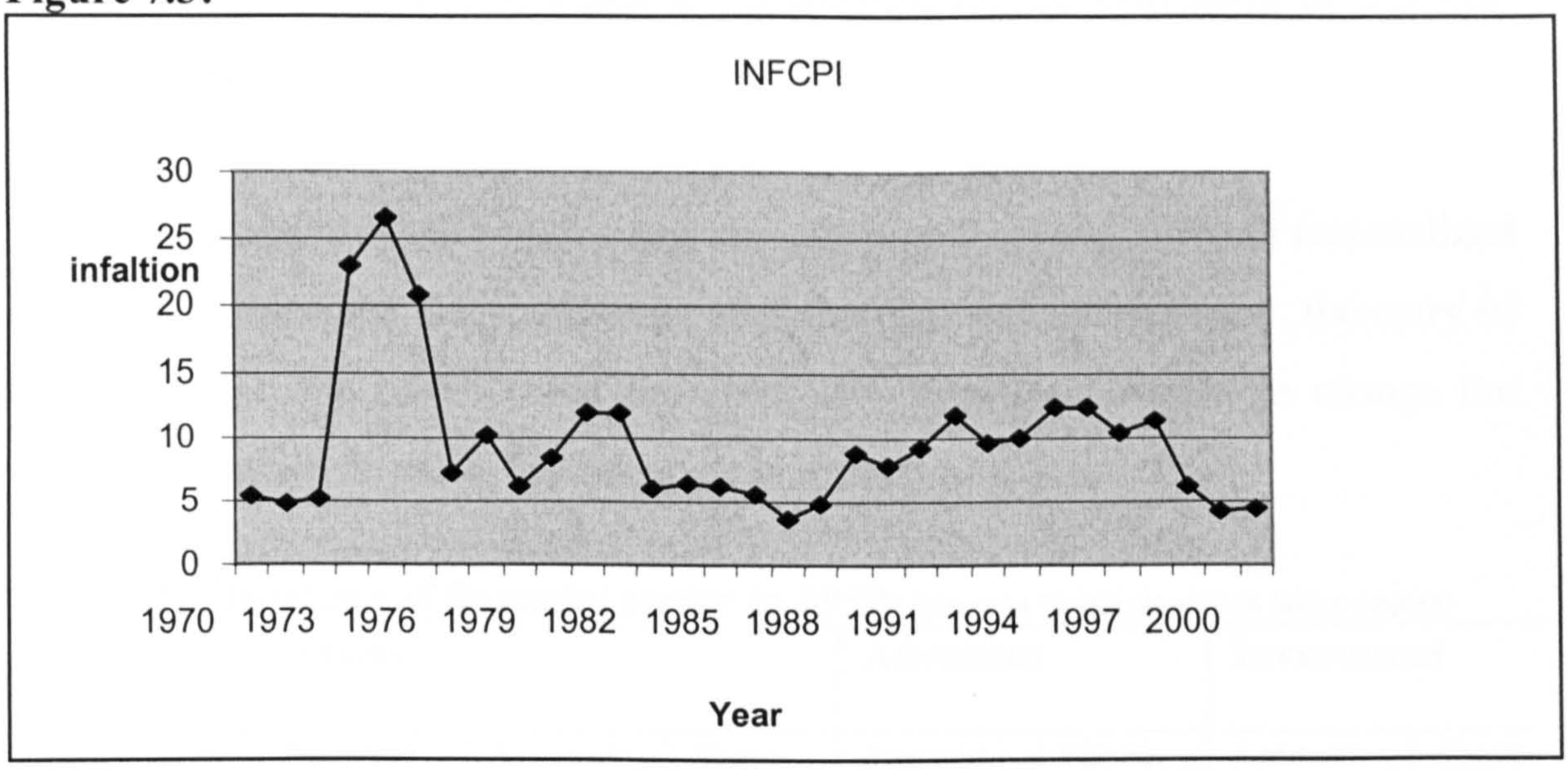


Source: WDI 2002.

7.25 Inflation

Inflation is one of the major factors which affect the performance of the financial system. High inflation reduces the demand for money, persuading people to prefer the real assets over monetary assets. In Pakistan, the CPI data show that inflation has not behaved well during the 1970s, and remained fairly under control in the 1980s as compared to the following decade of the 1990s. The decade of the 1990s recorded as high as around 10% rise in CPI pa (Figure 7.3).It is noteworthy that inflation remained lower in the later part of the 90s decade. However, people did not change their savings behaviour in the last two years of the 1990s when inflation was under control. The turbulent era seems to have affected peoples' saving behaviour.

Figure 7.3:



Source: WDI 2002.

7.26 Financial structure of Pakistan

Pakistan's financial sector continued to reflect the nationalization policy of banks and financial institutions till the last decade of the 1990s. The financial sector enlarged the predominant role of government in the process of deposit mobilization and credit allocation. In the mid-1980s, before the non-bank financial sector for private investment was established, public sector financial institutions held the major share of assets, deposits, advances and investment of the entire financial sector, (see Table 7.8.).

The financial system was predominantly characterized by the high government borrowings, inter-bank credits and ceilings, interest rate controls, and subsidized credit. Although the financial system was put in place, to achieve socio-economic goals rapidly, it worked contrary to such objectives. The system particularly during the Bhutto regime was proved to be a major hindrance to promote private investment. Pakistan's financial system was dominated by the commercial banks (which includes foreign banks) and non-bank financial institutions (which include development finance institutions). Together with other bodies the State Bank of Pakistan was the main regulating body of the banks and financial institutions. The Pakistan Banking Council (PBC) was also acting as one of the regulating bodies. There was substantial overlapping of regulatory functions between the PBC and

SBP in their responsibilities, which left a problem for the evaluation of financial system in Pakistan.

Assets and deposits of the banking system were highly skewed towards nationalized commercial banks and DFIs, and even after that nationalization period, the entry of foreign and private banks could not show any significant results to change the outlook of that old financial system up to year 2000.

Table 7.8: Structure of financial sector in 1990s (share in % and amount in billion rupees)

	Assets			Advances		Investment	
	Number	Amount	Share	Amount	Share	Amount	Share
Banks	24	425.6	61.5	218.5	48.7	1113	89.0
State owned	7	392.3	56.7	201.2	44.8	104.1	83.2
Private	-	-	-	-	-	-	-
Foreign	17	33.4	4.8	17.3	3.9	7.3	5.8
NBFIs	36	133.9	19.4	98.3	21.9	13.7	11.0
State owned	13	124.3	18.0	94.7	21.1	13.3	10.6
Private	23	9.6	1.4	3.6	0.8	0.4	0.3
CDNS	1	131.9	19.1	131.9	29.4	-	-
Equity market	2	90.0	-	-	-	-	-
Total	63	691.5	100.0	448.7	100.0	125.1	100.0

Source: State Bank of Pakistan (2000) (share in % and amount in billion rupees)

7.27 The Size of Banking sector in Pakistan

By the end of 1990, there were 24 commercial banks working in Pakistan, out of which 7 banks were domestic and 17 foreign. (see Table 7.7), Domestic banks of Pakistan were under an absolute public ownership till 1990. The reforms' process in the financial sector coupled with the privatization drive after the 1990s may have changed the composition of the ownership of the public sector banks but at a very slow pace. Domestic banks with public ownership have been enjoying absolute control over the financial markets of Pakistan. With a large share of 90% (SBP 2000) of total assets and total deposits of the banking sector, the commercial banks have been catering for major commercial needs of country. The public sector banks have been operating through a large network of branches throughout Pakistan.

On the other hand, the foreign banks were operating in a restricted environment, for example the number of branches of any foreign bank was determined by the regulatory bodies rather than banks. The business of these foreign banks has been mainly in foreign trade. Due to their business nature, these banks have been

concentrated in a few big cities of Pakistan. The foreign banks were holding a small share of 7.8% of total assets and 7.0% of the total deposit base (SBP 2000).

Table 7.9: Structure of banks in Pakistan in 1990s (share in percent)

	No.of Banks	No.of Branches	Assets	Advances	Investment
State owned	7	7,043	92.2	92.1	93.5
Private	0	0	-	-	-
Foreign	17	45	7.8	7.9	6.5
Total	24	7,088	100.0	100.0	100.0

Source: State Bank of Pakistan, 2000

7.28 Non Bank Financial Institutions (NBFIs)

Since the establishment of one of the largest Development Finance Institutions (DFIs) in the early 1970s before nationalization of banks, NBFIs grew more rapidly up to the 1980s at the expense of banks, due to the emphasise of government policy on promoting industrial development through long-term financing. These NBFIs were primarily aimed to mobilise national savings. Although the business categories of NBFIs varied, all these DFIs were predominantly public sector institutions. Among these, housing finance companies, and mutual funds constituted a large part of NBFIs in Pakistan. In terms of number of institutions, these were only 15 out of 36. In terms of assets and advances, three categories (i.e. DFIs, housing finance corporations, and mutual funds control over 90% of the business.

Table 7.10: Structure of NBFIs of Pakistan in 1990s

	Assets	Advances	Investment
State-owned	92.8	96.3	97.4
Private	7.2	3.7	2.6

Source: State Bank of Pakistan (2000)

7.29 Central Directorate of National Savings (CDNS)

The Central Directorate of National Savings (CDNS), an organization engaged in operating through various national savings schemes to mobilize the national savings of Pakistan, has been operating under the federal government's finance ministry.

The State Bank of Pakistan data sources report that by 30 June 1990, the organization was able to mobilize Rs.131.9 billion. Through its 363 branches country-wide, by the end of 1991 (SBP 2000), the CDNS was also operating through the post office network in Pakistan.

7.30 Regulatory framework of financial sector in Pakistan

There are three regulatory /or supervisory bodies to administer the financial sector of Pakistan.

1. State Bank of Pakistan (SBP), the central bank of Pakistan, dispensing its functions under the SBP Act, 1956.
2. Pakistan Banking Council (PBC), monitoring the performance of nationalized commercial banks under the Banks Nationalization act, 1974.
3. Corporate Law Authority (CLA), regulating the equity market under Securities and Exchange Ordinance, 1969.

We discuss all these regulatory bodies in brief below to provide a broader picture of the working of the financial system in Pakistan.

7.31 Functions of the State Bank of Pakistan

The state bank has been performing three major responsibilities:

1. Conduct of monetary policy 2. Exchange rate management 3. Banking supervision.

1. Conduct of monetary policy

SBP conducts monetary policy with the instruments of direct control. More specifically the cash reserve requirement (CRR), as prescribed under the SBP Act, requires every bank to maintain at least 5% of demand and time liabilities in cash with SBP. On the other hand, the statutory liquidity requirement (SLR) was prescribed under the Banking Companies' Ordinance, and fixed by the federal government of Pakistan. Accordingly, the banks were required to maintain 35% of time and demand liabilities in cash or government securities. The bank rate was set at 10% since 1977. However, in banks credit ceilings are used as active instrument of monetary control. This system was established after adoption of credit planning

through the national Credit. Consultative Council, set up in the SBP in 1972. Under this system credit ceilings are allocated to banks depending upon their share of total deposits during previous years' utilization of credit ceiling. In addition, the SBP also administers a number of directed credit schemes with subsidized financing.

2. Exchange rate management

Under the Foreign Exchange Regulation Act, 1947, Pakistan's exchange rate policy has been administered by the SBP. The exchange arrangement, introduced in January 1982, was characterized as managed floating. Frequent but small adjustments continued to be made in Rupee/Dollar parity by the Foreign Exchange Rate committee of the SBP. With a view to regulating all dealings and debt instruments in the foreign exchange market, the SBP set limits to the open exchange position and balances of individual authorised dealers over and above their daily operational requirements. SBP also provides forward exchange cover to private foreign currency loans and works as credit supplier.

3. Banking supervision

Surveillance of banks is undertaken by SBP. Banks are required to submit various returns to the SBP, on site inspection is also part of active surveillance programme. However, the effectiveness of supervision is reportedly deteriorated over last decade, largely due to the presence of the Pakistan Banking Council (PBC), which was also empowered to carry out inspections of nationalized commercial banks. As a result, enforcement of regulations declined considerably for NCBs, largely due to the directives of government being passed on to these banks through the PBC for compliance. Lack of empowerment and unclear demarcation of roles in supervision of nationalized commercial banks resulted in gradual decline in the quality of SBP supervision.

7.32 Pakistan Banking Council (PBC)

Pakistan Banking Council (PBC) was formed under the banks (Nationalization) Act 1974. The purpose of PBC was to provide a regulatory framework for the objectives of nationalisation i.e to provide for directing banking activities towards nationalisation objectives, coordinating banking policy and cooperation in various

areas in feasible joint activity without eliminating healthy competition in various fields of operation, and ensuring complete security of depositors' funds. PBC was operating in status of a holding company but caused a considerable overlapping in the supervisory role of SBP, largely because of a wide nature of supervisory powers given to PBC. In particular the act prescribed 21 specific functions broadly falling in six areas, some of which were exactly identical to the functions of the Central bank. For example, PBC had authority to lay down performance criteria and formulate performance targets for banks, to monitor banks' progress in terms of profitability and efficiency, and to carry out their inspection. Such a role was in conflict with the activities of the central bank and created problems in the regulations of the financial institutions.

7.33 Corporate Law Authority

The Corporate Law Authority (CLA), established in 1948 had a supervisory responsibility to regulate and supervise the capital markets of Pakistan. It worked under the federal ministry of finance of Pakistan. The responsibilities of CLA under the Securities and Exchange Ordinance 1969 were; (1) to grant registration to stock exchanges, and ensure maintenance of their accounts and submission of annual reports (2) to list of securities, ensure annual general meetings by listed firms, and timely circulation of their half-yearly accounts free transferability of their shares, and dividend payment within 45 days of declaration, (3) to issue the balloting of new issue applications within 10 days of subscription and refunding to unsuccessful applicants within 10 days of the ballot, (4) to ensure the issue of share certificates of new companies within 30 days of allotment, (5) to prescribe qualification requirements for the members of the stock exchange, and (6) to prescribe the manner of transaction of stock brokers and ensure maintenance of their account books. However, the CLA delegates much of its authority to the stock exchange boards, which are largely self-regulated.

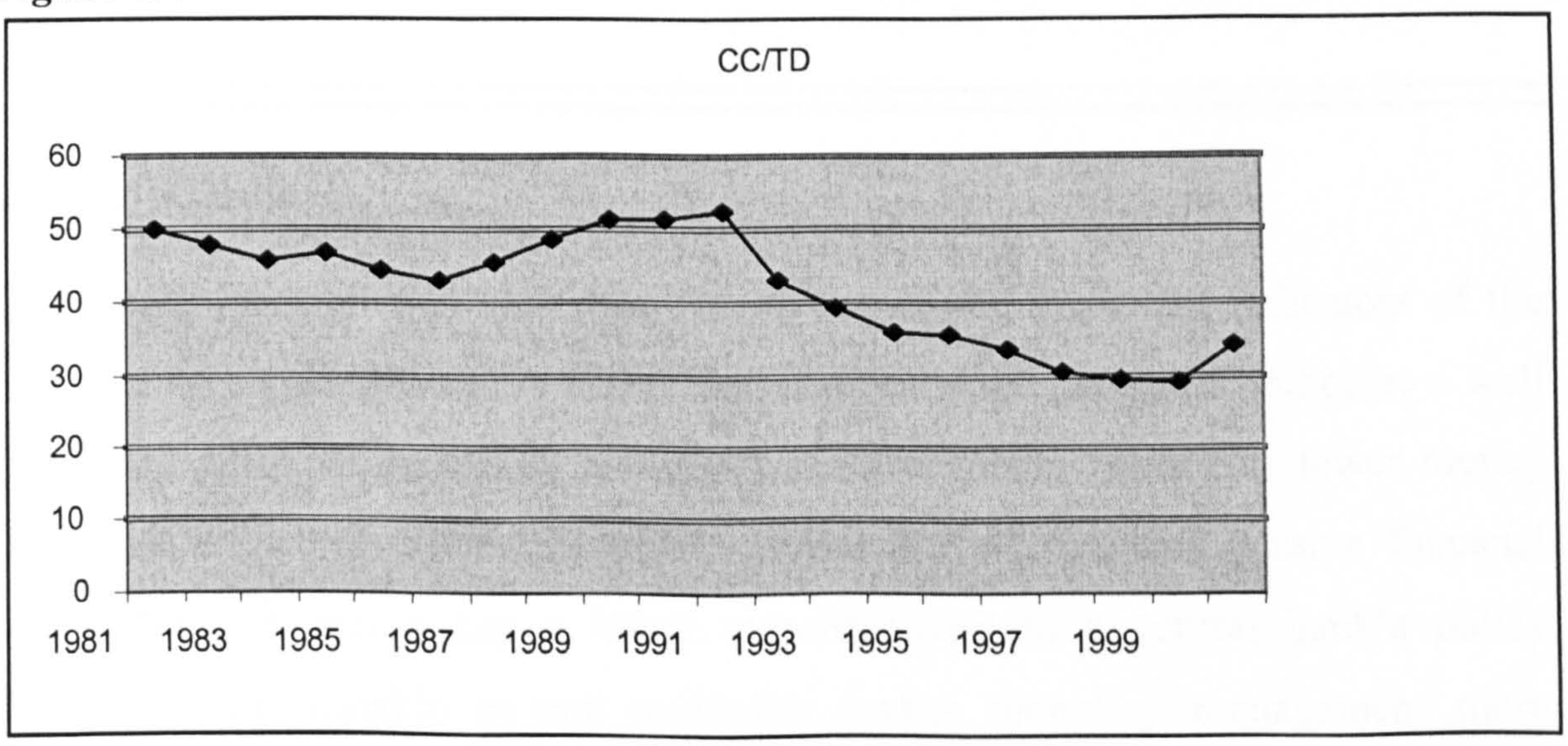
7.34 Financial structure, deepening and intermediation in Pakistan

The nationalization process of all domestic banks in 1974 changed the basic features of the financial system, which even after the nationalization phase have been

dominating the whole banking structure of Pakistan. The SBP used the direct monetary controls, and the National Consultative Council (NCC) was also established. The NCC was designed to serve the purpose to limit the quantity of the credit volume to be extended by the banks to the private sector. The objectives of the nationalized banking system was to promote a direct banking system to achieve of the socio-economic goals through the flow of credit to government and priority sectors.

Currency and bank deposits are two competing financial assets. The best indicator to assess the extent of financial intermediation is the currency to deposit ratio. People like to keep both currency and deposits in a certain proportion, these decisions may be derived by their consumption needs, depending upon taste, spending habits and cost of holding currency in terms of interest rates and inflation. Quality of financial services, is also one of these reasons an efficient payment service may encourage deposits. A low currency to deposit ratio indicates public preference for bank deposits.

Figure 7.4



CC/TD = currency in circulation to total deposit ratio

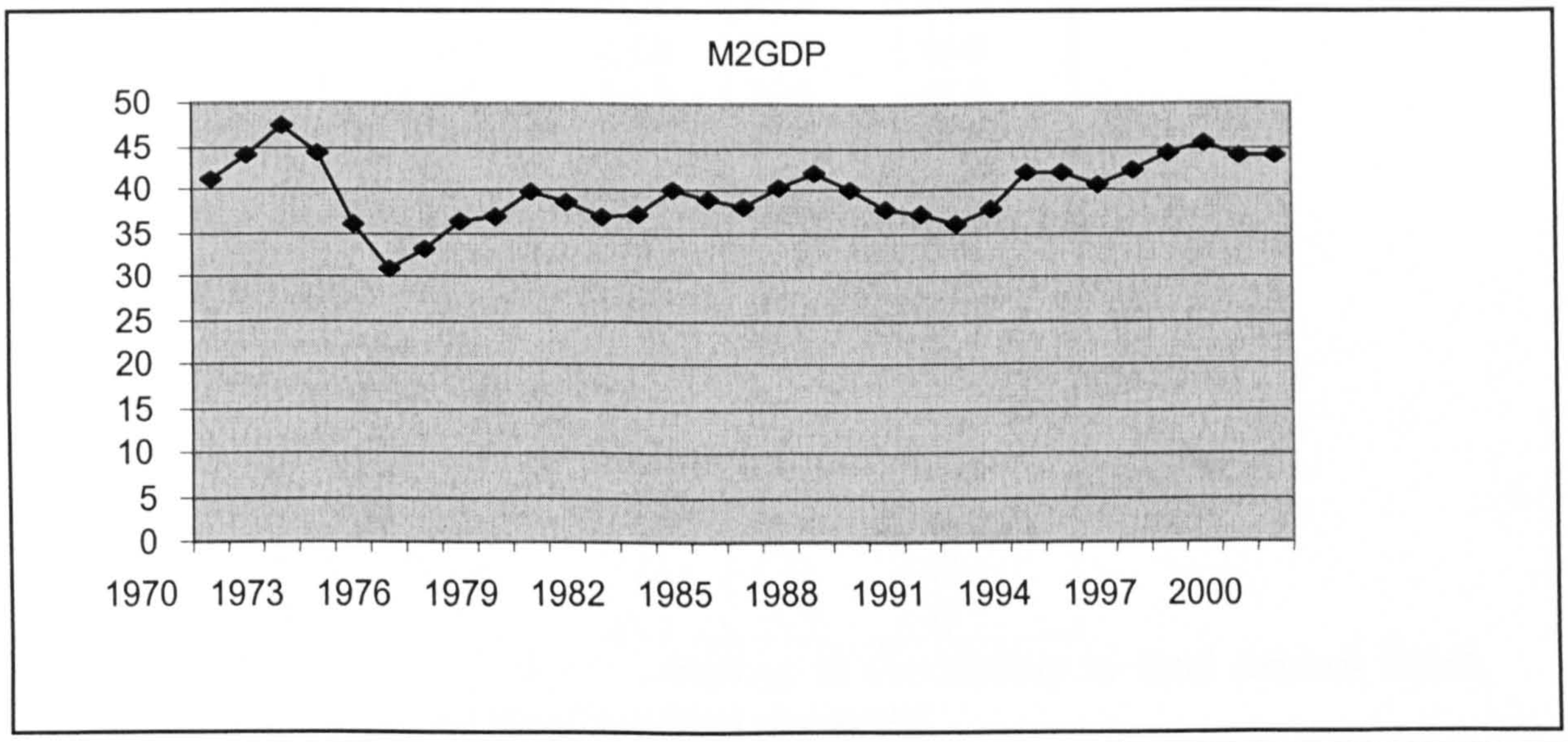
In Pakistan, currency to deposit ratio had a declining trend. The data over two decades for currency to deposit ratio show a declining trend over the 1990s.

It declined from 50.1% in 1981 to 29.2% in 1999, and it goes even further to 33.2% if resident foreign currency deposits are excluded.

7.35 Financial depth

The most common by used indicator of financial sector deepening is the ratio of monetary assets, M2 to GDP. A higher M2/GDP ratio represents a more developed and efficient financial sector. People would like to prefer to hold monetary assets, only they feel it convenient to keep their wealth in monetary instruments, with the underlying nature of liquidity, risk, return and efficiency in payments. Such types of instruments are offered by a well developed financial sector.

Figure 7.5



Source; WDI 2002

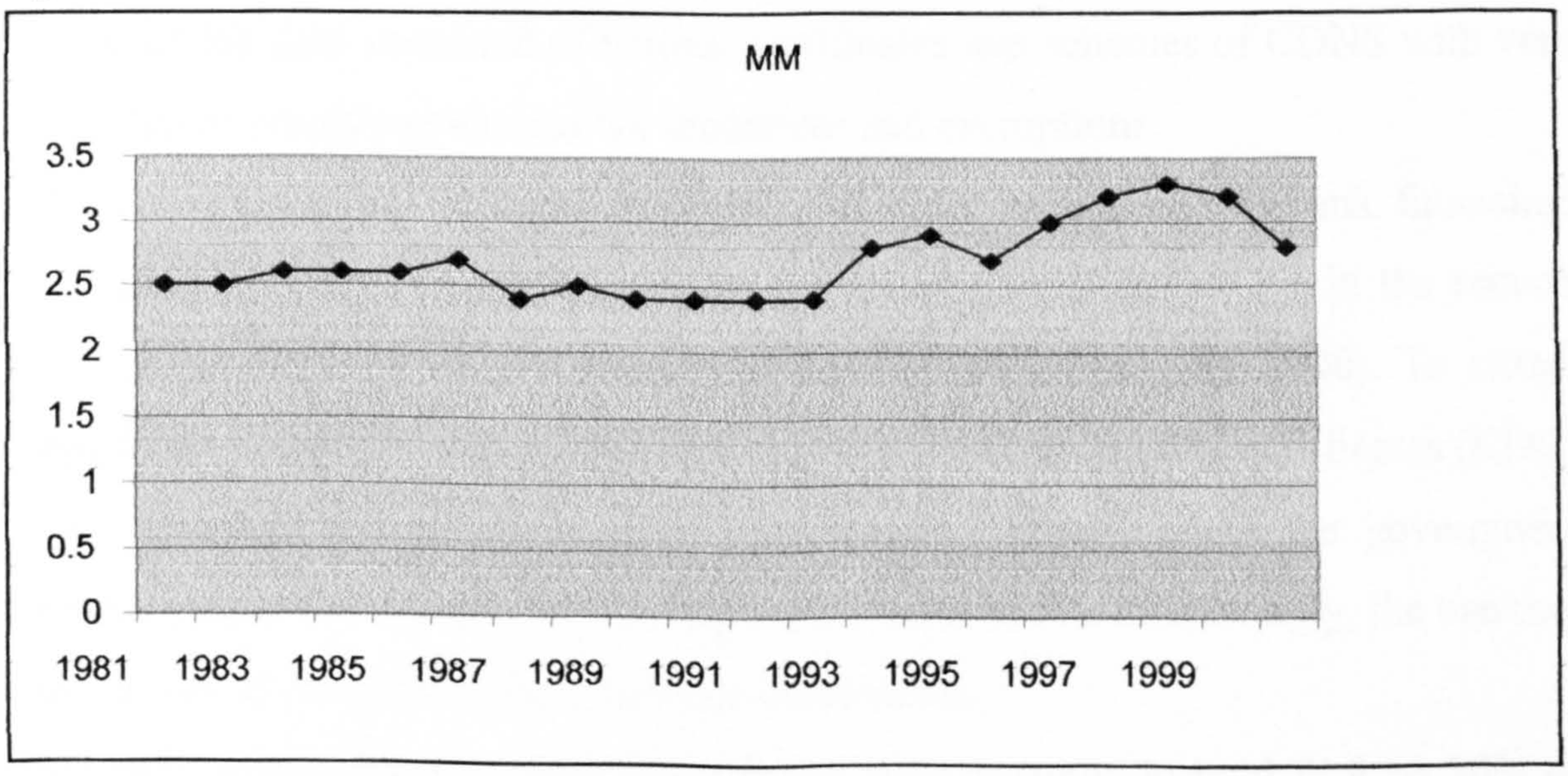
The money multiplier is also regarded as one of the important indicators of the financial sector deepening. A higher and stable money multiplier indicates a well developed financial sector, as compared to an economy having a lower money multiplier. A lower money multiplier indicates a shallow and passive financial sector. Such economy has a lower responsiveness to a central bank's policy changes. An unstable money multiplier makes monetary management more difficult by making monetary policy measures unpredictable. A low and unstable multiplier indicates a weak monetary transmission.

Table 7.11: Financial Indicators of Pakistan

Year	M2/GDP	MM	CC/TD	CC/RD
FY81	37.6	2.5	50.1	50.1
FY82	35.9	2.5	48.1	48.1
FY83	40.1	2.6	45.9	45.9
FY84	38.9	2.6	47.1	47.1
FY85	39.0	2.6	44.5	44.5
FY86	41.0	2.7	43.1	43.1
FY87	41.9	2.4	45.5	45.5
FY88	39.9	2.5	48.6	48.6
FY89	37.7	2.4	51.4	51.4
FY90	39.9	2.4	51.4	51.4
FY91	39.3	2.4	52.6	54.6
FY92	41.7	2.4	43.3	49.4
FY93	44.4	2.8	39.3	46.0
FY94	44.7	2.9	36.0	43.9
FY95	43.8	2.7	35.7	43.2
FY96	44.3	3.0	33.6	42.4
FY97	42.9	3.2	30.4	42.2
FY98	45.1	3.3	29.4	42.1
FY99	43.6	3.2	29.2	33.2
FY00	44.0	2.8	34.4	38.5
Averages				
1981-85	38.3	2.6	47.1	47.1
1986-90	40.1	2.5	48.0	48.0
1991-95	42.8	2.6	41.2	47.4
1996-00	44.2	3.1	31.4	39.7

MM=Money Multiplier, CC/TD = Currency in Circulation to total deposit ratios, CC/RD = Currency in circulation in rupees deposited

Figure 7.6



Source: State Bank of Pakistan (2004)

Value of the money multiplier shows a rising trend during the decades of the 1980s and 1990s. A significant jump may be noted (see Figure 7.6) over the decade of the

1990s, which could be explained as a consequence of frequent devaluation of domestic currency during this period, resulting in holding of the Pak rupee as being less attractive. As a result, currency to deposit ratio declined and money multiplier increased. As far as stability of MM is concerned, it witnessed high fluctuations during the 1990s compared with the 1980s. These fluctuations were response to frequent changes to policies, since as mentioned in early sections, the 1990s were a turbulent political era.

7.36 High government borrowings

The decades of budget deficits had resulted in high domestic borrowings by the government. Government securities were the main source of financial repression. The government loans were arranged in three categories: 1. permanent, 2. floating, and 3. unfunded.

1. Permanent debt consisted of government bonds (held by banks and financial institutions), and bearer instruments (held by individuals or by corporate bodies).
2. Floating debt comprised three-month treasury bills sold to banks through the tap system and adhoc treasury bills purchased by SBP.
3. Unfunded debt consisted of various certificates and schemes of CDNS with very high rate of return and various tax incentives and exemptions.

The national savings schemes had been the major source of non-bank financing. The average share of National savings increased overall from 12% in the second half of the 1970s to 67% in the second half of the 1980s (SBP 2000). To attract significant amount of savings, the rate of return on Khas deposits certificates (KDC) was increased to 15% on a three year maturity period, while the government treasury deposit receipts were offering a maximum of 9%. Interestingly, the banking sector was not allowed in both of these instruments.

For bank borrowing, the commercial banks were required to hold SLR as 30% of their deposits in the form of government securities. Banks usually held treasury bills, which offered a 6% rate of return which after tax was 2.1% (SBP 2000), compared to return on KDC which was 15% for a three year maturity period. In addition to that, the government was borrowing from SBP by selling adhoc treasury

bills at 0.5 percent per annum, which was the most inflationary i.e. monetization of government debt.

The banking system was affected by this kind of domestic borrowing and the monetary control mechanism. This led to the low returns on the banks' portfolio. The lending operations of the commercial banks were restricted in view of ceilings and subsidized credit to certain priority sectors. As mentioned before, the banks were required to maintain 30% of their deposit base in low yielding government securities as SLR, in addition to a minimum of 5% CRR to be deposited in non-interest bearing accounts with SBP. Due to these regulations, there was a very low return on assets portfolio, while a certain proportion of unutilized funds did not earn any returns.

The financial intermediation process was hampered due to these policies which tamed the whole banking system of Pakistan. While NSC offered a variety of tax incentives and relatively high returns (15% per annum tax free) at zero risk, the financial institutions were providing 7 to 9% per annum on time deposits. As a result, the NSS was more attractive than financial institutions, and could manage to divert a large amount of savings from financial institutions. As a result, not only banks' share in financial savings declined, but also SBP's role as a monetary authority was weakened. The declining ratios of M1/M2 (see results, Table 7.12) indicates the increasing cash flows out of the banking system.

Table7.12: Selected indicators of financial sector of Pakistan

Year	Currency /total deposits	Time deposits /total deposits	Currency /M2	M1/M2	M2/M3	Time deposit /GDP	M2/GDP	M3/ GDP
1981	50.1	44.8	33.2	70.3	89.6	11.2	37.6	42.0
1982	48.1	45.5	32.3	69.5	87.0	11.0	35.9	41.3
1983	45.9	49.6	31.3	66.1	82.7	13.6	40.1	48.5
1984	47.1	54.1	31.9	63.4	78.9	14.3	38.9	49.3
1985	44.5	51.2	30.7	64.7	77.0	13.8	38.9	50.6
1986	43.1	51.9	30.0	63.9	76.0	14.8	41.0	54.0
1987	45.5	49.0	30.1	66.5	72.5	14.0	41.9	57.8
1988	48.6	46.8	32.6	68.7	68.6	12.5	39.9	58.1
1989	51.4	44.3	33.6	71.0	67.3	10.9	37.7	56.1
1990	51.4	45.1	33.7	70.4	67.7	11.8	39.9	58.9

Source: State Bank of Pakistan

The banks vis-à-vis non-banks created and played a crucial role in market segmentation, and the resulting dispersion in interest rate structure added to inefficiency of the banking system as evident from high M1/M2 and M3 to GDP ratios, suggesting the inability of banks to generate long-run savings. The ratio of M2 with GDP has been declining significantly since 1986-87, which suggests that Pakistan's financial sector was losing its attractiveness for depositors.

7.37 Credit Ceilings

The credit ceiling was one of the favourite tools of Pakistan's monetary authorities to control the monetary expansion, repercussions of which led to the distortion in the financial sector. Individual banks' ceilings for credit were determined on outstanding stock of deposits, which led banks to emphasize market share rather than banks success rate to mobilize the deposits. As a result, the inter-bank competition to mobilize the deposits was impeded. The credit ceiling system was repercussive, as the credit advancement level to the private sector was only determined after accommodating public sector credit requirements. Hence it was only the private sector investment which was being affected by the credit ceiling in real terms system of the government directed loan administration in terms of credit ceiling did little to convert household savings into investment.

7.38 Administered Interest Rates

With reference to our McKinnon and Shaw hypothesis, which postulates that increase in real interest rates will induce more savings which will increase the level of investment to push up the economic growth rate further, we discuss the interest rate policies by the monetary authorities in Pakistan to find out the possible reason not to have results of the model substantiated in the case of Pakistan (1970-2000). The State Bank of Pakistan's many studies confirm the pre-reform scenario of the financial sector in Pakistan as a controlled or administered interest rate. The interest rate restrictions were in place in the form of floor or deposit rates and ceilings on lending rates on commercial banks. These controls were motivated by a desire to provide low cost funds to encourage investment, particularly for priority sectors. To

safeguard against their increase, it was deemed politically and socially undesirable. Hence, the real interest rate on deposits remained virtually negative for most of the time, thereby discouraging savings and leading to financial dis-intermediation. In addition to that, in some cases, like mandatory targets, credit risks were taken over by the government, liquidity risks were limited, as banks were allowed to discount access treasury bills with the SBP on a daily basis; interest rate risks were negligible due to adminstered interest rates, and foreign exchange risk cover was provided, and government provided an explicit insurance to all NCBs, and DFIs depositors. These broad assurances by the government were meant to maintain financial system stability through depositors' confidence. There were some other factors, like limited competition due to entry restrictions on new institutions and restrained activities of the foreign banks, which hampered the development of the financial system. Moreover, the banking system became the major political tool for political elites of the country which played a safe role to seek rents and kick-backs. To achieve the policy results, authorities have to tighten the controls over the system.

In addition, underdeveloped money and capital market limited the role of the financial sector in terms of intermediating funds between borrowers and savers. Firms and individuals were meeting their long-term financing needs from the informal sector. Also, the absence of a secondary market of government papers led to limited number of money market instruments, thus curtailing the SBP's capacity to conduct short-term monetary operations.

7.39 Conclusions

The following conclusions can be drawn from our cointegration analysis of the McKinnon-Shaw theory of financial liberalization.

1. In general, our results fail to confirm the MS mechanism of the favourable impact of financial liberalization on economic growth in Pakistan between 1970 and 2000. We do not find any evidence of complementarity between real money balances and investment to income ratio.

2. Contrary to the MS hypothesis, we do not find a positive impact of real rate of interest on savings in Pakistan in the last three decades. The coefficients on the

investment-income ratio and real interest rate are negative, and are generally significant. This may be explained by the fact that the real interest rate on deposits in Pakistan remained virtually negative for most of the time, thereby discouraging savings and investment.

3. A major reason for the invalidity of the MS hypothesis could be the lack of adequate sound financial institutions and assets to convert savings into investments. Indeed, Pakistan's record for transforming savings into investment between 1970 and 2000 has been unsatisfactory due to a lack of good financial institutions in many areas and appropriate regulation and supervision of monetary institutions.

Chapter 8

Conclusion and Summary of Thesis

8.1 Research overview

This thesis has investigated the empirical relationship between economic growth and poverty reduction in Pakistan. Macro economic data from 1970-2000 have been used for the empirical work. The thesis investigates the impact of economic growth on poverty reduction in Pakistan and the implications financial liberalisation hypothesis for Pakistan. The summary of the thesis is as follows.

Chapter 2 is a review of the literature on poverty; and its many dimensions. Poverty has been matter of debate between two schools of thought. It has been defined as a relative or absolute concept. The arguments of both schools of thought are discussed in the first section. The next few sections of the literature review cover the selected literature from a huge body of theoretical and empirical works. related to poverty issues. Then we review the poverty trends in Pakistan, it is followed by economic growth and poverty reduction issues. In chapter 3 we review the economic developments of Pakistan in past 30 years and present the macro development indicators of Pakistan from 1970 to 2004.

Taking into account of sectoral growth of Pakistan economy, during the last 40 years, we show that the sectoral economic growth rate has been varied. The growth rate was 3% per annum during the first five year plan (1955-60) During the second

(1960-65) and third five year plan (1965-70), the GNP was estimated to have grown by 6.8 percent annually. The period from 1970 to 1978 (a non-plan period) witnessed a significant slow-down in average annual growth of the GNP at only 4.9 percent. But it picked up momentum again by the fifth five-year plan (1978-83), averaging an annual GNP growth rate of 6.7 percent. The sixth five-year plan (1983-88) shows a downward trend through-out the 1990s. Three successive plans, (seventh and eighth, and an other non-plan period from 1998-2000) recorded a growth of 4.2, 3.9 and 3.5 respectively .

Considering the average annual GDP growth rate of 5 percent since 1950, it seems that changes in the growth of GDP have been affected by the growth in agricultural output. However, agriculture growth has been modest and quite uneven. Agricultural output has grown annually at just over 3 percent in the face of rising population growth at the rate of 1.9 to nearly 3.0 percent. The 1960s witnessed impressive record of agricultural growth, followed by 1980s. The rate of agricultural growth was less than the population growth rate in the 1950s and 1970s. In the first half of the 1990s, the annual average growth rate fell to 3.4 percent from 4 percent in the 1980s.The lower rate of growth of agriculture, and the relatively slow growth in industrial output kept the annual average growth rate of GDP at just over 4 percent in the first five years of the 1990s.

Manufacturing output registered a growth rate of 7.7 percent in the 1950s.The growth rate accelerated further to 9.9 percent in the 1960s, but fell to 4.8 percent in the 1970s. The growth rate of manufacturing output, however, increased to 8.2 percent during the 1980s, but fell to 5.5 percent in the 1990s. Pakistan has recorded a good growth rate after the year 2002, through 2003 to 2004 and 2005. Pakistan's remarkable growth rate has been achieved due to better performance of the agriculture, manufacturing and services sectors. Inflation accelerated to 5.4 percent on CPI in the year 2004. Domestic investment remained stagnant, while foreign investment did not show any significant increase. However, overall economic indicators are not encouraging, though Pakistan has achieved an impressive growth rate of 8.4% in 2004-05.

Chapter 4 explains the methodology used in our thesis and some related issues. We use a dynamic co-integration analysis to show the relationship between growth and poverty reduction. It is well recognised that OLS diagnostics are problematic when data are non-stationary. The data used for our analysis were non-stationary. To avoid any chances to have spurious results, there is a good reason to use co integration test.

In chapter 5, the empirical results are presented. In our first model for economic growth and poverty reduction, we estimate two parameters α_1 and α_2. The first parameter α_1 measures the elasticity of income of the poor with respect to mean income. The second parameter α_2 measures the impact of other determinants of income of the poor over and above their impact on mean income. We have used macro-level data for our analysis. The data are obtained from the World Bank data bank (CD Rom 2002) for Pakistan, from 1970 to 2000. The ADF (Augmented Dicky-Fuller test) results report the unique co-integration vector for the VAR, with-one lagged level term for both GDP and per capita GDP. The co-efficient in both co-integrating vectors are negative and significant. Both cases are consistent with our hypothesis that at aggregate level, poverty falls as GDP rises. Thus the dynamic co-integration method is appropriate for the log levels of the series. Empirically, it is shown that income of the poor responded positively to the overall economic growth from 1970 to 2000.

Chapter 6 investigates the social gaps of Pakistan over the period of study (1970-2000). Although it has been shown that economic growth has been beneficial to over-all income of the poor in Pakistan, nevertheless, social gaps have widened during the period of our investigation.

The prevailing social gaps explain that despite reasonable economic growth, the poor may not have benefited from economic growth from 1970 to 2000 in Pakistan.

Chapter 6 also shows that poverty in Pakistan mainly exists in three levels.

a. provincial, b. rural-urban, c. gender

Lack of education, unemployment or underemployment, assets and meager sources of income, demographic characteristics, and vulnerability are the main attributes which characterise the poor in Pakistan.

Poverty indices based on, gender, rural/urban population and inter provincial data on literacy, land holding etc. are discussed. Various studies on poverty indicate that the incidence of poverty increased from 22 percent to 26 percent in 1991 to 32 -35 percent in 1999. The general level of poverty increased significantly from 1990 to 1999, a period of slow growth and macro economic instability in Pakistan. A general conclusion can be drawn that poverty in Pakistan remained unchanged in 1990s. It might have even increased somewhat in the later 1990s. Studies indicate that poverty was concentrated in rural areas. While urban poverty fell, rural poverty remained stagnant.

As regards provinces, Sindh shows the lowest rural HDI while Punjab province has the highest HDI in Pakistan. Mean per equivalent adult expenditure seems to be consistent with poverty figures, Mean consumption expenditure (per adult equivalent) increased in urban areas, more than in rural areas. In rural areas, it actually fell slightly in the same period. We further investigate the relationship of poverty with educational attainments, land ownership, employment, and other indicators which determine the poverty level. The political under-representation is also investigated as one of the many causes of poverty.

Land is the primary asset of the rural poor. The rural poor in Pakistan lack the ownership of land or they are unable to manage their land productively. A large proportion of agricultural workers do not own their land. The maximum land-holding shows that the Sindh province has the highest concentration of land ownership in Pakistan, It has the highest rural poverty in Pakistan as well Universal education is the basic condition for the overcoming worsening inequality in LDCs, as it ensures that all segments of the society benefit from macro-economic growth. Poverty is highly correlated to the educational attainments in Pakistan; low level of education in households appears to be the major determinant of their poverty. An analysis in all four provinces of Pakistan indicates that incidence of poverty is highly correlated with educational attainments. The incidence of poverty seems higher in the households with lower educational levels, compared to the households with higher levels. These educational levels vary in all three dimensions, gender, regional (urban-rural), and inter provincial.

Among provinces, Punjab province shows the highest achievement in overall education, while in urban-rural differences, Sindh province has the highest

educational attainment in urban areas. The female education levels are much lower in all provinces; females have been lagging behind in educational attainments compared to males in all four provinces of Pakistan. Unemployment is widely regarded as a common characteristic of poverty. In Pakistan, two employment survey results show that, in Pakistan total participation of the labour force in 1992-93 was 42.35 percent, which remained almost stagnant in the second labour force survey of Pakistan in 1996-97. Regarding gender labour force participation of females has been very low compared to male participation.

The figure show that about 70 percent of the male labour force was participating against 13.6 percent of female labour participation in 1996-97. On a regional basis, though labour force participation was found higher in rural areas compared to urban areas, there has been a higher number of underemployed labour force in rural areas compared to the urban centers of Pakistan. In the provinces, Punjab province had the highest labour force participation, while the lowest male labour force participation was recorded in NWFP and the lowest female participation was in the western province of Balochistan. There was no change in the labour force participation in Sindh province during the survey periods.

The poor are often characterised by the lack of assets. WDR (1990) mentions for the rural poor who are engaged in agriculture, ownership of a piece of land has a significant effect on their income, which eventually reduces the household poverty. The rural poor derives their income mainly from agricultural activities. In Pakistan, a large portion of the rural poor is landless, and the maximum land- holding size shows unequal distribution of land in Pakistan. It is higher in the Sindh provinces, compared to all other three provinces, This may have a significant correlation to the rural poverty in Sindh.

Large family size is also a common trend in poor families in Pakistan; the trend of a larger family size is more common in rural areas compared to the urban centres.

Weak institutional framework makes the poor vulnerable. The poor in Pakistan have little access to the public goods, which is a direct outcome of institutional failure. Investigating further the institutional failures, we establish that the poor are more vulnerable in such a weak institutional framework to access public goods like law and policing services which often cost more to the poor.

Finally an attempt is made to relate poverty to governance and democracy in Pakistan. It is established that since 1958 till date, out of 47 years of government, Pakistan has been ruled 30 years by martial law governments compared to 17 years of democracy. The democratic period of 1990 was a turbulent political era of Pakistan, which left devastating effects on the economy as a whole. The human rights situation of Pakistan has been viewed as a part of good governance. In Pakistan, a poverty-driven suicidal trend is found to rise in the 1990s, which could be interpreted as an indicator of social distress. Although at the aggregate level, results show poverty is reduced as growth increases, regional data for Pakistan show major differences in degree of poverty reduction. This could be explained by inequality in land holding, human capital investment, and gender differences in Pakistan.

In Chapter 7, we investigate the impact of financial liberalisation on economic growth in Pakistan. The macro-level data set (from 1970-2000) is used for Pakistan. McKinnon and Shaw (1973) argue that money and physical capital are complementary to each other, rather than substitutes, in LDCs. Investment is saving constrained and orthogonal to changes in real rates of interest. It is availability rather than cost of credit which determines investment. Higher rates of real interest will achieve higher savings, investment and growth, and eventually reduce poverty. Our co-integration analysis of the McKinnon-Shaw theory of financial liberalisation yielded the following conclusions:

1. In general, our results fail to confirm the MS mechanism of the favourable impact of financial liberalisation on economic growth in Pakistan between 1970 and 2000. We do not find any evidence of complementarity between real money balances and investment to income ratio.

2. Contrary to the MS hypothesis, we do not find a positive impact of real rate of interest on savings in Pakistan in the last three decades. The coefficients on the investment-income ratio and real interest rate are negative, and are generally significant. This may be explained by the fact that the real interest rate on deposits in Pakistan remained virtually negative for most of the time, thereby discouraging savings and investment.

3. A major reason for the invalidity of the MS hypothesis could be the lack of adequate sound financial institutions and assets to convert savings into investments. Indeed, Pakistan's record for transforming savings into investment between 1970 and 2000 has been unsatisfactory, due to a lack of financial institutions in many areas and appropriate regulation and supervision of monetary institutions. In view of our results that the MS hypothesis could not be substantiated, we further investigate the particular weaknesses of Pakistan's financial structure during the three decades under study.

The most commonly used indicator of financial sector deepening is the ratio of monetary assets, M2 to GDP A higher M2/GDP ratio represents a more developed and efficient financial sector. People would prefer to hold monetary assets, only they feel it convenient to keep their wealth in monetary instruments with underlying nature of liquidity, risk, return and efficiency in payments. Such types of instruments are offered by a well-developed financial sector. In Pakistan, we observed in our co-integration analysis that a rise in financial depth (M2/GDP) raises economic growth rate and reduces poverty.

The best indicator to assess the extent of financial intermediation is the currency-to-deposit ratio. People like to keep both currency and deposits in a certain proportion, depending upon their taste, spending habits, and cost of holding currency in terms of interest rates and inflation, quality of financial services, and efficient payment services. A low currency-to-deposit ratio indicates public preference towards bank deposits. In Pakistan, currency-to-deposit ratio had a declining trend. The data over two decades for currency-to-deposit ratio show a declining trend over the 1990s. It declined from 50.1 percent in 1981 to 29.2 percent in 1999, it goes even further to 33.2 percent if resident foreign currency deposits are excluded. With reference to our MS hypothesis, which postulates that increase in interest rates will induce the savings which will increase the level of investment to push up the economic growth rate further, we discuss the interest rate policies of the monetary authorities in Pakistan to find out the possible reason for the invalidity of the MS model in the case of Pakistan over the study period (1970-2000). State Bank of Pakistan's many studies confirm the pre-reform scenario of the financial sector in Pakistan as a

controlled or administered interest rate and the financial institutions were weak. The interest rate restrictions were in place in the form of floor or deposit rates and ceilings on lending rates on commercial banks. These controls were motivated by a desire to provide low-cost funds to encourage investment, particularly for priority sectors, and to safeguard against their increase, as it was deemed politically and socially undesirable. Hence, the real interest rate on deposits remained virtually negative for most of the time, thereby discouraging savings and leading to financial dis-intermediation. In addition to that, in some cases, like mandatory targets, credit risks were taken over by the government, liquidity risks were limited, as banks were allowed to discount excess treasury bills with SBP on daily basis; interest rate risks were negligible due to administered interest rates, and foreign exchange risk cover was provided, and the government provided an explicit insurance to all NCBs, and DFIs depositors. These broad assurances by the government were meant to maintain financial system stability through depositors' confidence but due to ill supervision and inadequate regulation they lacked credibility which accounted for the failure to convert savings into productive investment.

Section two of chapter 7 discusses a critique of the MS model .

Two strands of literature exist on competitive credit markets and their operations:

1. Stemming from the seminal works of McKinnon (1973) (the MS model),

b. Stemming from Stiglitz and Wiess (1981) (the SW model)

What sets these two models apart is the assumption on information and certainty of loan returns, Roughly, the MS model assumes perfect information and certainty of loan returns, while the SW model takes as the starting point uncertainty of loan returns and asymmetric information. In relation to financial reforms in developing countries in the recent decades, the MS model had much influence and, indeed, provided the very theoretical foundation, whereas the SW model has as yet made little inroad into discourse.

In section two, we provide a brief review of these types of model. It is shown that in a situation where returns on loans are certain and information is perfect, the MS model does provide a reasonably valid picture of the working of the competitive credit market, with the result that it achieves first best efficiency in funds' allocation. However, in the more common case of uncertain loan returns and

information asymmetry, the SW model provides the more valid alternative, with excess credit demand as a possible outcome and socially non-optimal investment.

8.2 Policy recommendations

Pakistan needs to modernise economic policies to boost the growth rate, and beside this, to make sure the growth is pro-poor. Historically biased policies against the poor resulted in concentration of poverty in three main areas, i.e. female population, backward province, and rural sectors. In order to include the poverty-ridden groups within economic growth benefits, the Pakistan government may design a policy framework which allows these groups a wider access to the accruing growth benefits.

Political process is vital in public participation in resource allocation and other development decisions. Research shows that Pakistan has a fairly poor record of public institutions and democracy which resulted in exclusion of the poor from society. A long-run policy to establish democratic institutions is vital to reduce poverty in Pakistan.

Public sector spending affects the poor directly, Education is a very important dimension which helps the poor to prepare for the global job markets. The quality of education to the poor can increase economic growth, and it can directly increase the income of poor households. Access of the poor to health services has a high return to the poor in the society. These public goods play a crucial role in reducing vulnerability of the poor to the shocks. Thus the Pakistan Government has an open policy choice to increase spending on public goods like education and health at the expense of the defence, if there is a strong desire and commitment to eradicate poverty.

8.3 Further research areas

Economic growth has a positive relationship with poverty reduction, the benefit of economic growth trickle-down to the bottom income group in Pakistan. More research on the relationship of financial liberalisation and economic growth may be carried out once a sufficient data sample is available after the financial reforms period of Pakistan. Micro credit plays a direct role in poverty reduction. An

empirical research on this side may provide a useful direction to design any future poverty alleviation programmes in Pakistan.

Further research on the trade liberalisation and its relationship with economic growth is to be undertaken to know to what extent the poor in Pakistan can benefit from the trade liberalisation policies. Study on the gender dimension of poverty is required to know profoundly about the causes of this very serious dimension of poverty which is all-pervasive in Pakistani society. An empirical research on the role of local government structure on poverty alleviation could also be helpful to understand the effectiveness of such political structure at the grass roots level.

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Data: Pakistan 1970-2000

Year	povHC	GDPgrow	impgdp	expgdp	GDPDEF
1970	37	1.14E+01	1.47E+01	7.77E+00	4.31E+00
1971	38	4.68E-01	1.28E+01	7.14E+00	5.24E+00
1972	38	8.13E-01	1.70E+01	1.18E+01	6.21E+00
1973	36.5	7.06E+00	1.63E+01	1.35E+01	1.55E+01
1974	38	3.54E+00	2.08E+01	1.37E+01	2.54E+01
1975	37	4.21E+00	2.24E+01	1.09E+01	2.40E+01
1976	36	5.16E+00	1.94E+01	1.07E+01	1.19E+01
1977	37	3.95E+00	1.90E+01	9.28E+00	9.09E+00
1978	35.5	8.05E+00	1.85E+01	9.24E+00	9.03E+00
1979	36	3.76E+00	2.28E+01	1.07E+01	6.59E+00
1980	33	1.02E+01	2.41E+01	1.25E+01	9.06E+00
1981	32	7.92E+00	2.30E+01	1.23E+01	9.91E+00
1982	31.5	6.54E+00	2.18E+01	9.95E+00	9.37E+00
1983	31.5	6.78E+00	2.30E+01	1.19E+01	5.27E+00
1984	32	5.07E+00	2.26E+01	1.11E+01	9.65E+00
1985	31	7.59E+00	2.28E+01	1.04E+01	4.53E+00
1986	32	5.50E+00	2.27E+01	1.19E+01	3.29E+00
1987	33	6.45E+00	2.10E+01	1.32E+01	4.52E+00
1988	34	7.63E+00	2.17E+01	1.36E+01	9.62E+00
1989	35	4.96E+00	2.17E+01	1.39E+01	8.59E+00
1990	34.5	4.46E+00	2.34E+01	1.55E+01	6.45E+00
1991	3.41E+01	5.45E+00	2.32E+01	1.63E+01	1.31E+01
1992	33	7.83E+00	2.35E+01	1.70E+01	1.01E+01
1993	32.2	1.91E+00	2.49E+01	1.61E+01	8.67E+00
1994	33	3.90E+00	2.12E+01	1.59E+01	1.29E+01
1995	32	5.12E+00	2.11E+01	1.59E+01	1.38E+01
1996	33	3.86E+00	2.39E+01	1.57E+01	8.47E+00
1997	34.5	1.01E+00	2.30E+01	1.56E+01	1.34E+01
1998	34	2.55E+00	2.05E+01	1.60E+01	7.53E+00
1999	34	3.66E+00	2.00E+01	1.51E+01	5.86E+00
2000	33	4.43E+00	1.91E+01	1.55E+01	3.72E+00

Key :

povHC = Head count Poverty ratio
GDPgrow = GDP Growth
Impgdp= imports as percentage of GDP
Expgdp= Exports as percentage of GDP
GDPDEF= GDP Deflator

Data; Pakistan from 1970- 2000

invpcgdp	bnkintrt	mrktint	M2LCU	M2GDP
14.31234	5.4	5	2.08E+10	41.18641
13.95409	5.5	5	2.36E+10	43.93408
12.60313	6.6	5	2.77E+10	47.48983
11.43511	5.34	6	3.16E+10	44.33509
12.22065	6.51	8	3.12E+10	36.12109
14.44605	10.33	9	3.78E+10	30.72163
17.24334	9.87	9	5E+10	33.23144
18.60192	9.37	9	5.89E+10	36.36192
17.29122	10.87	10	7.06E+10	36.72071
16.9782	10.41	10	8.41E+10	39.65653
17.62902	8.83	10	9.73E+10	38.68176
17.15661	8.63	10	1.09E+11	36.99895
16.83711	9	10	1.32E+11	37.13765
16.96081	9.51	10	1.6E+11	40.08295
16.48396	8.15	10	1.67E+11	38.97003
16.49875	8.97	10	1.92E+11	38.04851
17.02518	8.13	10	2.23E+11	40.31114
17.47488	6.59	10	2.59E+11	42.11845
16.47436	6.25	10	2.79E+11	39.88618
17.30054	6.32	10	3E+11	37.63789
17.29975	6.3	10	3.35E+11	37.09624
17.40604	7.29	10	3.98E+11	35.93202
18.6035	7.64	10	5.15E+11	37.71119
19.12928	7.51	10	6.09E+11	41.88297
17.85503	11	10	7.14E+11	42.04998
16.91265	8.36	10	8.13E+11	40.57621
17.40797	11.52	10	9.76E+11	42.19356
16.38043	11.4	10	1.17E+12	44.20108
15.08323			1.26E+12	45.43238
13.93139			1.32E+12	43.89342
13.98523			1.48E+12	43.8866

Key:
Invpcgdp = investment as percentage of GDP
Bnkintrt = bank interest rate
Mrktint = Market interest rate
M2LCU = M2 in Local currency units
M2GDP = M2 as percentage of GDP

Pakistan from 1970 to 2000

Sources: World Development Indicators CD-Rom (2002)
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