SPDC

SOCIAL DEVELOPMENT IN PAKISTAN

ANNUAL REVIEW 2012-13

The State of Social Development in Rural Pakistan

SOCIAL POLICY AND DEVELOPMENT CENTRE

SOCIAL DEVELOPMENT IN PAKISTAN

ANNUAL REVIEW 2012-13

SOCIAL POLICY AND DEVELOPMENT CENTRE
KARACHI

Published by Social Policy and Development Centre
Printed in Karachi by Times Press (Pvt.) Ltd.
ISBN 978-969-8407-17-9

FOREWORD

Pakistan lags behind in achieving most of the Millennium Development Goals (MDGs), particularly related to education, health and gender equality. One of the reasons for this failure is the lack of attention given to reducing inequalities in social development that exist among urban and rural localities as well as among the provinces. The goal of inclusive and sustainable development cannot be accomplished unless equal access to economic and social opportunities and services is ensured for all groups of society.

This report focuses on the regional and urban-rural inequalities of social development in Pakistan. Chapter 1 focuses on these differences using major development indicators such as population, demography, education and public health. Chapter 2 quantifies the size of the rural economy of Pakistan and profiles its characteristics besides providing the provincial comparison of growth and structure of rural economy. The pattern and structure of employment and labour force in rural areas are presented in Chapter 3. The chapter analyses the trend in the magnitude and participation rates of the labour force with regard to gender and urban-rural disparities. It also helps in bringing forward the issues related to unemployment, underemployment and unpaid family contributors. Chapter 4 discusses the state of education in rural areas with respect to school enrolment and the out-of-school phenomenon prevalent at the various levels of education. The chapter also discusses a number of other issues preventing the progress in achieving the goal of universal education. Focusing on the state of the health sector in rural Pakistan, Chapter 5 underscores the large disparities that exist among urban and rural areas in terms of health outcome indicators besides discussing the alternative mechanisms for improving health service delivery. Chapter 6 presents latest estimates of poverty incidence, multidimensional poverty, multiple deprivation and income inequality with a particular focus on rural areas whereas an assessment of social security instruments and social protection programmes for the rural population is presented in Chapter 7. Emphasizing the role of rural areas in sustainable development, Chapter 8 examines the issues related to availability of water and land degradation and its consequential repercussions for rural development. Recognising the role of finances in the delivery of social services, Chapter 9 analyses the distribution of public expenditure in rural and urban areas both at the national and provincial levels. It examines the changes in the level as well as the urban-rural distribution of public spending on education and health after the 7th NFC Award and also attempts to analyse the efficiency and effectiveness of spending, particularly in rural areas.

The report exclusively and extensively looks into the various aspects of social development in rural Pakistan and also brings forward the gender differentials as a cross-cutting issue. We earnestly hope that the analyses presented in the report will benefit policy formulators, advocacy groups and civil society at large.

Khalida Ghaus
Managing Director

THE TEAM

Core Research Team	Hafiz A. Pasha
	Khalida Ghaus
	Haroon Jamal
	Muhammad Asif Iqbal
	Muhammad Sabir
	Iffat Ara
	Nikhat Sattar
Research Support	Nadeem Ahmed
	Waseem Saleem
	Naveed Aamir
	Rafea Anis
	Tabinda Areeb
	Manzoor H. Memon
	Aasiya Kazi
	Zia-Ul-Haque Khan
Editing Support	Hilda Saeed
Design and Layout	Rizwanullah Khan

SOCIAL POLICY AND DEVELOPMENT CENTRE

Established in 1995, SPDC is a private sector research organisation that serves as a focal point for policy-relevant research on social sector development. Using a multidisciplinary approach, the Centre assists both public and private sector institutions including non-governmental organisations (NGOs) to plan, design, finance, execute and manage social sector programmes in a cost-effective manner. The results of its research are made available to policy makers, interested groups and the general public to promote informed discussion and action on vital social sector issues.

SPDC being an independent and non-partisan organisation cooperates and collaborates with organisations/institutions working on issues of common concerns (both) within Pakistan and abroad. Being an autonomous and independent organisation, the Centre identifies its own research agenda and parameters remaining within the mandate and objectives identified. Key activities include research and policy analysis in the areas of governance, poverty, public finance and macro economy, and gender; social sector government database support; pilot project monitoring and evaluation; training of personnel in government, private sector and non-governmental organisations; and information dissemination through publications, conferences, seminars and workshops.

In addition to the core funding from International Development Research Centre (IDRC - Canada), SPDC generates its alternate funding through contract research.

The Board of Directors consists of eminent personalities selected for their commitment to social sector development and their belief in the use of analytical tools in developing public policy to ensure sustainable social sector development. The Board members are:

Moeen A. Qureshi - *Patron*
Saeed A. Qureshi - *Chairman*
Javed Jabbar - *Vice-Chairman*
Rafiq A. Akhund
Ishrat Hussain
Zeba A. Sathar
Saba Gul Khattak
Muhammad Sakib Sherani
Shahnaz Wazir Ali
Muhammad Ayub Baloch
Khalida Ghaus - *Managing Director*

Social Policy and Development Centre
15-Maqbool Co-operative Housing Society
Block 7 & 8, Karachi 75350, Pakistan
Tel: (92-21) 111-113-113 | Fax: (92-21) 4534285
Website: http://www.spdc.org.pk | E-mail: spdc@spdc.org.pk

CONTENTS

Appendices 167

Boxes

Tables

Charts

LIST OF ACRONYMS

ACGR	Average Cumulative Annual Growth Rate
ADB	Asian Development Bank
APCOM	Pakistan Agricultural Prices Commission
BHU	Basic Health Unit
BISP	Benazir Income Support Programme
CATPCA	Categorical Principal Component Analysis
CMIPHC	Chief Minister's Initiative for Primary Health Care
CPI	Consumer Price Index
DDI	District Development Index
EPI	Expanded Programme on Immunisation
GDP	Gross Domestic Product
GoP	Government of Pakistan
GPI	Gender Parity Index
GRP	Gross Regional Product
HDI	Human Development Index
HIES	Household Integrated Economic Surveys
IDPs	Internally Displaced Persons
IFAD	International Fund for Agricultural Development
ILO	the International Labour Organisation
IMD	Index of Multiple Deprivations
IMR	Infant Mortality Rate
KPP	Khushal Pakistan Programme
LF	Labour Force
LFP	Labour Force Participation
LFS	Labour Force Survey
LZC	Local Zakat Committee
MFB	Microfinance Bank
MIP	Micro Investment Plan
MNCH	Maternal & Child Health Programme
NER	Net Enrolment Rate
NFC	National Finance Commission
NGO	Non-Governmental Organisation
NNS	National Nutrition Survey
NRSP	National Rural Support Programme
NSPS	National Social Protection Strategy
PBM	Pakistan Bait-ul-Mal
PBS	Pakistan Bureau of Statistics
PCA	Principal Components Analysis
PG	Poverty Gap
PGI	Poverty Gap Index
PMDC	Pakistan Medical and Dental Council
PML	Pakistan Muslim League
PMN	Pakistan Microfinance Network
PPAF	Pakistan Poverty Alleviation Fund
PPAF	Pakistan Poverty Alleviation Fund
PPHI	People's Primary Health Care Initiative
PPP	Public Private Partnership
PRSP	Poverty Reduction Strategy Paper

PSDP	Public Sector Development Programme
PSLM	Pakistan Social and Living Standards Measurement Survey
RCC	Reinforced Concrete Cement
RHC	Rural Health Centre
RSP	Rural Support programme
SLE	School Life Expectancy
SPDC	Social Policy and Development Centre
SPI	Social Protection Index
SPSS	Statistical Package for the Social Sciences
SRSO	Sindh Rural Support Organisation
SRSP	Sarhad Rural Support Programme
TB	Tuberculosis
TRDP	Thardeep Rural Development Programme
TRF	Technical Resource Facility
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations Children Fund
WB	World Bank
WHO	World Health Organisation

Glossary Non-English Terms

Barani	Rain-fed
Guzara Allowance	Subsistence allowance
Hadbast Number	It is a revenue code number of villages.
Jahez	Dowry
Mouza/Deh	It is a type of administrative unit, corresponding to a specific land area within which there may be one or more settlements.
Pacca	Concrete
Tameer-e-Watan	Construction of homeland
Tehsil	Sub-district, administrative division
Waseela-e-Haq	The right source; it is a small loan facility under BISP
Waseela-e-Rozgar	Resource for livelihood/business; it is a vocational & technical training programme under BISP
Waseela-e-Sehet	Resource for health; it is a health & life insurance programme under BISP
Waseela-e-Taleem	Resource for education; it is a conditional cash transfer programme for primary education under BISP
Zakat	A form of charitable giving by Muslims based on accumulated wealth. It is obligatory for all who possess wealth above a certain threshold.

EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

THE RURAL–URBAN DIVIDE

This chapter helps in bringing forward urban-rural differences using major development indicators like population, demography, education and public health. Despite the high rate of urbanisation during the last three decades, Pakistan predominantly remains a rural country, with over 60 percent of the population living in rural areas, according to the official definition of urban and rural areas. Though the overall fertility rates in Pakistan have declined over the years, they still remain significantly high particularly in rural areas. Similarly, the natural population growth rate, which represents the difference between births and deaths, is also higher in rural areas. Nonetheless, the urban population is growing at a relatively higher rate due to rural-urban migration. According to estimates for the year 2010-11, over 10 percent of the urban population consists of migrants. The life cycle consumption model suggests that different age groups in a population have different economic needs. The share of the working population in Pakistan has increased over time from 48.5 percent in 1981 to 53.4 percent in 2011. In terms of the age composition of the population, the country is experiencing a youth bulge where the share of the youth has increased from 17 percent to 21 percent during the same period. The youth bulge can be used as an opportunity to convert the demographic transition into a demographic dividend and accelerate the pace of economic growth by providing them skills and employment.

As far as the key indicators of education and health are concerned, there exist significant urban-rural gaps on all fronts. The majority working age population (54 percent) in rural areas is illiterate as compared to 28 percent in urban areas. Similar gaps are also observed in the mean year of schooling of the working age population. However, the gaps have reduced over the years and are relatively narrower in the younger age groups also. Similarly, urban-rural and gender gaps are evident in net enrolment rates at all levels of school education. Moreover, the provision of water and adequate sanitation services remains a challenge for the government.

THE RURAL ECONOMY

This chapter quantifies the size of the rural economy of Pakistan and profiles its characteristics. As of 2010-11, the size of the rural economy is estimated to be Rs 8.7 trillion. In fact, Pakistan is effectively a *50-50 economy*, with half of the economy in the rural areas and the other half in

the urban areas. This is in comparison to the shares in population of 66 percent and 34 percent respectively. During the last decade, the rural and urban economies of Pakistan have not only been of more or less the same size, but have also shown the same annual growth rate of just above 4.5 percent. However, the provinces where the rural economy has expanded faster than the urban economy are Sindh and Khyber Pakhtunkhwa. As far as the structure of the rural economy is concerned, contrary to general perceptions, the agricultural sector does not dominate the rural economy at the aggregate national level. It has a share of 38 percent as compared to a share of 41 percent of services. However, in two provinces, Punjab and Sindh, it still has the largest share. The share of rural areas in industrial activity is as high as 42 percent, with particularly large shares in mining and quarrying (64 percent), construction (65 percent) and small-scale manufacturing (48 percent). Among provinces, the share of rural industry is the highest in Khyber Pakhtunkhwa at 74 percent, with Balochistan at 50 percent, Punjab at 47 percent and Sindh at 23 percent. It is interesting to note that the rural areas have considerable (41 percent) service activity as well. With regard to income inequality, the urban per capita income is 1.9 times the rural equivalent for the country as a whole. The province with the biggest differential is Balochistan with the ratio of 3.3, followed by Sindh at 2.0, Punjab at 1.8 and Khyber Pakhtunkhwa at 1.6. Remittances play a significant role in raising rural incomes, especially in Punjab and Khyber Pakhtunkhwa.

EMPLOYMENT IN RURAL AREAS

This chapter presents an analysis of the pattern and structure of employment in rural areas of Pakistan. As per estimates based on the Labour Force Survey, the magnitude of the labour force in Pakistan has increased from 38.5 million to 50.8 million during 1999-00 to 2010-11 with an annual average growth of 3.1 percent. The majority of Pakistan's labour force (35 million or 68 percent) works in rural areas. Labour force participation rate in rural areas is 57 percent with high male-female disparity. Participation rate for females is only 31 percent as compared 84 percent for males. A significant feature of the labour force in rural areas is the prevalence of unpaid family contributors who work without pay in cash or in kind on an enterprise operated by the member(s) of their households, or by other related persons. Unpaid family helpers constitute over 10 percent of the total labour force in rural areas. In addition, stark gender differentials in favour of males are also evident. For instance, in rural Sindh and Balochistan more than 90 percent of employed females were unpaid family helpers (as compared to 27 percent males).

The analysis of rural employment indicates that rural economies are generally mixed where rural populations earn their living from interdependent agricultural and non-agricultural activities. Rural labour markets largely comprise of unskilled labour with little formal education or training. The majority of the rural population (both males and females) derive their earnings from agriculture which is subject to risks of weather and price volatility that tend to affect the overall demand for labour. These fluctuations in labour demand and labour productivity throughout the agricultural cycle cause seasonal migration and seasonal employment patterns, persistent underemployment, prevalence of casual over permanent employment. In the non-agriculture sector, people largely work in the informal sector and are usually less educated. Consequently, they are less paid than those employed in the formal sector. At the same time they are confronted with unpaid work, underemployment and seasonal employment that tend to create huge fluctuations in employment, particularly among females. The provision of decent and productive employment in rural areas remains a challenge due to prevailing deficiencies including low pay, poor-quality jobs that are unrecognised and inadequate social protection. It is argued that public-private partnership can play an instrumental role not only in generating employment opportunities but also in accelerating economic growth.

THE STATE OF EDUCATION IN RURAL PAKISTAN

Access to education is generally gauged with reference to the gross and net enrolment rates, based on the relevant age group. According to estimates based on Pakistan Social Living Standard Measurement Survey, about 36 percent (10 million) children of the primary age group (5-9 years) were out of school in the year 2010-11. The situation at the secondary level of education is even worse. The out-of-school incidence of primary age children is more prominent in the case of girls (42 percent) as compared to boys (31 percent). There are both supply-side and demand-side factors inhibiting parents to send their children to schools. The supply-side issues include availability of school in vicinity, availability of teachers, quality of teaching and infrastructure. The demand-side factors mainly include the cost of education and children helping parents in their work.

The results show significant differences in respondents' opinions among provinces. For instance, education is considered costly only by 7 and 6 percent of respondents in Sindh and Balochistan, whereas the corresponding percentages are 17 and 16 for Punjab and Khyber Pakhtunkhwa. Overall, about 26 percent children were out of school due to economic reasons, while about 32 percent girls were not attending schools due to parents' refusal to send them to schools. The analysis also indicates a strong negative correlation between the level of enrolment

and incidence of poverty. A multivariate analysis is also carried out by estimating logistic regression function for school participation of 5-14 age cohort children. An important finding of this analysis is the significant role of female headed households in the decision to send children to school. Similarly, the education level of the spouse as opposed to the head of household is more effective in influencing the decision to enroll.

THE STATE OF THE HEALTH SECTION IN RURAL PAKISTAN

The state of the health sector in Pakistan is characterised by poor health indicators, low level of public spending and ineffective delivery of service provision. The country lags behind in all important indicators when compared to other countries in South Asia and some other regional countries. Life expectancy at birth in Pakistan is estimated to be 65.7, which is the lowest among the countries in comparison. At the same time, infant mortality (59) and mortality under 5 years of age (72) are the highest. Maternal mortality rate is 260 per 100,000, which is again highest in the region. Prevalence of communicable diseases is also high, which accounts for about half the deaths in the country. In 2012, the incidence of tuberculosis (TB) in Pakistan is estimated to be 231 cases per thousand of population per year, which is the highest in South Asia and the third highest in Asia. Similarly, malaria remains a major public health hazard in the country and its incidence has risen over the last decade. Public spending on health is very low and it has declined (in terms of percent of GDP) from 0.72 in 2000-01 to 0.35 in 2012-13.

The situation of rural areas is particularly poor. Large disparities exist among urban and rural areas in terms of health outcome indicators such as malnutrition, infant mortality, maternal mortality and immunisation. Geographic coverage and accessibility of public health services in rural areas is also very poor which has serious implications for people's health. Federal and provincial governments have made attempts to introduce alternate models of service delivery in the form of public-private partnerships that have achieved some success. Moreover, vertical programmes of the federal government have also played an important role in supplementing the efforts of the provincial governments. However, the dismal situation of health indicators demands that a more concerted effort needs be made, possibly in every domain of the health sector.

POVERTY, INEQUALITY AND SOCIAL EXCLUSION

This chapter presents latest estimates of poverty incidence, multidimensional poverty, multiple deprivation and income inequality based on the data of the Household Income and Expenditure Survey 2010-11. It is estimated that about 39 percent of the rural population of Pakistan was poor in year 2011. The incidence of rural poverty is the

lowest in Punjab and highest in Balochistan. The magnitude of rural poverty is almost equal in Sindh and Khyber Pakhtunkhwa. The trend in rural poverty appears to be negatively correlated with growth in agriculture GDP. Analysis of socio-economic correlates of poverty indicates that family size and dependency ratio are important determinants of rural poverty while female headship of households is also positively correlated with poverty. The analysis clearly demonstrates that education of the family head directly or indirectly influences poverty levels. Moreover, ownership of land, livestock and non-residential property are all negatively correlated with poverty incidence.

The analysis of multi-dimensional poverty covers non-income variables such as literacy and schooling, housing and ownership of physical assets. The estimates show that the incidence of multi-dimensional poverty in rural Pakistan was 44 percent in the year 2010-11. As expected, highest incidence (75 percent) is observed in Balochistan followed by Sindh (57 percent). Income inequality in rural Pakistan is high as measured through the Gini Coefficient. In 2010-11, the value of the coefficient is estimated to be 0.37, which has increased from 0.35 in 2004-05. Punjab has the most unequal distribution of rural income, followed by Khyber Pakhtunkhwa. Interestingly, Balochistan – the province with the lowest income level in the country – has comparatively the most equal income distribution.

SOCIAL PROTECTION FOR THE RURAL POPUALTION

There is no clearly articulated social protection framework in Pakistan. Various social security schemes and cash assistance programmes are developed largely as a series of ad-hoc responses to problems raised by particular circumstances or recommended by international donor agencies. The Asian Development Bank (ADB) has developed a Social Protection Index (SPI) for Asian countries on which Pakistan stands at the penultimate position with a value of 0.07, just above Papua New Guinea.

The estimates of the coverage of public transfers and the extent of private philanthropy reveal that only 1.2 percent households are receiving social assistance from public and private sources. Although the rural share is relatively large (0.4 urban and 1.6 rural), a minute percentage reveals extremely trivial access of poor households to the social assistance intervention. All existing social security schemes are in the formal sector of the economy and designed for the employed labour force and retirees. These schemes generally provide benefits regarding contingencies of sickness, invalidity, maternity, old age, and work related injury. A major shortcoming of these schemes is that a sizable majority of workers remain uncovered through these programmes. The uncovered segment include workers from the agriculture sector, from the informal sector, and those in the formal sector who are either employed temporarily through contractors or working in establishments with less

than ten workers. The agriculture sector which constitutes about 61 percent of the labour force, is not only excluded from the social security net, but is virtually exempt from existing laws pertaining to the protection of workers in terms of working conditions, conditions of employment, health, and safety at workplace. Thus the rural poor who comprise the majority of the poor population are not entitled to protection against various risks through social security instruments. The phenomenon clearly indicates a serious flaw in the design of social security schemes and necessitates developing special schemes for the rural poor like social insurance, old age benefits and agriculture insurance along with risk management and disaster risk reduction measures.

SUSTAINABLE RURAL DEVELOPMENT

Rural areas are not only engines of economic growth, their populace is also the custodian of natural resources such as water bodies, forests and other biodiversity. Investment in rural development minimises haphazard rural to urban migration by providing opportunities for people to live and work in their villages with some degree of satisfaction. However, over sixty years of battering natural resources have brought the country to a point where drinking water is a scarce commodity and ground water has depleted to frighteningly low levels. The forest cover is one of the lowest in the world and soil and coastal areas have been eroded, exposing them to devastating impacts of natural disasters. The Environmental Performance Index (EPI) ranks 163 countries on 25 indicators that cover ecosystem productivity and environmental public health. Pakistan's performance is relatively good or satisfactory in some indicators such as greenhouse gas emissions per capita (including land use emissions), CO2 emission per electricity generation and marine protection. On the other hand, the country ranks poorly with regard to most of the indicators related to water, pollution, forestation, agricultural water intensity and pesticide protection.

Water and land degradation are among the most important issues concerning sustainable development in Pakistan. Water availability on a per capita basis has been declining in the country at an alarming rate — from about 5,000 cubic metres per capita in 1951 to about 1,100 cubic metres at present. Multiple factors are contributing to stress on water resources including rapid urbanisation, increased industrial activity and dependence of the agricultural sector on chemicals and fertilizers. As far as land degradation is concerned, 70 percent of Pakistan's total area is arid or semi arid; and therefore, highly vulnerable to desertification. Pakistan's agricultural production is least sustainable in South Asia, with 80 percent of its crop land being irrigated, but nearly half of this is water logged and 14 percent is saline. A five-point process is recommended for sustainable development: halt degradation, reverse losses, regenerate, grow sustainably (adopt sustainable agricultural practices) and

inclusively, and adopt green policies. The inclusiveness of sustainable growth requires that poor, marginalised and remotely situated groups must be particularly catered to. For sustainable growth to be implemented, environmental issues must be thoroughly integrated within economic policies and institutional reforms.

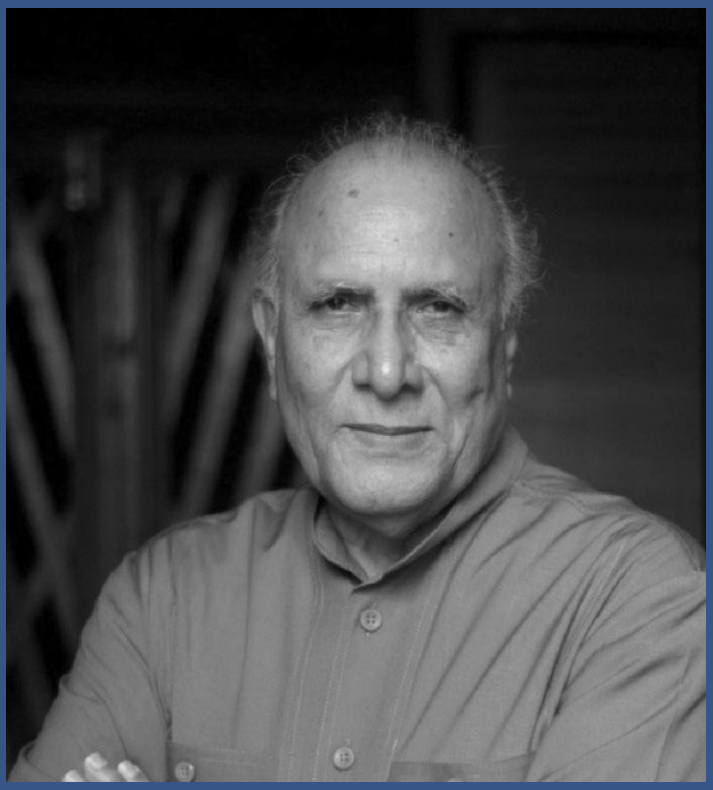
RURAL URBAN DIVIDE IN PUBLIC EXPENDITURE ON SOCIAL SERVICES

Pakistan spends a very low share of its GDP on the social sectors. Since the responsibility of social service delivery lies mainly with provincial governments, one explanation for the low level of spending was the weak fiscal position of provinces due to their low share in divisible pool taxes. This situation has been rectified by the 7th National Finance Commission (NFC) Award of 2010 that substantially enhanced the share of provinces in the divisible pool of taxes. It provided fiscal space to the provinces to focus more on social sectors, particularly, after the 18th Amendment to the Constitution that further enhanced the responsibility of provincial government to deliver social services.

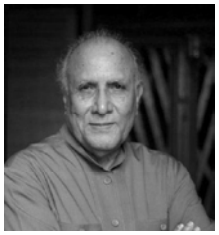
The analysis of urban-rural distribution of public spending on education reveals that a sizeable amount of public resources is diverted to social services particularly towards education since 2004-05. The focus of the government in term of expenditure has shifted towards rural areas. Within the education sector, the focus was on secondary and primary education which experienced a very healthy growth in public expenditure during the post-NFC period. However, this increase in public spending did not correspond with an increase in enrolment both in rural and urban areas, which resulted in a sharp increase in per unit cost of provision of primary and secondary education. Moreover, there are wide disparities in public spending on education across provinces.

The analysis of the health sector indicates that public expenditure on curative health grew by 30 percent during the pre-NFC period while the pace of growth declined to 21 percent during the post-NFC period. The major beneficiary (of more than two-thirds) of public expenditures on curative health was the rural population. The government spent Rs612 per person per year on the urban population and Rs780 per person per year on the rural population in 2012-13. However, an alarming finding is the greater focus of the government towards curative health at the cost of preventive health despite the resurgence of polio, the incidence of chicken pox and dengue. Public spending on preventive health declined in real terms by more than 5 percent per year during the post-NFC period, which has disproportionately affected the rural population.

Views of a Leading Social Sector Personality



Shoaib Sultan Khan



VIEWS OF A LEADING SOCIAL SECTOR PERSONALITY

Shoaib Sultan Khan is a pioneer in rural development with a career spanning over six decades and several countries. Mr. Khan served as a civil servant in Pakistan for 25 years after which he opted to turn to the development sector to work for the country's poor. A champion of people power, he has made extremely important contributions to the cause of rural development in the country. He has been a part of numerous initiatives including the Aga Khan Rural Support Programme (AKRSP), National Rural Support Programme (NRSP), Sindh Rural Support Organization (SRSO), Ghazi Brotha Taraqiati Idara (GBTI), Sarhad Rural Support Programme (SRSP), Punjab Rural Support Programme (PRSP) and Balochistan Rural Support Programme (BRSP). Currently, he is the chairperson of the Rural Support Programmes Network (RSPN).

Mr. Khan spoke to SPDC about rural development, poverty and his career.

Rural poverty programmes in Pakistan are aplenty, but Mr. Khan was asked what makes one effective and result-oriented? Recounting his experiences in the sector, Mr. Shoaib Sultan Khan said he subscribes to three simple principles used in Germany by Friedrich Raiiffeisen: get the peasants to organize and identify a leader; acquire capital and savings; and human skills development. He was introduced to them by his mentor and guide Dr. Akhtar Hameed Khan.

He said a framework based on Raiifeisen's principles is what makes rural poverty programmes effective as it is people oriented and centered on their needs. While explaining the framework, Mr Khan said that communities need to first identify honest and able leaders from among them; generate capital through savings; and participate in human resource development training. Further, donors and governments should offer a "development partnership" to the people instead of imposing from the outside when designing policies and programmes for rural development. After all, he said, no one knows what the people want more than the people themselves; hand them the reigns and results follow.

While underscoring the importance of the process approach in rural development, where communities themselves are made stakeholders in planning and implementation of programs, Mr. Khan said that engaging in dialogue and forging partnerships with communities is vital. Governments and donors need to find out the needs and interests of the poor first and

then design support programmes and projects where both the donor and the beneficiaries need to fulfill their obligations.

In Gilgat-Baltistan, where Mr. Khan headed the Aga Khan Rural Support Programme (AKRSP), he enforced these principles with monumental success using a bottom-up approach. According to Mr. Shoaib Sultan Khan, many were skeptical of his approach and did not expect communities to accept these terms. But in the 10 years he spent in Gilgat-Baltistan under the umbrella of AKRSP, communities managed to fulfil these terms and obtain fruitful results – they got organized; saved millions of rupees; and got thousands of village activists as service providers. After 10 years the World Bank concluded that the income of the people under AKRSP had more than doubled in real terms.

Mr. Khan spoke extensively about Dr. Akhtar Hameed Khan's accessibility based framework for development administration back when Mr. Khan was still a civil servant. The framework espoused the formation of a separate government unit devoted exclusively to development that was easily accessible to villagers. For this purpose, thaana training and development centres were created across what was then East Pakistan where farmers could learn about new agricultural techniques. The rationale behind this was that in order to bring about change for the poor one has to be cognizant of, first and foremost, on-ground realities.

In response to what the government's biggest failures have been in terms of rural poverty, Mr. Khan said the government's approach to rural poverty reduction should be in the context of a broader strategy for rural development that strengthens rural institutions, community organizations and the sustainable use and management of natural resources with a long-term commitment. He added that strategies need monitoring in order to be effective. "There are pockets [in rural Pakistan] where nothing has been done and they are worse off than the others", he said. But where communities have been involved and made responsible, things are different.

While discussing whether his approach can be successfully replicated, Mr. Khan cited the example of Andhra Pradesh (AP), India. Mr. Khan has worked with communities in Bangladesh, Maldives, Nepal and Sri Lanka as well. Meanwhile, his work in AP stemmed from Dr. Akhtar Hameed Khan's belief that you don't replicate programmes you replicate people. According to Shoaib Sultan Khan it took him a year to find the right person to help and support his approach and when he did he mobilized a million people in 12 years and they mobilized 45 million. This approach was "demonstrated" in "1100 Mandals covering over 11 million rural households, all led by women". In AP, people also undertook an initiative called Community Managed Sustainable Agriculture adopted by "300,000 farmers to date". Furthermore, plans are underway to turn AP into a green state.

Mr Khan was then asked that even if Raiifeisen's principles-based rural support programmes effectively reduce income and food insecurity among the rural population and enhance their capacity to manage their future and the sustainable use of resources, does this empower women or are they further marginalized? He asserted that following Raiifeisen's principles enables women to lead, play an active role in their communities; and makes them aware of their rights and how to make government officials accountable in terms of service delivery.

Finally, Mr. Khan was of the view that in terms of short- and long-term poverty alleviation strategies to be successful a welfare state needs three pillars – administrative, political and people's – and it is the third that needs to be strengthened in Pakistan. Through the latter, his "recipe" for poverty reduction — create institutions of people so they can get organized and demand what they need – can be implemented. He stressed that development programmes and policies in Pakistan need to adopt a social mobilization approach and focus on organizing communities.

The Rural Urban Divide

1

1 The Rural Urban Divide

The debate on Pakistan's economic development is predominantly surrounded by the discourse on whether it is a rural country or it has transformed into an urban country. While there is consensus that the rural population is growing at a slower pace than its urban equivalent, the focus of debate is whether the stock of urban population is greater than its rural counterpart, or vice versa. There are views that Pakistan's urban population would be more than the rural population if some alternate criteria, such as population density and availability of basic facilities and services are incorporated in the conventional definition of urban and rural areas. In fact, there have been discussions to revisit the definition for the next population census[1]. The official definition given in the last census conducted in 1998 has been used in this chapter. The chapter highlights the urban-rural differences using major development indicators like population, demography, education and public health.

RURAL AND URBAN POPULATION TRENDS

Pakistan is a rural country according to the official definition of rural areas (see Box 1). While it is the world's sixth most populous country, it ranks fourth in rural population[2]. According to the latest estimates of the Planning Commission, Government of Pakistan, more than 61 percent of Pakistan's population lives in rural areas (see Table 1.1). Despite the decline in the share of rural population since 1981 more than 113 million Pakistanis continue to live in rural areas. Moreover, 24 million plus persons with average cumulative annual growth rate (ACGR) of 1.6 per cent have been added to the rural population since 1998.

Table 1.1 Trend in Rural and Urban Population of Pakistan
(Percent)

Years	Rural	Urban	Total	Share (%) Rural	Share (%) Urban
Population in Millions					
1981(census)	60.9	24.2	85.1	71.6	28.4
1998 (census)	89.1	44.2	133.3	66.9	33.1
2013	113.3	71.1	184.4	61.4	38.6
Absolute Change					
1998-1981	28.2	20.0	48.2	-4.7	4.7
2013-1998	24.1	26.9	51.0	-5.4	5.4
Average Cumulative Annual Growth Rate (%)					
1998-1981	2.3	3.6	2.7	-0.4	0.9
2013-1998	1.6	3.2	2.2	-0.6	1.0

Source: Pakistan Economic Survey 2012-13, Government of Pakistan (GoP)

Box 1.1 What is Rural?

Globally, there is no one agreed-upon definition for what constitutes "rural". There are two main methods to define rural in practice. One methodology is to use a geopolitical definition that defines specific administrative units as urban and by exclusion defines all of the rest as rural. The second methodology uses population agglomerations to define rural. Populations that live within an area where populations are larger than for example 5,000 inhabitants are considered urban, while by exclusion the rest is defined as rural. Since it establishes a clear threshold, this method seems more feasible. There is another less often used methodology which is nonetheless worth mentioning in view of its relevance for social protection and rural poverty analysis. This method considers the availability of municipal services to define rural/urban localities.

In the context of Pakistan, the 1951, 1961 and 1972 population censuses defined urban as areas with a minimum population base of 5,000 people, though exceptions were made for some localities with less than 5,000 people that had urban characteristics. In the 1981 and 1998 censuses, urban areas were defined according to an administrative definition.

According to Population Census 1998, “All localities which were metropolitan corporations, municipal corporations, municipal committees, town committees or cantonment at the time of the Census were treated as Urban”. The Census does not actually define “rural.” “Rural” encompasses all population, housing, and territory not included within an urban area. Whatever is not urban is considered rural. The territory of the lowest tier of urban settlement is the “Town Committee” which is defined in terms of population scale as “population exceeding 10,000 but not exceeding 30,000”.

The analysis presented in this chapter is primarily based on household surveys conducted by Pakistan Bureau of Statistics (PBS), Government of Pakistan. The sample of these surveys is derived from the framework of Population Census. According to PBS, “With regard to the rural areas, the lists of villages/mouzas/deh according to Population Census 1998 have been used as sampling frame. In this frame, each village/mouzas/deh is identifiable by its Name, Had Bast Number, Cadastral map etc. This frame comprises of 50590 villages/mouzas across Pakistan.

On the other hand, urban population is estimated to be 71 million in 2013 and its share has also increased over the years. During 1998-2013, the urban population grew at an average cumulative rate of 3.2 percent per annum and 27 million people were added to the urban population (3 million more than the increase in rural population).

Province-wise population trends indicate that the degree of urbanisation varies in each province. Sindh is the most urbanised province where 56 percent people live in urban areas (Table 1.2). In contrast, Khyber Pakhtunkhwa appears to be the least urbanised province with urban population of only 20 percent. Punjab and Balochistan are also rural provinces where 62 and 72 percent of people respectively live in rural areas. While the share of rural population declined in all four provinces, the change has been more sizable in Sindh and Punjab. It is also important to note that the population growth rate in urban areas was around 4 percent in all provinces during 1998 to 2013. However, the rate of growth in rural population of Balochistan and Khyber Pakhtunkhwa is much higher compared to that of Punjab and Sindh.

Table 1.2 Locality-wise Population of Provinces

Year	Punjab		Sindh		K-PK		Balochistan	
	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban
Population in Million								
1998	50.9	23.5	15.6	14.8	14.8	3.0	5.0	1.6
2013	62.7	38.8	19.5	24.6	19.8	5.0	6.9	2.6
ACGR (%)	1.6	3.9	1.7	4.0	2.3	4.0	2.5	4.1
Percentage Distribution								
1998	68.4	31.6	51.2	48.8	83.1	16.9	76.1	23.9
2013	61.8	38.2	44.1	55.9	80.0	20.0	72.2	27.8
Change	-6.6	6.6	-7.1	7.1	-3.2	3.2	-3.9	3.9

Source: SPDC estimates based on Economic Survey and Pakistan Labour Force Survey, GoP

Table 1.3 Province-wise Rural Population by Gender

Year	Punjab		Sindh		K-PK		Balochistan	
	Male	Female	Male	Female	Male	Female	Male	Female
Population in Million								
1998	26.2	24.7	8.2	7.4	7.5	7.3	2.7	2.3
2013	31.5	31.2	10.4	9.1	9.9	10.0	3.6	3.2
ACGR (%)	1.4	1.8	1.8	1.6	2.1	2.5	2.4	2.5
Percentage Distribution								
1998	51.4	48.6	52.5	47.5	50.8	49.2	53.2	46.8
2013	50.3	49.7	53.4	46.6	49.7	50.3	53.0	47.0
Change	-1.2	1.2	0.9	-0.9	-1.1	1.1	-0.2	0.2
Sex Ratio (number of males per 100 females)								
1998	106	111	103	117				
2013	101	114	99	113				

Source: SPDC estimates based on Economic Survey and Pakistan Labour Force Survey, GoP

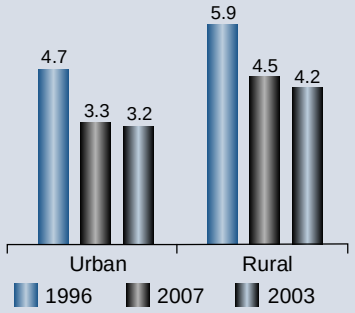
The composition of province-wise rural population by gender is presented in Table 1.3, which indicates that the share of males in total population was higher than females in all provinces in 1998. However, sex ratio (number of males per 100 females) was substantially higher in Sindh and Balochistan, 111 and 117 respectively.

Over the years, the share of female population increased in all provinces barring Sindh where sex ratio has increased to 114 in 2013. This may be due to the migration of males from rural to urban areas for economic opportunities. In Balochistan, sex ratio has declined but is still as high as 113.

Natural Growth Rate and Fertility

Overall, fertility rates in Pakistan have declined over the years but they still remain significantly high particularly in rural areas (Chart 1.1). During 1996 to 2013, fertility rates have declined from 4.7 to 3.2 in urban

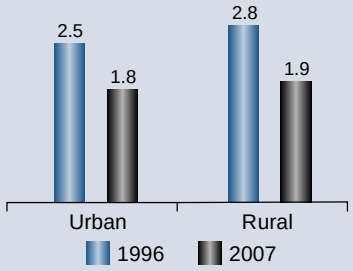
Chart 1.1 Fertility Rates



Fertility rate is defined as the average number of children that would be born to a woman if she were to live to the end of her childbearing age and bear children.

Source: Pakistan Demographic Survey, GoP

Chart 1.2 Natural Growth Rates



Natural growth rate is defined as the difference between number of births and deaths (per thousand population) per year divided by ten.

Source: Pakistan Demographic Survey, GoP

areas and from 5.9 to 4.2 in rural areas. Similarly, the natural growth rate of population, which represents difference between births and deaths, is also higher in rural areas though it declined from 2.8 percent in 1996 to 1.9 in 2007 (Chart 1.2).

Rural- Urban Migration

Despite the fact that natural growth rate of population is higher in rural areas, the urban population growth rate is much higher. What explains the urbanisation phenomenon in Pakistan? One possible explanation is higher migration from rural to urban areas. Table 1.4 shows the quantum and share of migrant population in 2011. There are 6.7 million migrants in urban areas compared to 5 million in rural areas. The share of migrant population is 10.2 percent and 4.7 percent in urban and rural areas, respectively. Province-wise migration patterns show that the highest percentage of migrants live in urban areas of Sindh, and the lowest percentage in rural areas of Balochistan.

Table 1.5 shows the pattern of recent migration during 2011. The migration phenomenon (both in terms of inflow and outflow) appears to be more prominent in Punjab. Moreover, in urban areas of both Punjab and Sindh, inflow is more than outflow indicating a net increase in urban

Table 1.4 Rural and Urban in Migration

	Migrant in Urban Areas		Migrant in Rural Areas	
	Number in Thousands	Share in total Population (%)	Number in Thousands	Share in Total Population (%)
Punjab	3,667	10.1	3,879	6.3
Sindh	2,619	11.4	215	1.1
Khyber Pakhtunkhwa	426	9.2	864	4.5
Balochistan	27	1.1	15	0.2
Pakistan	6,738	10.2	4,972	4.7

Source: SPDC estimate based on Labour Force Survey 2010-11, GoP.

Table 1.5 Pattern of Recent Migrantion* (numbers in thousands)

	Within same province			Outside Province			Total		
	Inflow	Outflow	Net	Inflow	Outflow	Net	Inflow	Outflow	Net
PUNJAB									
Urban	101.2	95.4	5.8	47.4	6.0	41.4	148.6	101.4	47.2
Rural	130.8	136.5	-5.8	24.3	20.4	3.9	155.1	156.9	-1.8
Total	231.9	231.9	0.0	71.7	26.4	45.4	303.7	258.3	45.4
SINDH									
Urban	20.6	9.0	11.6	7.9	2.3	5.7	28.6	11.3	17.3
Rural	3.8	15.4	-11.6	0.4	40.0	-39.6	4.2	55.4	-51.2
Total	24.4	24.4	0.0	8.4	42.3	-33.9	32.8	66.7	-33.9
KHYBER PAKHTUNKHWA									
Urban	25.6	30.7	-5.1	9.2	19.6	-10.4	34.8	50.3	-15.5
Rural	23.0	17.9	5.1	70.4	11.9	58.5	93.4	29.9	63.5
Total	48.6	48.6	0.0	79.6	31.6	48.1	128.2	80.1	48.1
BALOCHISTAN									
Urban	0.2	0.2	0.0	0.1	0.4	-0.3	0.3	0.6	-0.3
Rural	0.3	0.3	0.0	0.0	3.8	-3.8	0.3	4.0	-3.8
Total	0.5	0.5	0.0	0.1	4.2	-4.1	0.6	4.7	-4.1

Source: Estimate based on Labour Force Survey 2010-11, GoP. * Migration within one year

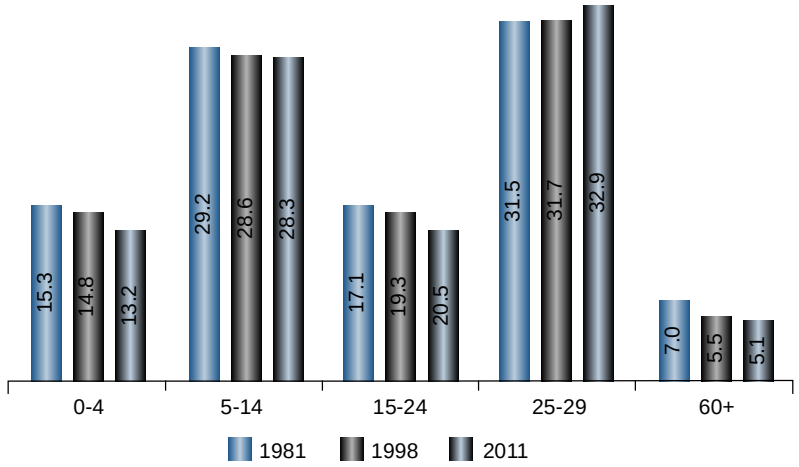
population due to migration. In contrast, the movement of migrants is reverse in the case of Khyber Pakhtunkhwa where net migration is negative in urban and positive in rural areas. Analysis of micro-data (not shown here) indicates that reason for migration to rural areas cited by a majority of people was 'returned home'. This probably relates to the return of internally displaced persons (IDPs) in the backdrop of military operations in some areas of the province.

Age Composition of Population and Youth Bulge

The life cycle consumption model suggests that different age groups in a population have different economic needs. Population less than 5 years of age mainly requires health services while population between 5 to 14 years of age needs both basic education and health services. The youth (15 to 24 years of age) needs higher and technical education services and employment opportunities if they are prepared to join the labour market. Adult population (25 to 59 years of age) needs employment opportunities to generate income and also to save for old age. Finally old age population (age 60 years and above) require greater health services along with retirement income or alternatively, some type of benefits through social safety nets in the case of poverty.

According to economic classification, population between 15 to 59 years of age is generally considered the working age population, while the remaining population cohorts are considered as dependent. The experience of East Asian countries show that increase in share of working age population played a vital role in the economic development of these countries. The youth bulge and an increase in the working age population can be used as an opportunity to convert the demographic transition into a demographic dividend and accelerate the pace of economic growth by providing them skills and employment.

Chart 1.3 Share of Different Age Cohorts in Population (%)



Dependency Ratio	**1981**	**1998**	**2011**
	106	97	87

Dependency ratio is defined as the number of dependents (aged 0-14 and over the age of 65) to the working population (aged 15-64) multiplied by 100.

Source: Estimate based on Labour Force Survey 2010-11, Population Census 1981 and 1998.

This section provides comparative analysis of changes in age structure of overall urban and rural population, to figure out whether Pakistan is passing through demographic transition. Moreover it also looks at whether this demographic transition is an urban or rural phenomenon.

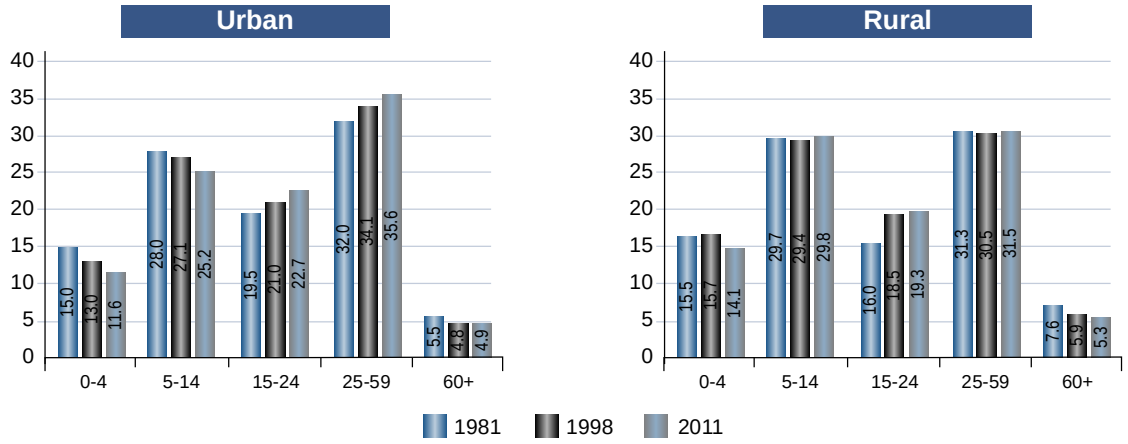
Age composition of population

Chart 1.3 presents the shares of 5 age groups mentioned above. The chart indicates that the share of dependent age groups (0-4, 5-14 and 60+) in total population has gradually declined while the share of working age groups (15-24 and 25-59) has increased. Altogether, the percentage share of dependent population declined from 51.5 to 46.6 during 1981 to 2011 and that of working age population increased from 48.5 to 53.4. Consequently, the dependency ratio (number of dependents per hundred working age persons) has declined from 106 to 87. Evidently, the population now consists of a large working age proportion of people.

While the two working age cohorts have shown an upward trend, a large increase (in percentage terms) is seen in the youth population (15-24 years of age), which has been described as the youth bulge (constituting 20 percent or more of a population). The youth bulge consists of large numbers of adolescents and young adults who were born when fertility was high, followed by declining numbers of children born after fertility declined[3]. A further analysis of data (not presented in the chart) reveals that the proportion of men in the youth population increased more than that of women.

Chart 1.4 shows that composition of the urban population followed the same trend. The aggregate percentage share of dependent groups declined from 48.5 to 41.7 while that of working age groups increased

Chart 1.4 Share of Different Age Cohorts in Urban and Rural Population (%)



Dependency Ratio	1981	1998	2011
Urban	94	81	72
Rural	111	104	97

Source: Estimate based on Labour Force Survey 2010-11, Population Census 1981 and 1998.

from 51.5 to 58.3, which led to the dependency ratio dropping from 94 to 72. It is also important to note that dependency ratio in urban areas was below 100 even in 1981 implying that the number of dependents was less than the working age population. In economic terms, the decline in dependency provides a window of opportunity to increase per capita income through several channels. Firstly, if this working age population is used productively, the number of producers or earners would be higher than the consumers, leading to increase in per capita income even assuming constant productivity of the working age population. Secondly, with increased numbers of earners and decline in consumers, it is likely that income will increase more than consumption and may lead to higher domestic savings. The higher savings will provide more domestic resources for investment and capital formation. This additional capital and investment will, in all likelihood, further increase income. Thirdly, parents with fewer dependent children can afford quality education and health services. Similarly, the government will also need lower resources to provide education and health services to comparatively fewer children; it can thus divert resources to other sectors to foster economic growth. Progress/economic development in urban areas can serve as the growth engine with higher availability of human resources.

Similar trend in dependency is observed in rural areas where it declined from 111 to 97. However, the rate of decline in dependency is significantly higher in urban areas where it dropped by 22 points as compared to a decline of 14 points in rural areas. In rural areas, the decline in the share of age group 0-4 years is marginal while the share of age group 5-14 years has slightly increased. As far as the shares of working age groups in rural areas are concerned, there is significant increase in the case of youth population (from 16 percent in 1981 to 19.3 percent in 2011) while that of age group 25-59 remained almost stagnant.

RURAL-URBAN DIVIDE IN EDUCATION

The experience of developed and developing countries shows that acquisition of knowledge and its effective utilisation is a key driver of economic growth and poverty reduction. With the transformation of the world economy into a knowledge-based economy, it has become evident that human capital is the most important resource of a nation. There are several ways to measure and highlight special differentials in education. The rural-urban gap in the education attainment of the working age population is one of the indicators used to highlight spatial differences in the stock of human capital. Other measures, such as gross and net enrolment rates are flow indicators that are widely used to show the general level of participation in a given level of education.

Rural-Urban Education Gaps in Working Age Population

Over the last two decades, the share of illiterates in the working age population has declined both in urban and rural areas (Table 1.6). Unfortunately, the majority working age population in rural areas is still illiterate, and in urban areas it is either illiterate or has completed only primary education. Though the share of working age population that has completed either secondary or tertiary education grew in both urban and rural areas, it continues to be dismally low. Another important finding is that the share of professionals including doctors, engineers and agriculture professionals declined in urban areas.

In order to further investigate the rural-urban gaps, an indicator 'years of schooling' has been constructed for both rural and urban areas by assigning years of schooling to each category based on a simple mapping (Table 1.7). Two interesting findings being: (1) education attainment rates as measured by years of education improved in both urban and rural sectors during this period; and (2) the rural-urban education gap gradually narrowed over time. In 1991, the average number of years of schooling of the urban worker was 169 percent higher than a typical rural worker (4.34 years compared to 1.61 years), which declined to 95 percent by 2010-11 (6.20 years compared to 3.19 years).

Table 1.6 Education Attainment of Working age population (15 years and above) in Rural and Urban Areas (%)

Level of Education	Urban			Rural			Difference (Urban-Rural)		
	1990-91	1999-00	2010-11	1990-91	1999-00	2010-11	1990-91	1999-00	2010-11
Illiterate	44.1	35.5	28.4	73.3	67.8	53.8	-29.3	-32.3	-25.5
Literate but below Primary	4.7	2.7	2.3	3.8	1.8	3.7	0.9	0.9	-1.4
Primary	25.1	27.2	29.3	16.1	20.3	26.4	8.9	6.9	2.9
Matric	14.9	18.5	19.3	4.8	6.9	9.9	10.1	11.5	9.4
Intermediate	6.0	8.4	10.0	1.3	2.0	3.6	4.6	6.4	6.3
Graduate	3.2	5.1	7.4	0.4	0.7	1.7	2.9	4.4	5.7
Post Graduate and Above	0.9	1.7	2.5	0.1	0.2	0.6	0.8	1.5	1.9
Professional	1.2	0.9	0.7	0.1	0.2	0.2	1.0	0.7	0.6

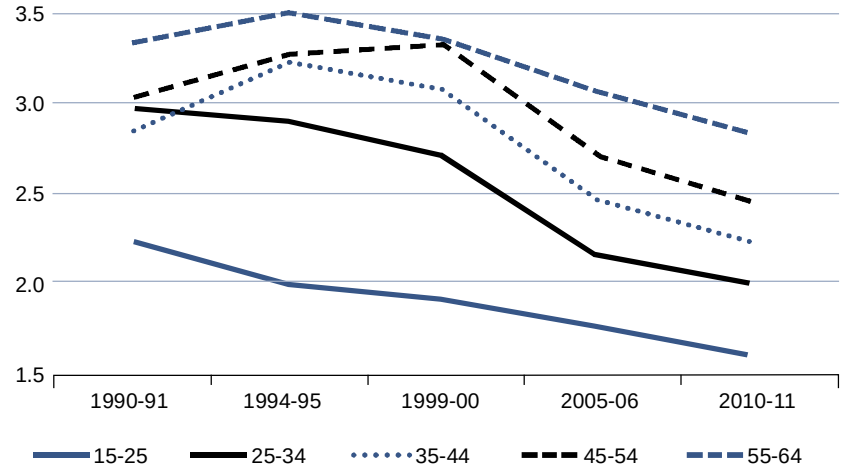
Source: Estimate based on Labour Force Survey, GoP (various issues).

Table 1.7 Years of Schooling of Working age Population in Rural and Urban areas

	Overall	Urban	Rural	Urban-Rural Relative Gap*
1990-91	2.49	4.34	1.61	2.69
1994-95	2.82	4.94	1.89	2.61
1999-00	3.23	5.41	2.15	2.51
2005-06	3.83	5.81	2.72	2.13
2010-11	4.28	6.20	3.19	1.95

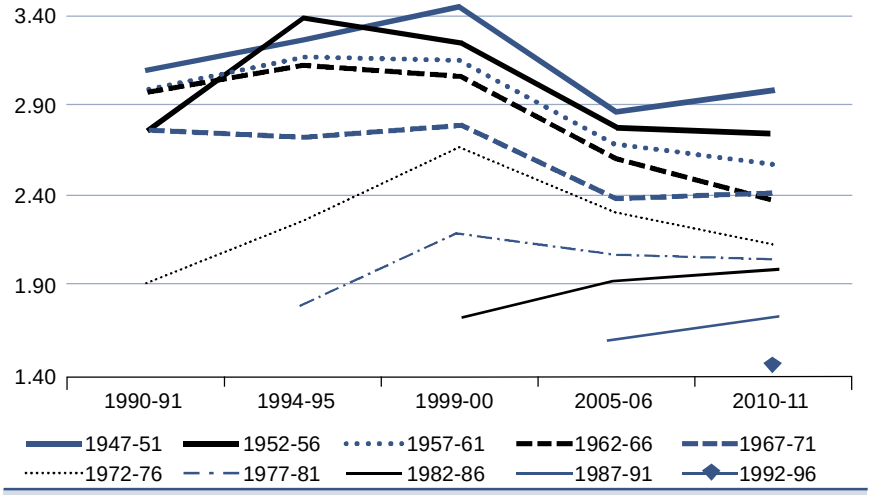
* Urban divide by rural
Note: Mapping scheme for years of schooling: not-literate = 0 years; literate but below primary = 2 years; primary = 5 years; matric = 10 years; intermediate = 12 years; graduate = 14 years; post-graduate = 16 years; and professional education = 16 years.
Source: Estimate based on Labour Force Survey, GoP (various issues).

Chart 1.5 Urban-Rural Education Gaps by Age Groups



Source: Estimate based on Labour Force Survey, GoP (various issues).

Chart 1.6 Urban-Rural Education Gaps by Birth Cohorts



Source: Estimate based on Labour Force Survey, GoP (various issues).

The aggregate numbers, however, do not uncover the underlying heterogeneity in education attainment by cohort, i.e., variation by the age of the respondent. Chart 1.5 shows the relative gap in years of schooling between the typical working age adult population in urban and rural areas by age group. There are two key results to note: (1) the gaps have been getting narrower over time for all age groups, and (2) the gaps are narrower for the younger age groups.

Is the education convergence taking place uniformly across all birth cohorts, or are the changes mainly being driven by ageing effects? For a better understanding of relative education gaps for different birth cohorts, education gaps by birth cohorts have been computed (Chart 1.6). Clearly, almost all of the convergence in education attainments is taking place through cross-cohort improvements, with the younger cohorts showing the smallest gaps. Ageing effects are symmetric across all cohorts, except the very oldest. Most strikingly, the average gap in 2010-11 between urban and rural from the youngest birth cohort has almost disappeared while the corresponding gap for those born between 1947 and 1951 stood at more than 190 percent (urban to rural ratio of 2.9). Clearly, the declining rural-urban gaps are being driven by declining education gaps amongst the younger segment of population.

Rural-Urban Gaps in Enrolment Rates

Similar education gaps between urban and rural areas are also observed in the extent of participation in education as measured by net enrolment rates (NER) at primary, middle and matric levels. As shown in Table 1.8, net enrolment rates at all levels of education remain low in both the urban and rural areas despite some improvement over the decade. The improvement is visible at primary level where aggregate NER increased from 42 percent to 57 percent from 2001-02 to 2011-12. On the other hand, NER at middle and matric levels also marginally increased but still remain at a miserably low level.

Table 1.8 Net Enrolment Rates at various Level of Education *(%)*

	2001-02			2011-12		
	Male	Female	Both	Male	Female	Both
NER Primary	**46**	**38**	**42**	**60**	**54**	**57**
Urban	57	54	56	67	66	67
Rural	43	33	38	58	50	54
NER Middle	**17**	**14**	**16**	**24**	**20**	**22**
Urban	23	29	26	29	30	30
Rural	15	8	12	22	15	19
NER Matric	**10**	**8**	**9**	**13**	**12**	**13**
Urban	15	15	15	17	21	19
Rural	8	5	6	12	8	10

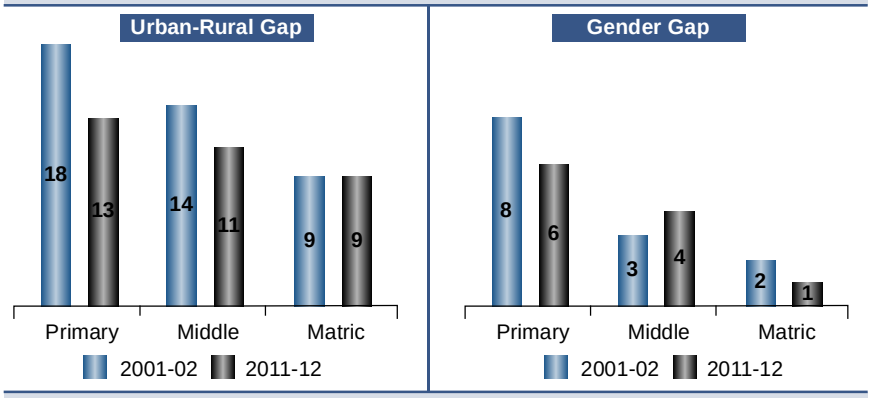
NER Primary: Number of children aged 5 - 9 years attending primary level (classes 1-5) divided by total number of children aged 5 - 9 years multiplied by 100.

NER Middle: Number of children aged 10 - 12 years attending middle level (classes 6-8) divided by total number of children aged 10 - 12 years multiplied by 100.

NER Matric: Number of children aged 13 - 14 years attending matric level (classes 9-10) divided by total number of children aged 13 - 14 years multiplied by 100.

Source: Pakistan Social and Living Standards Measurement Survey (PSLM), GoP.

Chart 1.7 Urban-rural and Gender Gaps in Net Enrollment Rates



Urban-Rural Gap = Urban enrolment rate minus rural enrolment rate
Gender Gap = Male enrolment rate minus female enrolment rate
Source: PSLM

Urban-rural and gender gaps in enrollment levels are also apparent in Chart 1.7. Though urban-rural gaps are reducing over time, they are still sizable ranging from 9 to 13 percentage points at various levels of education. As far as the overall male-female gaps are concerned, they reduced a bit in primary and middle levels but increased slightly at matric level.

STATE OF HEALTH IN RURAL AND URBAN AREAS

Health and nutrition are other important areas that need to be viewed from the rural-urban perspective. There is a general consensus that rural and urban areas have different environment and socio-economic activities, which affects the health of people living in these areas. Despite the changing trend and increasing number of many non-farm activities in rural areas, a large segment of the rural population is still engaged in agricultural activities, which have different health implications. In contrast, the urban population is largely engaged in industrial and service related jobs, which have different implications on their health. Moreover, their health seeking behaviour also varies due to their exposure, awareness, and very importantly the availability of health care service providers.

Rural-urban disparities exist in the access to health services as well as in the health outcome indicators. For example, infant mortality rate, maternal mortality rate, child malnutrition and child immunisation coverage are invariably higher in rural areas. These issues have been discussed in Chapter 5.

Availability of Water and Sanitation

Access to safe water and adequate sanitation is critical not only for health reasons, but also for sustainable economic development. Adequate provision of piped water and proper sanitation are identified as important indicators of socio-economic wellbeing. However, provision of water and adequate sanitation services remain a challenge for the government and contribute substantially to rural-urban disparities.

Chart 1.8 Access to Tap Water

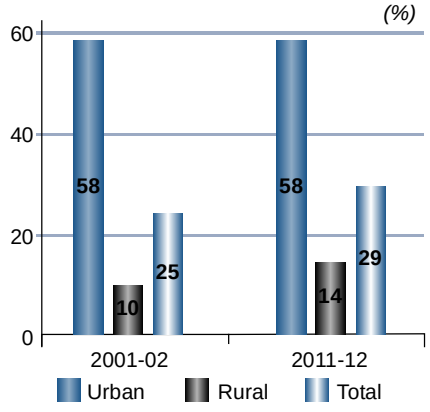
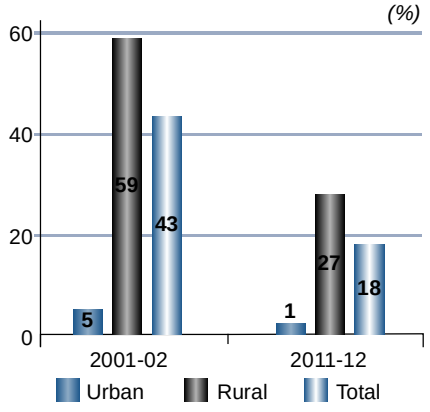


Chart 1.9 Household without Toilet



Source: PSLM

The Pakistan Social and Living Standards Measurement Survey (PSLM), Government of Pakistan, provides information about the sources of drinking water. For our analysis we used access to tap water connection as a proxy for improved potable water services. Chart 1.8 indicates low overall coverage and large gaps in access to tap water among rural and urban households. In 2011-12, only 29 percent of households in Pakistan had access to tap water. Access to tap water in urban areas remained stagnant since 2001-02. In rural areas, though it improved from 10 to 14 percent, it still remains far behind urban coverage of 58 percent.

Access to a sanitation system is another important indicator of health and hygiene. Currently, 33 percent of households in Pakistan do not have access to a sanitation system. Again, there is a huge urban-rural gap since 49 percent of rural households do not have access to sanitation system as compared to 4 percent of urban households. However, there has been improvement in sanitary facilities within households. The proportion of rural households without a toilet has decreased from 59 in 2001-02 to 27 percent in 2011-12.

In summary, despite relatively faster growth in urban population, a large number of Pakistanis live in rural areas (as per official definition of urban and rural areas). In terms of social development rural areas are lagging behind urban areas. Though the gap in many of the social sector indicators is reducing, it continues to be dismally low.

NOTES:

1. Conference on “Urban Definition and Coding Scheme” Daily Times, December 13, 2011
2. Source: The World Bank rural population estimates for 2012
3. See Economic Survey 2009-10 for greater details about decline in fertility rate.

The Rural Economy

2

2 The Rural Economy

The objective of this chapter is to quantify the size of the rural economy of Pakistan and profile its characteristics. This will enable answers perhaps for the first time to the following questions:

- How large is the rural economy of Pakistan in relation to the urban economy?
- How diversified is the rural economy? In particular, what is the share of the off-farm economy?
- Has the rural economy grown faster or slower than the urban economy?
- How large is the per capita income differential between rural and urban areas?
- In which sectors of the rural economy does a particular province have a comparative advantage?
- What is the contribution that remittances make to the rural economy in different parts of the country?

The Chapter is organised as follows. The next section describes the methodology used for the disaggregation exercise. The subsequent sections present the resulting estimates of the size of the rural economy and its growth rate in different periods; give the sectoral distribution of the rural economy in each province; quantify the rural-urban differential; and undertake analysis of the impact of home remittances.

METHODOLOGY

A two stage approach has been adopted for disaggregation. In stage 1 the GDP of Pakistan has been distributed among the four provinces to obtain estimates of the respective Gross Regional Products (GRPs). In stage 2 the GRP of a province has been disaggregated into the rural and urban components.

At each stage allocators have been used to determine shares. In Stage 1 the allocators are as follows:

Output/product Approach: major crops, minor crops, fishing, mining and quarrying, large-scale manufacturing, electricity and gas, transport and communications.

Factor Incomes Approach: small-scale manufacturing, construction, public administration, and defense and community, social and personal services.

Expenditure Approach: slaughtering, forestry, livestock, wholesale and retail trade, finance and insurance, and ownership of dwellings.

Table 2.1 Share of the Rural Economy in each Province and Pakistan 1999-2000 to 2010-11

(Rs in Billion)

	At current prices			At constant prices of 1999-2000		
	GRP	Rural Economy	Share (%)	GRP	Rural Economy	Share (%)
Punjab						
1999-2000	1,976	1,080	54.6	1,976	1,080	54.6
2006-07*	4,531	2,465	54.4	2,892	1,589	54.9
2010-11	9,375	5,054	53.9	3,196	1,699	53.2
Sindh						
1999-2000	1,031	337	32.7	1,031	337	32.7
2006-07*	2,494	795	31.9	1,546	502	32.4
2010-11	5,050	1,813	35.9	1,702	622	36.6
Khyber Pakhtunkhwa						
1999-2000	370	277	74.9	370	277	74.9
2006-07*	841	644	76.6	527	404	76.6
2010-11	1,947	1,475	75.7	666	503	75.5
Balochistan						
1999-2000	185	96	51.9	185	96	51.9
2006-07*	369	210	56.8	227	130	57.5
2010-11	736	362	49.1	252	126	49.8
Pakistan						
1999-2000	3,562	1,791	50.3	3,562	1,791	50.3
2006-07*	8,235	4,114	50	5,192	2,625	50.6
2010-11	17,108	8,703	50.9	5,817	2,951	50.7

*chosen as it is the last full year of the Musharraf Government and, more or less, the middle year of the decade.

Source: Pakistan Economic Survey (various issues), Government of Pakistan

The specific provincial allocators and their sources of data are given along with a statement of the methodology in Appendix A.1.

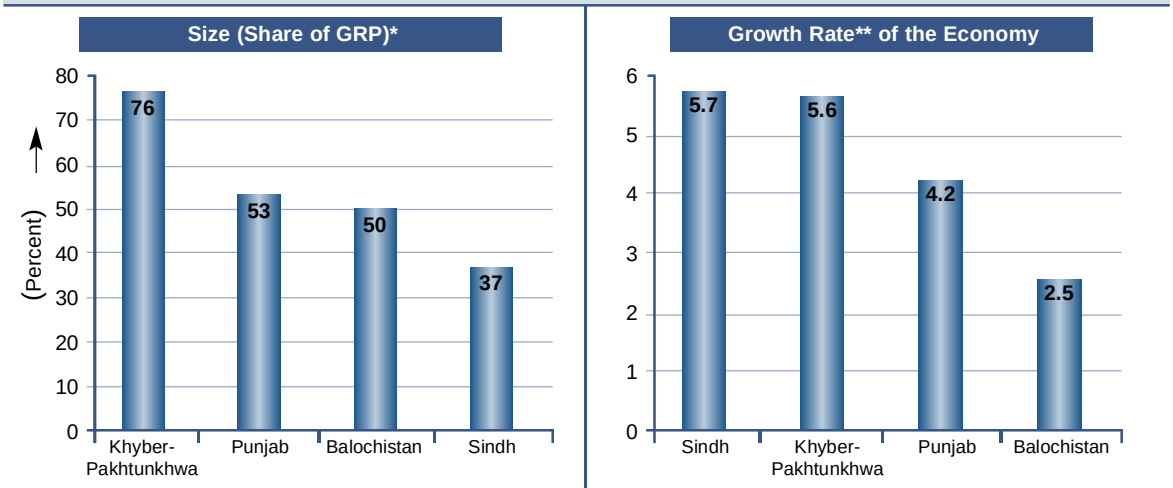
In the second stage, the allocators of sectoral value added in a province have relied largely on the factor incomes approach, with data for different years obtained from the Labour Force Surveys (LFS) and the Household Integrated Economic Surveys (HIES) conducted by Pakistan Bureau of Statistics, Government of Pakistan.

The time series of the value added in the rural and the regional economy by sector, at constant prices of 1999-2000 and at current prices respectively, are also given in Appendix A.1 for each province from 1999-2000 to 2010-11.

SIZE OF THE RURAL ECONOMY

The share of the rural economy in the GRP of each province is given in Table 2.1 and depicted in Chart 2.1. The estimates are presented both at current prices and constant prices of 1999-2000, although the difference in the shares is small.

Chart 2.1 Size and Growth of the Rural Economy by Province



* 1999-2000 | ** 1999-2000 to 2010-11

Source: SPDC estimates.

As of 2010-11, the size of the rural economy of Pakistan was Rs 8.7 trillion. In fact, Pakistan is effectively a 50-50 economy, with half the economy in the rural areas and the other half in the urban areas. This is in comparison to the shares in population of 66 percent and 34 percent respectively.

Rural shares of the regional economies at the Provincial level vary widely. The highest share is in Khyber Pakhtunkhwa of over 75 percent, as the extent of urbanisation in the province is low. This is followed by Punjab where the rural economy accounts for 53 percent of the GRP and Balochistan with share of 50 percent. Sindh, with the highest level of urbanisation, has a relatively small share of the rural economy at 37 percent.

Growth of the Rural Economy

During the last decade, the rural and urban economies of Pakistan have not only been of more or less the same size, but have also shown the same annual growth rate of just above 4.5 percent. This is a surprising regularity and highlights the balanced growth that the country has experienced. Provinces where the rural economy has expanded faster than the urban economy are Sindh and Khyber Pakhtunkhwa. The cities in both provinces have been affected by deterioration in the law and order situation, especially in Karachi in recent years.

The fastest growing rural economy between 1999-2000 and 2010-11 is observed in the provinces of Khyber Pakhtunkhwa and Sindh, with an annual growth rate exceeding 5.5 percent. Our initial hypothesis is that this is due to a buoyant agricultural economy in Sindh. As opposed to this, the dynamism of the rural economy of Khyber Pakhtunkhwa may perhaps be attributed to the multiplier effects of remittances on the non-farm economy in rural areas. We test these hypotheses later on.

Table 2.2 Growth of the Rural Economy by Province *(at constant prices of 1999-2000)*

	Annual Growth Rate, (%)		
	1999-2000 to 2006-07	2006-07 to 2010-11	1999-2000 to 2010-11
Punjab			
GRP	5.6	2.5	4.5
Rural Economy	5.7	1.7	4.2
Urban Economy	5.5	3.5	4.8
Sindh			
GRP	6.0	2.4	4.7
Rural Economy	5.8	5.5	5.7
Urban Economy	6.0	0.9	4.1
Khyber Pakhtunkhwa			
GRP	5.2	6.0	5.5
Rural Economy	5.5	5.6	5.6
Urban Economy	4.1	7.3	5.3
Balochistan			
GRP	2.9	2.7	2.8
Rural Economy	4.5	-0.9	2.5
Urban Economy	1.1	7.1	2.5
Pakistan			
GRP	5.5	2.9	4.6
Rural Economy	5.6	3.0	4.6
Urban Economy	5.4	2.8	4.5

Source: SPDC estimates.

The rural economy of Punjab performed well up to 2006-07, but after that the growth rate plummeted to less than 2 percent. This may be at least partially due to the debacle in the cotton crop which saw a fall of 24 percent in output during this period. The rural economy of Balochistan has actually contracted in the last four years of the decade. This is probably a reflection of the extremely disturbed conditions throughout the province as a result of insurgency.

STRUCTURE OF THE RURAL ECONOMY

The sectoral shares of the rural economy of each province are given in Table 2.3. These shares reveal major differences in the structure of the rural economy among provinces. Contrary perhaps to perceptions, for Pakistan as a whole, the agricultural sector does not dominate the rural economy. It has a share of 38 percent as compared to a share of 41 percent of services. However, in two provinces, viz., Punjab and Sindh, it still has the largest share.

The structure of the Khyber Pakhtunkhwa economy is markedly different, with a relatively small agricultural sector and a substantially larger share of services. This indicates that the rural economy in this province is essentially led by private consumption out of the large home remittances received.

Table 2.3 Sectoral Shares of the Rural Economy by Province *(at constant prices of 1999-2000)*

	As of 2010-11, (%)			
	Agriculture	Industry	Services	Total
Punjab	41.4	18.9	39.7	100.0
Sindh	42.5	21.0	36.5	100.0
Khyber-Pakhtunkhwa	21.5	28.5	50.0	100.0
Balochistan	35.8	28.0	36.2	100.0
Pakistan	38.0	21.3	40.7	100.0

Source: SPDC estimates.

RURAL-URBAN INCOME DIFFERENTIAL

The rural-urban differentials in per capita income (at current prices) are given in Table 2.4 in 2010-11. For the country as a whole, the urban per capita income is 1.9 times the rural equivalent. The province with the biggest differential is Balochistan with the ratio of 3.3, followed by Sindh at 2.0, Punjab at 1.8 and Khyber Pakhtunkhwa at 1.6.

Across provinces, the highest rural per capita income is observed in Sindh at Rs 82,151 per annum, with Punjab at Rs 77,434, Khyber Pakhtunkhwa at Rs 74,827 and Balochistan at Rs 52,342.

For the country as a whole, since the growth rates of the GRPs of the urban and rural areas respectively is almost the same, the faster growth of urban population implies that the rural-urban differential has somewhat narrowed over the last decade. This could imply less rural-urban migration (see Chapter 1).

Table 2.4 Rural-Urban Differential by Province, 2010-11 *(at current prices)*

	Population (million)	GRP (Rs in Billion)	Per Capita Income (Rs '000')	Ratio
Punjab	**96.6**	**9,375**	**97,100**	
Rural	65.3	5,054	77,434	1.783
Urban	31.3	4,321	138,139	
Sindh	**42.2**	**5,050**	**119,724**	
Rural	22.1	1,813	82,151	1.959
Urban	20.1	3,237	160,956	
Khyber-Pakhtunkhwa	**23.8**	**1,947**	**81,9099**	
Rural	19.7	1,475	74,827	1.554
Urban	4.1	472	116,313	
Balochistan	**9.1**	**736**	**81,146**	
Rural	6.9	362	52,342	3.317
Urban	2.2	374	173,640	
Pakistan	**177.1**	**17,107**	**96,595**	
Rural	117.7	8,703	73,942	1.913
Urban	59.4	8,404	141,481	

Source: SPDC estimates.

Table 2.5 Structure of the Farm Economy by Province, 2009-10
Share of Agricultural Value Added (%)

	Punjab	Sindh	Khyber Pakhtunkhwa	Balochistan	Pakistan
Major Crops	37.1*	30.3	17.0	17.9	32.7
Minor Crops	9.2	10.8*	7.8	29.5*	10.5
Livestock	52.1	52.7	72.2*	46.9	53.8
Fishing	0.6	5.2*	0.4	2.6	1.8
Forestry	0.9	1.0	2.5*	3.0*	1.2
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

*Sectors of comparative advantage.
Source: SPDC estimates.

Agriculture

The share of various sub-sectors in the agricultural sector of the rural economy in each province is given in Table 2.5. The analysis has been conducted for 2009-10 in view of the mega floods of 2010-11.

The highest share, 37 percent, is of major crops in Punjab, followed by Sindh at 30 percent. In minor crops, the highest share in agricultural value added is observed in Balochistan at 30 percent (mostly fruits) whereas the livestock sector, with a share of 72 percent, dominates the agricultural economy of Khyber Pakhtunkhwa.

Application of the Location Quotients methodology reveals that within the national economy, Punjab and Sindh have a comparative advantage in major crops, Khyber Pakhtunkhwa in livestock and Balochistan in minor crops. Accordingly, the province wise shares in output of different crops, mostly in rural areas, is given in Table 2.6. The distribution of livestock, according to the Livestock Census of 2006, is given in Table 2.7.

Table 2.6 Province wise Share in Production of Crops - 2009-10*
(Percent)

Crop	Production (000 Tones)	Punjab	Sindh	Khyber Pakhtunkhwa	Balochistan	Pakistan
Wheat	23310	77	16	5	2	100
Rice	6882	54	35	1	10	100
Maize	3261	77	-	23	-	100
All Cereals	**33973**	**72**	**18**	**6**	**4**	**100**
Sugarcane	49372	64	27	9	-	100
Cotton	12913**	67	33	-	-	100
Tobacco	119	20	-	80	-	100
Gram	562	87	5	2	6	100
Onions	1701	17	33	12	38	100
Potatoes	3141	95	-	4	1	100
Other Vegetables	3045	66	8	12	14	100
Citrus Fruit	2150	97	1	2	-	100
Mango	1845	79	21	-	-	100
All Fruits	**6941**	**65**	**15**	**6**	**14**	**100**

*2010-11 not chosen because of floods
**bales
Source: Agricultural Statistics Year Book, PBS.

Table 2.7 Distribution of Livestock by Province

(Percent)

	No ('000)	Punjab	Sindh	Khyber Pakhtunkhwa	Balochistan	Pakistan
Cattle	29,558	49	23	20	8	100
Buffaloes	27,334	65	27	7	1	100
Sheep	26,487	24	15	13	48	100
Goats	53,787	37	23	18	22	100
Camels	921	22	30	7	41	100
Horses	344	47	13	22	18	100
Asses	4,268	52	24	13	11	100
Poultry	73,648	35	19	38	8	100
Milch Cows/Buffaloes	26,793	56	26	13	6	100

Source: Pakistan Livestock Census 2006, PBS.

Industry

The share of rural areas in the industrial sector of each province is given in Table 2.8. Here again, it may come as a surprise that, for the country as a whole, the share of rural areas in industrial activity is as high as 42 percent, with particularly large shares in mining and quarrying (64 percent), construction (65 percent) and small-scale manufacturing (48 percent).

Among provinces, the share of rural industry is the highest in Khyber Pakhtunkhwa at 74 percent, with Balochistan at 50 percent, Punjab at 47 percent and Sindh at 23 percent. The relatively low level of industrialisation in rural Sindh is indicated with the bulk of large-scale manufacturing concentrated in the cities of Karachi and Hyderabad. It appears that this province has more of the characteristics of a 'dual economy'.

It is also interesting to note that as much as 88 percent of the construction activity in Khyber Pakhtunkhwa is in rural areas. This highlights the use of the large home remittances for upgradation of the housing stock.

Table 2.8 Share of Rural Areas in Value Added in Province by Province in Industry 2010-2011

(%)

	Punjab	Sindh	K-PK	Balochistan	Pakistan
Mining and Quarrying	49.0	72.1	97.9	46.4	64.5
Manufacturing	**44.9**	**11.9**	**71.4**	**45.6**	**36.0**
Large Scale	38.6	8.5	71.5	41.2	29.0
Small Scale	50.2	23.0	72.1	52.1	47.8
Slaughtering	59.4	34.0	68.7	51.8	52.9
Construction	64.5	42.0	88.3	53.4	65.3
Electricity and Gas	44.5	18.1	63.3	67.4	41.3
Industry	**47.3**	**23.4**	**73.8**	**50.2**	**42.0**

Source: Pakistan Livestock Census 2006, PBS.

Table 2.9 Share of Manufacturing Establishments in Rural Areas of Pakistan

Industry	Share (%)	Industry	Share (%)
Food, beverages and tobacco	71	Non-Metallic Mineral Products	69
Textiles, Wearing apparel & leather products	48	Basic Metals	25
Wood and Wood Products	49	Fabricated Metal Products, Machinery and Equipment	26
Paper and Paper Products	3		
Chemicals, Rubber and Plastic	20	Handicrafts and others	51

Source: Economic Census, 2005, PBS

The question that might be asked is: what is the composition of rural manufacturing in Pakistan? The Economic Census of 2005 gives the rural-urban distribution of manufacturing establishments. The estimated rural shares are given below in Table 2.9. As expected, the share in agro- and mineral-based products is high. Also, over half the establishments producing handicrafts are in the rural areas.

It needs to be stated, however, that establishments in rural areas are typically smaller in terms of employment or value added products. Also, the rural share may be overstated because of the presence of a large number of industries at the rural – urban periphery outside metropolitan boundaries.

We turn now to the share of different sub-sectors in the value added by the industrial sector in the rural areas of a province. Punjab appears to have a comparative advantage in manufacturing, Sindh in mining (especially gas), Khyber Pakhtunkhwa also in manufacturing (especially tobacco) and Balochistan in mining (gas again) and in electricity and gas (mostly gas distribution).

Table 2.10 Share of Sub-Sectors in the Industrial Sector of the Rural Economy by Province, 2010-11 *(%)*

	Punjab	Sindh	Khyber-Pakhtunkhwa	Balochistan	Pakistan
Mining and Quarrying	2.8	49.3*	2.7	38.9*	14.4
Manufacturing:					
Large Scale	33.3*	21.1	45.4	15.5	32.5
Small Scale	32.6*	9.3	16.3	7.3	22.6
Slaughtering	8.1*	6.1	5.2	6.5	6.9
Construction	16.3*	8.5	20.0*	9.7	15.2
Electricity and Gas	6.9	5.8	10.3*	22.1*	8.3
TOTAL	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

*Comparative Advantage, with LQ>1

Source: SPDC estimates.

Table 2.11 Share of Rural Areas in Value Added in a Province by Service, 2010-11 *(%)*

	Punjab	Sindh	Khyber Pakhtunkhwa	Balochistan	Pakistan
Transport, Storage and Communication	46.4	22.5	77.1	32.6	44.4
Wholesale and Retail Trade	36.3	15.8	69.3	33.0	33.7
Finance and Insurance	20.8	3.6	41.1	13.5	15.8
Ownership of Dwellings	40.4	17.6	74.7	51.5	36.4
Public Administration and Defence	34.6	79.6	55.9	45.2	49.8
Community, Social & Personal Services	42.9	29.3	74.7	45.8	43.8
TOTAL SERVICES	**38.6**	**26.1**	**69.7**	**38.3**	**38.7**

Source: SPDC estimates.

Services

Here again, perhaps contrary to expectations, rural areas have considerable service activity. In some provinces, as highlighted earlier, this is already the largest sector in the rural economy.

We quantify first in Table 2.11 the share of rural areas in the value added in different services within a province. Here again, the relative underdevelopment of rural Sindh and overdevelopment of rural Khyber Pakhtunkhwa is visible. Given the comparatively strong agricultural base of Punjab, the shares of the rural economy of the province are relatively high in wholesale and retail trade, transport and communications. Also, Punjab appears to have a somewhat more extensive rural banking network.

It is perhaps not surprising that almost 75 percent of the rental income (actual and imputed) from ownership of dwellings is contributed in Khyber Pakhtunkhwa by rural areas. This is yet another confirmation of the major role played by remittances in the development of the rural economy of the province.

The Economic Census of 2005 also gives the share of rural establishments in different services in Pakistan. This ranges from a high of 41 percent in wholesale and retail trade to 40 percent in community, social and personal services, 19 percent in transport and communications and 7 percent in finance and insurance.

The contribution of different services to the total value added in the services sector in rural areas is given in Table 2.12. As highlighted, the contribution of agriculture-related services is high in Punjab, while public administration plays a more important role in rural Sindh.

INEQUALITY IN RURAL AREAS

We turn next to indicators of asset and income inequality in rural areas of each province. A basic indicator of inequality in the rural economy is the extent of skewness in the distribution of farm land among private owners. The relevant Gini coefficient of land ownership is given in Table 2.13 over the last two decades, based on the Agricultural Censuses of 1990, 2000 and 2010.

Table 2.12 Share of Different Services in the Services Sector in the Rural Economy by Province, 2010-11 *(Share, %)*

	Punjab	Sindh	Khyber-Pakhtunkhwa	Balochistan	Pakistan
Transport and Communication	23.2*	13.9	25.1	15.1	21.5
Wholesale and Retail Trade	29.7*	20.5	30.5*	30.0*	28.1
Finance and Insurance	4.4*	1.5	3.1	0.9	3.4
Ownership of Dwellings	5.1*	4.1	4.4	6.5*	4.8
Public Administration and Defence	10.9	36.8*	9.1	25.8*	16.0
Community, Social & Personal Services	26.7*	23.2	27.9*	21.7	26.1
TOTAL	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

*Comparative Advantage, with LQ>1
Source: SPDC estimates.

Table 2.13 Gini Coefficients of Farm Land Ownership

	Punjab	Sindh	Khyber Pakhtunkhwa	Balochistan	Pakistan
1990	0.63	0.59	0.57	0.61	0.66
2000	0.63	0.58	0.59	0.63	0.65
2010	0.63	0.55	0.60	0.62	0.75

Source: Agricultural Census (1990, 2000 and 2010)

Table 2.14 Gini Coefficients of Rural Per Capita Income Distribution among Household

	1990	2000	2010
Pakistan	0.357	0.347	0.380
Punjab	0.365	0.373	0.410
Sindh	0.325	0.284	0.281
Khyber-Pakhtunkhwa	0.349	0.300	0.349
Balochistan	0.295	0.287	0.231

Source: HIES, PBS

Here again, the results are perhaps contrary to expectations. Not only is the inequity very pronounced, especially in Balochistan, but it has shown an increasing tendency over the last two decades to move towards greater inequity. It has sometimes been argued that due to inter-generational transfers, there is likely to be greater fragmentation of land holdings over time. But this has not happened due perhaps to the eviction of small farmers from farm land; this is more pronounced in Pakistan than in other South Asian countries like India, Sri Lanka and Bangladesh. Clearly, the time has come to consider another round of land reforms in the country after a gap of almost fifty years.

The pattern of rural income inequality is presented in Table 2.14. There are major differences between skewness in the distribution of land and incomes respectively. Gini coefficients are substantially lower in the case of incomes. This highlights the validity of the 'inverse productivity' hypothesis in Pakistan that farm productivity declines with farm size, and strengthens the case for land reform.

However, though relatively low, rural income inequality has been increasing in Pakistan over the last decade. It has increased, in particular, in Punjab, while it has declined somewhat in Sindh and Balochistan and remained unchanged in Khyber Pakhtunkhwa.

IMPACT OF REMITTANCES

We turn finally to the impact of home remittances, both domestic and foreign, on the rural economy in different parts of the country. Based on the data from the HIES, the regional distribution of remittances is given for the year 2010-11 in Table 2.15.

The dominant share of rural areas is visible at 72 percent in the case of foreign remittances, and 76 percent in domestic remittances. Two provinces, namely Punjab and Khyber Pakhtunkhwa receive the bulk of remittances. As opposed to this, rural Sindh and Balochistan have only a marginal share in remittances.

The consequence of this regional pattern of flow of remittances is that there is an increase of almost 12 percent in the size of the rural economy of Punjab and 21 percent in the case of Khyber Pakhtunkhwa. This leads to a dramatic change in the ranking of rural per capita income among the provinces. Khyber Pakhtunkhwa is now ranked first, next is Punjab, followed by Sindh and Balochistan. Also, the rural-urban income differential is considerably narrowed in the first two provinces.

Table 2.15 Provincial, Urban and Rural, Share in Remittances

	Percentage of Households	Percentage of Foreign Remittances	Percentage of Domestic Remittances
Punjab	**56.6**	**69.3**	**72.1**
Rural	38.3	47.2	54.7
Urban	18.2	22.1	17.4
Sindh	**23.8**	**1.6**	**2.7**
Rural	11.5	0.6	0.8
Urban	12.2	1.0	1.9
Khyber-Pakhtunkhwa	**12.0**	**27.5**	**24.2**
Rural	9.9	23.5	20.8
Urban	2.1	4.0	3.3
Balochistan	**4.6**	**1.6**	**0.5**
Rural	3.6	0.8	0.0
Urban	1.0	0.8	0.5
Pakistan	**100.0**	**100.0**	**100.0**
Rural	65.4	72.1	76.4
Urban	34.6	27.9	23.6

Source: HIES, PBS.

CONCLUSIONS

In conclusion, the primary research undertaken by SPDC has exposed some myths. The rural economy of Pakistan is of the same size as the urban economy and has demonstrated the same growth rate over the last decade. It is also more diversified than has hitherto been thought to be the case, with significant presence also of industrial and service activities. An area of concern is the presence of significant differential in per capita income between rural and urban areas and high inequality among households in rural areas. Remittances play a significant role in raising rural incomes, especially in Punjab and Khyber Pakhtunkhwa.

Employment In Rural Areas

3

3 Employment in Rural Areas

Rural employment in developing countries like Pakistan bears significant importance, primarily on two counts. First, rural areas accommodate over 65 percent of total population of whom the majority are poor; second, employment in rural areas largely comprises small-sized, traditional and survival-type economic activities in both agricultural and non-agricultural sectors. Therefore, rural employment policies besides addressing the needs have to be precise reflecting both local characteristics and future potential. Information about economically active population, pattern of employment and unemployment is fundamental for formulating economic and development policies for rural areas. It not only provides indicators of labour supply and demand but also provides information about the manner and extent to which the available human resources are utilised. Further, this information is crucial for designing government programmes that devise employment creation, human resource development and poverty reduction.

This chapter presents an analysis on the pattern and structure of employment in rural areas of Pakistan. It extracts data from the Labour Force Survey (LFS) that is carried out periodically by the Pakistan Bureau of Statistics (PBS). The analysis covers the period from 1999-00 to 2010-11, which is divided into two sub-periods almost corresponding to the political regimes: 1999-00 to 2006-07 – *the Musharraf period* and 2006-07 to 2010-11 – *the PPP government period*[1].

MAGNITUDE AND TREND OF LABOUR FORCE

The labour force in the chapter is defined as "population comprising of all persons 15 years of age and above who fulfil the requirement for inclusion among employed or unemployed", which is in line with the definition of the labour force recommended by the International Labour Organisation (ILO). In Pakistan, total labour force (LF) aged 15 years and above constitutes 50.8 million in 2010-11 as shown in Chart 3.1. During 1999-00 to 2010-11, the magnitude of the labour force in Pakistan increased from 38.5 million to 50.8 million (an increase of 12.34 million) with an annual average growth of 3.1 percent.

The majority of Pakistan's labour force works in rural areas (Table 3.1). In 2010-11, shares of rural and urban labour force were 68 percent and 32 percent, respectively. However, these shares differ noticeably among the provinces – the highest share of rural LF is observed in Khyber Pakhtunkhwa (83 percent) while the lowest in Sindh (53 percent). Overall, the share of rural LF has slightly declined (from 70 to 68 percent) during the past two decades.

Chart 3.1 Labour Force in Pakistan
(15 years of age and above)

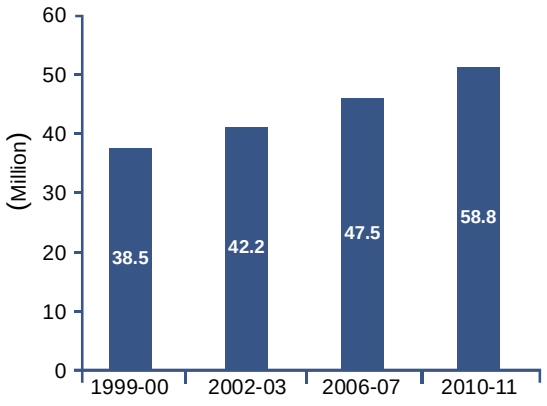
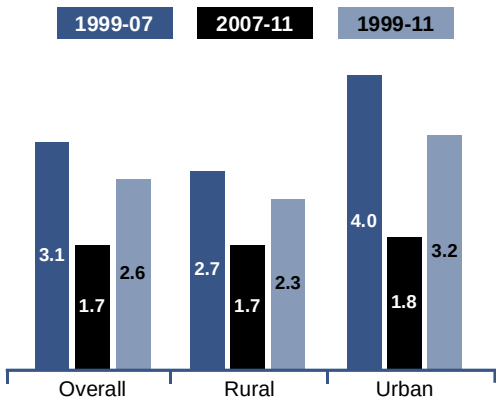


Chart 3.2 Growth in Labour Force
(%)



Source: SPDC estimates based on Labour Force Survey, PBS.

Table 3.1 Labour Force (15 Years of Age & Over) by Area - Pakistan and Provinces
(%)

	Pakistan		Punjab		Sindh		Khyber Pakhtunkhwa		Balochistan	
	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban
1999-00	70.0	30.0	71.5	28.5	54.3	45.7	83.9	16.1	84.4	15.6
2002-03	67.3	32.7	70.2	29.8	49.0	51.0	83.3	16.7	79.8	20.2
2006-07	68.2	31.8	70.9	29.1	51.9	48.1	82.9	17.1	79.4	20.6
2010-11	68.1	31.9	70.7	29.3	52.6	47.4	82.7	17.3	77.0	23.0

Source: SPDC estimates based on Labour Force Survey, PBS.

Chart 3.2 indicates that total labour force grew at an average rate of 3.1 percent per annum during 1999-2007 and 1.6 percent during 2007-11. During the first period, growth in urban labour force remained substantially higher than its rural counterpart (4 percent compared to 2.7 percent) while it remained almost the same in the second period. The growth in labour force also corresponds to the rates GDP growth in the respective periods.

Table 3.2 reports the magnitude of rural labour force and its distribution by province. In 2010-11, 63 percent of the rural labour force belonged to the province of Punjab, 18 percent to Sindh, 14 percent to Khyber Pakhtunkhwa and 4 percent to Balochistan. The trend in the provincial shares indicates that the share of Punjab declined from 67 to 63 percent during 1999-2011 while that of Sindh increased from 15 to 18 percent. The shares of the other two provinces remained almost stagnant.

Table 3.2 Rural Labour Force in Pakistan and Provincial Shares

	1999-00	2002-03	2006-07	2010-11
Rural LF in Pakistan *(Million)*	27	29	29	35
Provincial Shares in Total Rural LF (%)				
Punjab	67	64	64	63
Sindh	15	17	18	18
Khyber Pakhtunkhwa	14	14	14	14
Balochistan	4	5	5	4
Total	**100**	**100**	**100**	**100**

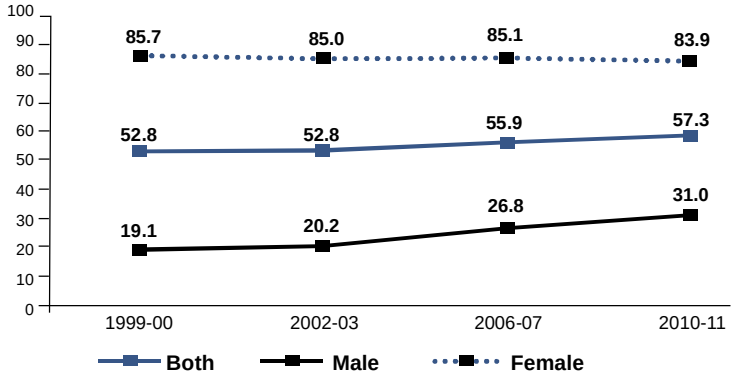
Source: SPDC estimates based on Labour Force Survey, PBS.

LABOUR FORCE PARTICIPATION RATES

Labour Force Participation rate (LFP), which is the ratio of labour force (employed and unemployed) to the working age population, is a basic indicator of the currently active population or labour force supply. Chart 3.3 shows that over 57 percent of the total working age population constitutes the labour force or economically active population in rural areas. Gender-wise picture indicates that LFP rate is 84 percent for males and 31 percent for females. An impressive trend in observed in the female LFP rate, which increased from 19 to 31 percent during 1999 to 2011.

Province-wise LFP rates are presented in Table 3.3. It appears that LFP rate has been highest in Punjab followed by Sindh and Balochistan while it was lowest in Khyber Pakhtunkhwa during 1999-00 to 2006-07. It remained higher than the national average only in Punjab, suggesting

Chart 3.3 Labour Force Participation Rate in Rural Areas of Pakistan by Gender (%)



Source: SPDC estimates based on Labour Force Survey, PBS.

Table 3.3 Labour Force Participation Rate in Rural Areas of Province by Gender *(%)*

	Punjab	Sindh	Khyber Pakhtunkhwa	Balochistan
Overall				
1999-00	55	51	47	47
2002-03	56	50	44	50
2006-07	60	55	44	55
2010-11	60	61	47	53
Male				
1999-00	87	87	82	85
2002-03	86	88	80	86
2006-07	85	89	79	87
2010-11	83	90	78	88
Female				
1999-00	23	12	14	5
2002-03	27	8	10	8
2006-07	35	17	11	18
2010-11	37	28	19	11

Source: SPDC estimates based on Labour Force Survey

that employment opportunities have been greater in the provinces of Punjab followed by Sindh as compared to Khyber Pakhtunkhwa and Balochistan. However, during the period from 2006-07 to 2010-11, significant improvement is witnessed in Sindh and Khyber Pakhtunkhwa, where LFP rate increased by 6 and 3 percentage points respectively. On the other hand, participation rates in Punjab remained stagnant and declined in Balochistan during the same period.

Substantial disparity exists between activity rates for males and females. Currently, the gender gap in LFP rate is the lowest in Punjab followed by Khyber Pakhtunkhwa. However, the gap has reduced over the years since female participation in labour force has increased in all the provinces barring Balochistan where it actually declined from 18 percent in 2006-07 to 11 percent in 2010-11. These results seem to suggest that the difference in participation rates among provinces could be due to the characteristics of respective local labour markets and economic environment while the reasons for lower female rates seem to indicate perhaps societal and cultural norms as well as the availability of fewer job opportunities.

UNEMPLOYMENT RATE

The unemployment rate measures the share of unemployed population in the total labour force, which is estimated to be 4.5 percent in 2010-11. It declined substantially during 2002-03 and 2006-07 (from 6.8 to 4.5 percent) but remained unchanged afterwards. The decline was largely due to downward trend in unemployment rates of females. Variations in unemployment rates are generally a function of both demand characteristics (such as sectoral structure and competitiveness) and supply side factors, and are thus linked to the performance of overall economic growth. For instance, GDP growth in agriculture was much higher during 2003-04 to 2006-07 as compared to the preceding period

Table 3.4 Unemployment Rate in Rural Areas by Province and Gender *(%)*

	Pakistan	Punjab	Sindh	Khyber Pakhtunkhwa	Balochistan
Overall					
1999-00	6.3	6.2	2.1	11.7	5.7
2002-03	6.8	6.3	3.8	12.7	6.2
2006-07	4.5	4.3	2.3	9.2	2.2
2010-11	4.5	4.7	1.9	7.6	2.3
Male					
1999-00	5.0	5.3	1.3	7.9	4.4
2002-03	5.5	5.2	2.6	10.2	4.7
2006-07	3.7	3.8	1.5	7.0	1.1
2010-11	3.8	4.1	1.8	5.6	2.1
Female					
1999-00	12.2	9.5	7.9	31.1	30.5
2002-03	12.4	9.8	17.4	30.6	23.9
2006-07	7.3	5.6	7.4	23.4	9.0
2010-11	6.5	6.1	2.3	14.5	5.4

Source: SPDC estimates based on Labour Force Survey

(1999-00 to 2002-03). This may have contributed to lowering the unemployment rates due to increase in farm as well as non-farm activities.

Province-wise comparison indicates that unemployment rate has always been highest in Khyber Pakhtunkhwa suggesting the availability of fewer employment opportunities in the province to absorb the existing labour force.

According to the standard definition, the 'unemployed' labour force includes all persons fifteen years of age and above who during the reference period were: i) 'Without work', i.e. were not in paid employment or self-employment; ii) 'Currently available for work', i.e. were available for paid employment or self-employment; iii) 'Seeking work', i.e. had taken specific steps in a specified recent period to seek paid employment or self- employment; and iv) 'Not currently available' for the reasons like illness, will take a job within a month, temporarily laid off.

This way of collecting statistics ignores hidden or covered unemployment like the discouraged workers who have given up looking for work. They are not counted among the unemployed even though they are not employed. Moreover, it also does not include persons who are underemployed – a situation where workers are overqualified for their jobs or work fewer hours or part-time even if they would like to work full-time. It is argued that the actual unemployment rate would be higher if these workers are accounted for. In addition, the unpaid family helpers are considered employed and are thus included in the labour force. This in turn lowers unemployment rate and underestimates the true extent of unemployment. The unemployment rate by excluding unpaid family helpers and the extent of underemployment are computed in the subsequent sections.

UNPAID FAMILY CONTRIBUTORS

A significant feature of the labour force in Pakistan, particularly in the rural areas, is the prevalence of unpaid family contributors who work without pay in cash or in kind on an enterprise operated by the member(s) of their households, or by other related persons. This section presents the magnitude of these workers and their incidence in each province as well as the type of economic activities they are engaged with.

The number of unpaid family contributors estimated for 2010-11 in rural Pakistan is 10.4 million, which has increased tremendously during

Table 3.5 Unpaid family contributors (15 years of age and above) in Rural Areas of Pakistan and Provincial Shares

Years	Unpaid LF in Rural Pakistan (Million)	Share (%)				
		Punjab	Sindh	Khyber Pakhtunkhwa	Balochistan	Total
1999-00	6.0	72	15	11	3	100
2002-03	6.8	69	17	11	4	100
2006-07	9.7	65	20	9	6	100
2010-11	10.4	63	24	9	5	100

Source: SPDC estimates based on Labour Force Survey

Table 3.6 Share of Unpaid Family Contributors in Employed Labour Force in Rural Areas by Gender *(percent)*

	Punjab			Sindh			Khyber Pakhtunkhwa			Balochistan		
	Both	Male	Female	Both	Male	Female	Both	Male	Female	Both	Male	Female
1999-00	25	19	53	22	15	88	20	13	69	16	13	87
2002-03	27	18	56	25	21	81	21	17	58	20	17	65
2006-07	32	18	65	34	26	87	22	16	67	36	27	91
2010-11	31	16	64	40	27	92	21	11	63	32	27	90

Source: SPDC estimates based on Labour Force Survey, PBS.

the last two decades (being at 6 million in 1999-00). The increase in the number of unpaid family contributors was higher than the increase in total labour force in rural areas. Consequently, the share of the former in the rural labour force increased from 22 to 30 percent during the same period. Table 3.5 also gives the distribution of these workers among the provinces. Significant variations in the provincial shares are evident. In the case of Punjab, the share of unpaid family contributors has declined over the years while an upward trend is observed in Sindh.

The extent of unpaid family work is more prominent in rural Sindh where it constituted 40 percent of the labour force in 2010-11 (Table 3.6) while shares of the same segment remained at 31, 21 and 32 percent in Punjab, Khyber Pakhtunkhwa and Balochistan, respectively. Moreover, in all the provinces, share of unpaid family contributors has increased since 1999-00.

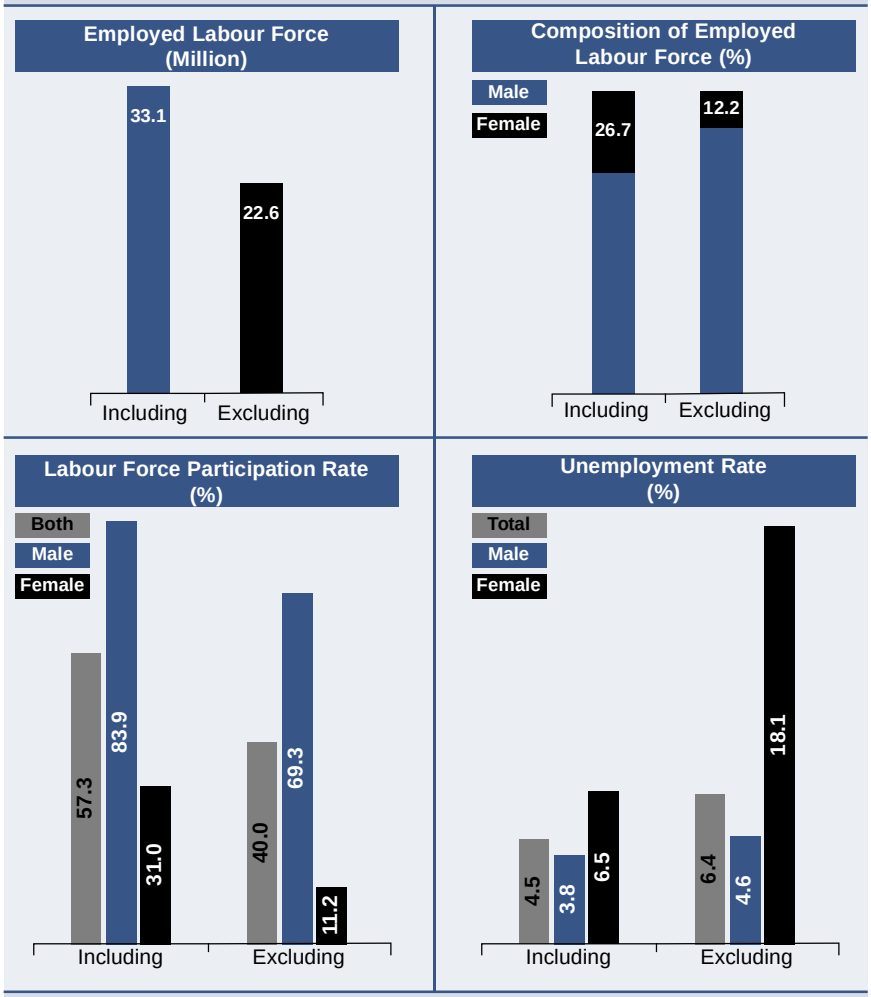
Stark gender differentials in favour of males are also evident, particularly in Sindh and Balochistan where more than 90 percent of employed females were unpaid family helpers (as compared to 27 percent males) in 2010-11. This suggests that the employment constraints of rural areas affect women disproportionately and compound the societal limitations on female participation outside their family. The same shares for females are also above 60 percent in the other two provinces.

The unpaid family contributors, both male and female, usually work in the agriculture sector. Males under this category are also engaged in wholesale/retail trade by working at places like shops, businesses, offices, industry, and restaurants/hotels. They carry out functions such as market oriented skilled (agriculture or fishery) workers, subsistence (agriculture or fishery) workers and personal or protective services workers. Females also work as home based workers particularly in Khyber Pakhtunkhwa and Punjab. They perform functions such as market oriented skilled (agriculture or fishery) workers, or subsistence (agriculture or fishery) workers.

LABOUR FORCE WITHOUT UNPAID FAMILY CONTRIBUTORS

Inclusion of unpaid family contributors in the employed labour force results in exaggerated estimates of various indicators, which do not provide a true picture of the status of labour force and employment. As shown in Table 3.4, the size of employed rural labour force reduces

Chart 3.4 Effect of Unpaid Family Contributors on Labour Force Indicators, 2010-11



Source: SPDC estimates based on Labour Force Survey, PBS.

significantly from 33.1 to 22.6 million with the exclusion of unpaid family contributors. The gender composition of employment also changes drastically as the share of females declines from 26.7 to 12.2 percent. There is also sizable decline in overall LFP rate – from 57 to 40 percent, and it is more prominent in the case of females. Similarly, unemployment rates become high, in general, by excluding unpaid family contributors. Particularly, the increase is massive in the case of females i.e. from 6.5 to 18.1 percent. It is, therefore, evident that commonly used indicators present a distorted picture of the country's labour force.

EXTENT OF UNDER-EMPLOYMENT

Underemployment is another way of disguising unemployment and is a pervasive problem in Pakistan. There are three different forms of underemployment. First, if someone with excellent job qualifications works at a position that requires lesser qualifications; second, if someone

Table 3.7 Persons Working Less than 35 Hours/Week *(Percentage)*

Province	Both	Male	Female
Share of Underemployed in Total Employment (%)			
Pakistan	18	7	11
Punjab	19	6	13
Sindh	13	7	7
Khyber Pakhtunkhwa	23	12	11
Balochistan	5	3	2
Extent of Underemployed (Index)			
Pakistan	33	31	34
Punjab	33	31	33
Sindh	32	27	38
Khyber Pakhtunkhwa	36	36	37
Balochistan	26	27	24

Source: SPDC estimates based on Labour Force Survey, 2010-11, PBS.

prefers to have full time work but settles only for part time work; third, if there is overstaffing where employees are not fully utilised. The presence of persistent underemployment in a country does not clearly represent its profile of employment and unemployment. This is due to the reason that unemployment does not include part-time workers looking for full-time jobs as they are considered employed. Also, it does not incorporate workers who are underpaid as compared to their qualifications. Underemployment does not allow people to work at their full potential and leads to dissatisfaction with job or employer. Similarly, overstaffing requires paying people who are unproductive; this practice eventually brings a decline in national income.

According to LFS, underemployment comprises all employed persons who work less than 35 hours (a specified cut-off) per week, and are available for alternative or additional work during the reference period. As shown in Table 3.7, about 18 percent of the total employed persons in Pakistan are underemployed since they work less than 35 hours per week. Of these, 6.5 percent are males and 11 percent are females. Among the provinces, the highest proportion of underemployed is observed in Khyber Pakhtunkhwa followed by Punjab.

In order to explore the severity of underemployment, a weighted index was constructed (Table 3.7). The value of this index ranges from zero to 100 where zero means no underemployment and 100 means complete underemployment. According to the estimated index, if the number of hours that all underemployed persons have worked is adjusted to 35 hours per person, 33 percent of them would become unemployed. Gender differentials also exist but they are not sizable except for Sindh where the value of index for males and females is 27 and 38, respectively.

CHARACTERISTICS OF EMPLOYED LABOUR FORCE

Sectoral distribution of employment in rural areas excluding the unpaid family contributors is presented in Table 3.8. The agriculture sector, constituting 45 percent of the employment in 2010-11, is the largest

Table 3.8 Employed Rural Labour Force by Section

Years	Total	Agriculture	Industry	Services
Share – Excluding unpaid family contributors (%)				
1999-00	100	57	16	27
2002-03	100	48	20	32
2006-07	100	44	23	33
2010-11	100	45	23	32
ACGR – Including unpaid family contributors (%)				
1999-2011	2.3	1.5	4.7	2.7
ACGR – Excluding unpaid family contributors (%)				
1999-2011	1.3	-0.7	4.7	2.7

Source: SPDC estimates based on Labour Force Survey, PBS.

segment of economic activity and employment. It includes crop farming, livestock and their products, fish farming and forestry. Besides this, the non-agriculture economic activities also play a significant role in income and employment generation in rural areas. Among them, the share of services and industry is 32 percent and 23 percent, respectively. The industrial sector includes mining, manufacturing, construction and electricity and gas while the services sector includes wholesale and retail trade, transportation/storage and communication, financing/insurance/ real estate, and community/social services.

The employment pattern in rural areas across Pakistan has undergone substantial change during 1999-11, the sectoral shift being the most obvious. There has been a decline in the relative share of the agriculture sector, while industrial and services sectors have emerged as essential areas of income generation for rural households.

Table 3.8 also gives the growth in employment for the three sectors with and without unpaid family contributors. During 1999-2011, the employed labour in Pakistan grew at the rate of 2.3 percent per annum. However, by excluding unpaid family contributors, the growth reduces to 1.3 percent only. The reduction is due to negative growth in agriculture sector employment. On the other hand, growth in the labour force of industry and services sectors remained 4.7 and 2.7 percent per annum, respectively.

Table 3.9 shows the composition of employed labour force in rural areas according to the status of employment. According to the estimates for 2010-11, the largest proportion of labour force (27 percent) is employed in the category of ‘own account worker’ followed by own cultivators and regular paid employees. A significant segment of labour force (16 percent) also works as casual paid employees. As compared to 1999-00, there appears to be a shift from own cultivation to paid employment. The share of ‘own cultivation’ has declined considerably while the employment share of ‘own account worker’ and paid employees has increased.

Employment of females is more concentrated in the category of ‘own account worker’, which constituted 45 percent of the female employed labour force in 2010-11. Noticeably, as compared to 1999-00, the share of this category has substantially increased while that of ‘paid work by piece rate’ and ‘casual paid employee’ declined.

Table 3.9 Employed Rural Labour Force by Status of Employment *(percent)*

	Both		Male		Female	
Employment Status	1999-00	2010-11	1999-00	2010-11	1999-00	2010-11
Regular paid employee (fixed wage)	16	18	16	19	9	13
Casual paid employee	12	16	12	17	16	9
Paid worker by piece rate	10	9	7	7	36	26
Employer	0	1	0	1	0	0
Own account worker	23	27	23	24	30	45
Owner cultivator	27	19	29	21	7	6
Share cropper	10	8	10	9	1	1
Contract cultivator	2	2	3	2	1	0.2
Other	1	1	1	0.4	0.1	1
Total	100	100	100	100	100	100

Source: SPDC estimates based on Labour Force Survey, PBS

Table 3.10 Employed Rural Labour Force by Level of Education *(percent)*

	Both		Male		Female	
Employment Level	1999-00	2010-11	1999-00	2010-11	1999-00	2010-11
Illiterate	61	46	59	42	87	71
Below Primary	3	5	3	5	1	3
Primary	23	30	25	32	5	12
Matric	8	11	9	12	5	6
Intermediate	3	4	3	4	2	3
Graduate	1	3	2	3	1	2
Post Graduate	1	1	1	1	0.1	2.2
Professional	0.3	0.3	0.3	0.3	0.2	0.2
Total	100	100	100	100	100	100

Source: SPDC estimates based on Labour Force Survey, PBS

Regarding the level of education, Table 3.10 shows that the share of literate population in the employed labour force has increased over time in rural areas but 46 percent of them were still illiterate in 2010-11. Illiteracy is much higher among females (71 percent) as compared to males (59 percent). The proportion of employed labour force with primary and matric level education has increased over time. The proportion of graduate, post graduate and professional levels is very low. In short, the trends in the education levels of labour force correspond to the general state of education and literacy in Pakistan.

GENDER SEGREGATION OF LABOUR FORCE

Table 3.11 presents gender distribution of the labour force for three major sectors, i.e. agriculture, industry and services. It is evident that women are more concentrated in agriculture with a share of 38 percent. Over the years, the share of women's employment has shown an upward trend in all the sectors but the increase is more prominent in agriculture. Rapid change in the gender composition of the labour force in agriculture indicates relatively more segregation of tasks in this sector, which is manifested in the nature of economic activities in rural areas.

Table 3.11 Sectoral Employment by Gender Share *(percent)*

	Punjab			Sindh			Khyber Pakhtunkhwa		
	Both	Male	Female	Both	Male	Female	Both	Male	Female
1999-00	100	78	22	100	94	7	100	94	6
2002-03	100	76	24	100	88	12	100	93	7
2006-07	100	67	33	100	87	13	100	92	8
2010-11	100	62	38	100	87	13	100	92	8

Source: SPDC estimates based on Labour Force Survey, PBS.

In Punjab and Sindh, economic activities in rural areas can be divided into four groups namely: only-agriculture, agriculture-cum-livestock (mixed), only-livestock and off-farm activities (employed/self employed). Among these groups, 60 percent of the rural economy is based on mixed agriculture and livestock group. In Punjab, only-agriculture and only-livestock groups constitute 13 percent and 7 percent respectively while the off-farm groups constitute 20 percent. In Sindh, 32 percent are associated with only-agriculture and the remaining work as labour (UNDP, 2007-08).

Since livestock is well integrated into the family economy and it efficiently utilises family labour, women's engagement with this sector has been growing over time (nearly 60 percent). Women take care of the animals and are involved in almost all aspects of animal health, maintenance, rearing and production. In crop farming (agriculture), women are mostly involved in agricultural support activities like weeding, grass cutting, cotton picking, stick collection and separation of seeds from fibre, and other related tasks. Moreover, women's involvement is gradually increasing in such activities that were previously carried out by men, for instance, land preparation and work in crop production. In contrast, men dominate in the work that involves use of machinery, supervision and management.

SEASONAL EMPLOYMENT

Employment in the crop sector varies due to seasonality in crop pattern i.e. it fluctuates in accordance with the crop sowing and harvesting periods. As a result many workers are seasonal, casual or temporary. They get employment during the sowing and harvesting periods and often migrate during the off-season to other avenues of employment such as construction and other similar occupations. However, some agriculture workers are employed on permanent basis.

Table 3.12 shows quarterly variation in employment-to-population ratio in the agriculture sector. Overall, the ratio is highest in Q2 (34.9 percent) and the lowest in Q4 (31.9 percent). The trend in this ratio varies among the provinces. In Punjab and Khyber Pakhtunkhwa, it is highest in Q2 while in Sindh and Balochistan it is highest in Q1. Comparing the highest and lowest shares, the maximum difference of 10 percentage points is found in Sindh indicating greater incidence of seasonality. In contrast, incidence of seasonality is lower in the provinces of Khyber Pakhtunkhwa and Balochistan.

Table 3.12 Employment in Agriculture Sector to Population Ratio (aged 15+ years) in Rural Areas *(percent)*

Quarter	Punjab	Sindh	Khyber Pakhtunkhwa	Balochistan	Pakistan
			Both		
1st Quarter	32.3	48.4	18.1	34.2	32.8
2nd Quarter	36.0	46.1	19.4	32.5	34.9
3rd Quarter	32.5	42.9	18.1	32.8	31.9
4th Quarter	33.8	38.3	18.1	33.1	31.9

*Double underline indicates highest rate while single underline indicates lowest rate.
Difference is highest rate minus lowest rate.

Source: SPDC estimates based on Labour Force Survey, PBS

The trend in these shares is largely reflective of the crop pattern in each of the provinces. In Pakistan, there are two major crop seasons namely the *Kharif* and *Rabi*. For the Kharif, the sowing season is April to June and harvesting season is October to December. For the Rabi, sowing season is October to December and harvesting season is April to May. Major Kharif crops include rice, sugarcane, cotton and maize; and major Rabi crops include wheat, lentils, tobacco, and barley. Though sowing and harvesting of major crops mainly occur in Q2 and Q4, they differ among provinces as shown in Chart 3.5.

Since Punjab produces all major crops with a leading share in production, the employment to population ratio in agriculture is roughly the same in each quarter except for Q2. In this quarter, the employment share is relatively high as this is also a season of cotton picking and rice

Chart 3.5 Sowing and Harvesting period of Major Crops

Crop	Province	1st Quarter			2nd Quarter			3rd Quarter			4th Quarter			Production Share (%)
		Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	
Wheat	Punjab													76.7
	Sindh													14.9
	Khyber Pakhtunkhwa													5
	Balochistan													3.4
Rice	Punjab													55.6
	Sindh													33.8
	Khyber Pakhtunkhwa													2
	Balochistan													8.6
Sugarcane	Punjab													64.9
	Sindh													26.4
	Khyber Pakhtunkhwa													8.7
Cotton	Punjab													75.5
	Sindh													23.8

Sowing | Harvesting | Sowing and Havesting

threshing and husking – the activities that engage more workers particularly females. In addition, Punjab produces over 78 percent of the total mango and guava production, and 96 percent of citrus (summer and winter season fruits respectively), which is another reason for lower fluctuations in employment share. In Sindh, harvesting of crops largely takes place in Q1 and Q2. Moreover, the production of dates holds a significant position in Sindh. The activities related to dates harvest start in July and last till the end of August. As a result, employment share in Sindh is high in these two quarters. Khyber Pakhtunkhwa and Balochistan largely produce fruits and vegetables, which are planted and harvested round the year. Further, in these provinces, livestock constitutes a major part of agriculture where employment does not change seasonally.

EMPLOYMENT IN INFORMAL SECTOR

The informal employment refers to economic activities that are partially or fully outside government regulation and taxation. It consists of jobs that commonly require little capital and few skills to set up a business. Many of these jobs can be home-based since they are labour-intensive and small-scale.

Table 3.13 portrays composition of employment in rural areas of Pakistan for the period 1999-00 to 2010-11. The employment is divided into three categories. Agriculture includes both types of employment i.e. formal and informal. Aggregate employment in industry and services is divided into formal and informal sectors. The agriculture sector is obviously the major employer in rural areas though its share in total rural employment has declined from 65 percent in 1999-00 to 60 percent in 2010-11. The informal sector (non-agriculture) appears to have sizable employment with a share of 31 percent in total rural employment. Further, its relative size has enlarged as compared to the estimates for the year 1999-00. Within the non-agriculture sector, the formal sector consists of about one-fourth of the employment in 2010-11 whereas its share was one-third in 1999-00.

The composition of rural informal employment with regard to various economic activities is presented in Table 3.14. There appears to be strong gender segregation of work in the informal labour market. In many economic activities, females are almost non-existent while the same is true for males in some other activities. For example, employment of males is concentrated in retail trade, construction, and transport. These three categories constitute 65 percent of the employed males. On the other hand, 83 percent of the females are employed in textile and leather industries, personal & household services, retail trade and education. Retail trade is the only activity that has a sizable proportion of both sexes.

Generally, the work force is attracted to informal economic activities as they can increase their take-home earnings or reduce their costs by evading taxation. At the same time, informal employment can provide support to workers who do not find a job in the formal sector. Further, it also serves as a macroeconomic cushion for formal sector employment

Table 3.13 Employment in Informal Sector excluding Agriculture Sector *(Percent)*

Years	Agriculture	Industry and Services	
		Formal	Information
1999-00	65	11	23
2002-03	59	12	29
2006-07	58	11	30
2010-11	60	10	31

Source: SPDC estimates based on Labour Force Survey, PBS

Table 3.14 Composition of Employment in the Rural Informal Sector by Industry Division *(Percent)*

	Male	Female
Retail trade	27	10
Construction	25	0
Transport and storage	13	0
Manufacture of food products and beverages	3	0
Sale, maintenance and repair of motor vehicles	3	0
Wholesale trade and commission trade	3	0
Restaurants and hotels	3	0
Textile, wearing apparel and leather industries	*4*	*54*
Personal and household services	*2*	*12*
Education	*0*	*7*
Social and related community services	4	2
Other manufacturing industries and handicrafts	2	6
Other	11	10
Total	100	100

Source: SPDC estimates based on Labour Force Survey, PBS

Table 3.15 Employment Elasticity with respect to GDP by Economic Sector

Period	Agriculture	Formal	Informal	Total
1999-00 to 2006-07	0.48	0.63	1.01	0.57
2006-07 to 2010-11	0.68	-0.43	1.25	0.41
1999-00 to 2010-11	0.66	0.40	1.04	0.54

Source: SPDC estimates based on Labour Force Survey, PBS

during low growth periods when employment in the formal sector tends to shrink. In order to examine the employment effect of economic growth, employment elasticity with respect to GDP is computed for each sector. Employment elasticity measures the percentage change in employment induced by percentage change in GDP. Hence, it attempts to capture the responsiveness of the labour market to changes in macroeconomic conditions (represented by GDP growth).

Table 3.15 reports the employment elasticities computed for agriculture, formal and informal sectors for the period 1999-00 to 2010-11 as well as for two sub-periods 1999-00 to 2006-07 and 2006-07 to 2010-11. Considering the entire period, the elasticity of employment is highest in the informal sector followed by the agriculture sector while being lowest in the formal sector. The magnitude and sign of elasticity indicates that a one percent increase in informal sector output (GDP) leads to more than

one percent increase in informal employment, whereas a one percent increase in agriculture output results in an increase of 0.7 percent in agriculture sector employment. However, one percent increase in formal sector output brings less than 0.5 percent increase in formal employment. It further shows that compared to 1999-00 to 2006-07, employment elasticity in agriculture and informal sector increased during 2006-07 to 2010-11. In contrast, elasticity for the formal sector remained negative during the latter period. This indicates that the increase in growth did not translate into formal employment growth during 2006-07 to 2010-11. It can be implied that informal employment functioned as a cushion by absorbing workers displaced from formal employment during 2006-07 to 2010-11 when macroeconomic performance of the country was slowing down.

There exists an intuitive notion that growth in employment has significant impact on poverty reduction. However, if growth in employment is greater or equal to growth in per capita income then the resulting increase in employment only redistributes poverty. This means that additional persons are engaged to produce the same unit of output. On the other hand, if growth in employment is less than growth in per capita income it helps reducing poverty, i.e. additional persons produce additional units of output.

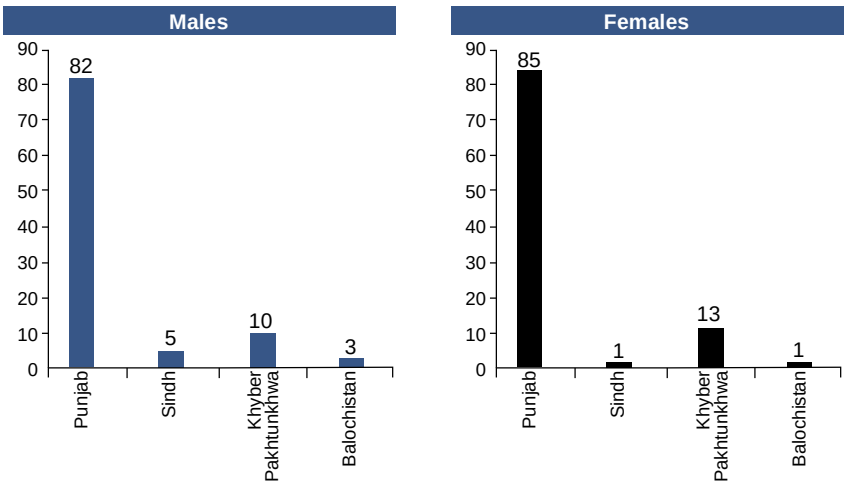
Table 3.16 provides average growth rates of per capita income and employment for two sub-periods during 1999-00 to 2010-11. It shows that growth in employment remained higher than growth in per capita income in agriculture and informal sectors during both the sub-periods. This indicates that employment creation in these sectors did not contribute in reducing poverty. The situation worsened during the PPP regime (2006-07 to 2010-11) when the difference in growth increased for both the sectors. On the other hand, growth in per capita income in the formal sector remained nearly equal to growth in employment during 1999-00 to 2006-07, whereas during 2006-07 to 2010-11, growth in employment remained negative and that of income positive. This implies that the economic condition of only those working in the formal sector improved. But, as noted earlier, this segment constituted only 10 percent of the employed labour force.

Table 3.16 Average Annual Growth in per Capita Income and Employment

Period	Agriculture	Per Capita Income (%)	
		Formal	Information
1999-00 to 2006-07	0.74	5.00	2.48
2006-07 to 2010-11	-0.40	1.26	0.79
1999-00 to 2010-11	0.33	3.64	1.86
Employment (%)			
1999-00 to 2006-07	1.58	5.07	4.86
2006-07 to 2010-11	2.19	-1.06	3.35
1999-00 to 2010-11	1.81	2.84	4.31
Difference in Growth (employment – per capita income) (%age points)			
1999-00 to 2006-07	0.84	0.07	2.38
2006-07 to 2010-11	2.59	-2.32	2.56
1999-00 to 2010-11	1.48	-0.8	2.45

Source: SPDC estimates based on Labour Force Survey, PBS

Chart 3.6 Home-based Workers by Province in Rural Areas 2010-11 *(percent)*



Source: SPDC estimates based on Labour Force Survey, PBS.

HOME-BASED WORKERS

Home-based work constitutes a category of work within the informal or unorganised sector performed within homes or in the surrounding areas. In home-based work, the activity must lead to remuneration therefore it does not include the unpaid housework done as a family responsibility. Moreover, since it is an activity undertaken at a worker's home it also does not include paid domestic work (like washing, cleaning, child care, etc.) performed at an employer's premises.

According to the LFS, over 2.1 million persons aged 15 years and above were working as home-based workers in Pakistan in 2010-11. Of this, 74 percent belonged to rural areas and 26 percent to urban areas. Gender-wise, 68 percent of home-based workers in rural areas and 70 percent in urban areas were women. It is interesting to note that more than 80 percent of the home-based workers in rural areas, both male and female, belong to the province of Punjab (Chart 3.6). Only one percent of female home-based workers were from the rural areas of Sindh and Balochistan each in 2010-11.

Among males, home-based work in rural areas of Pakistan largely lies in the category of own account worker (72.6 percent) followed by owner cultivator (10.2 percent) as depicted in Table 3.17. The situation however differs in provinces. For example, except Sindh, the majority of home-based workers in other provinces were own account workers. In Sindh, an equal proportion of home-based workers perform activities as own account worker and owner cultivator. Moreover, compared to other provinces, in Punjab a notable proportion of home-based workers also work as paid workers by piece rate. On the other hand, females in rural areas of Pakistan perform home-based activities primarily as own account workers (77.6 percent) followed by paid work at piece rate (16.7 percent). The situation is similar in all the provinces.

Table 3.17 Home-based Workers (age 15+ years) by Employment Status in Rural Areas - 2010-11

(%)

	Pakistan	Punjab	Sindh	Khyber Pakhtunkhwa	Balochistan
Regular paid employee with fixed wage	2.7	2.1	10.5	4.6	0.0
Casual paid employee	3.0	2.9	0.0	4.7	2.5
Paid worker by piece rate	8.9	10.5	2.5	2.0	0.0
Employer	0.6	0.2	1.0	3.5	0.0
Own account worker	72.6	74.5	41.2	73.0	68.5
Owner cultivator	10.2	7.9	41.4	11.1	23.3
Share cropper	0.9	0.7	3.4	1.0	3.2
Others	1.03	1.2	0.0	0.0	2.5
Total	100	100.0	100.0	100.0	100.0
Female					
Regular paid employee with fixed wage	1.5	1.5	4.7	0.8	0.0
Paid worker by piece rate	16.7	18.5	5.4	5.2	4.8
Own account worker	77.6	75.6	89.9	89.8	95.2
Owner cultivator	2.3	2.1	0.0	3.5	0.0
Others	1.9	2.2	0.0	0.6	0.0
Total	100.0	100.0	100.0	100.0	100.0

Source: SPDC estimates based on Labour Force Survey, PBS

Table 3.18 Home-based Workers (age 15+ years) by Industry in Rural Areas 2010-11

(%)

	Pakistan	Punjab	Sindh	Khyber Pakhtunkhwa	Balochistan
Agriculture, hunting and forestry	56.0	59.2	62.2	25.0	60.9
Manufacturing	21.4	21.5	2.0	28.1	30.0
Food products and beverages	2.4	2.4	0.0	3.9	0.0
Textiles	1.8	1.9	0.0	2.4	0.0
Wearing apparel and dyeing	6.9	6.6	0.0	14.8	0.0
Wood, products of wood/cork	3.8	3.4	0.0	4.1	20.6
Non-metallic mineral products	1.6	1.5	2.0	3.0	0.0
Furniture	4.9	5.7	0.0	0.0	9.4
Construction	3.3	1.6	3.5	17.6	0.0
Retail trade, except motor vehicles/ motorcycles	6.7	5.8	10.3	13.0	2.5
Health and social work	2.0	1.8	0.0	4.8	0.0
Others	10.6	10.0	22.0	11.5	6.5
Total	100.0	100.0	100.0	100.0	100.0
Female					
Agriculture, hunting and forestry	45.8	49.1	3.5	35.2	3.8
Manufacturing	46.9	43.4	91.8	62.1	96.3
Textiles	7.2	7.3	51.2	0.9	14.7
Wearing apparel and dyeing	36.1	32.3	21.3	58.0	41.8
Wood, products of wood/cork	1.7	1.1	19.3	2.8	27.4
Furniture	1.9	2.1	0.0	0.0	4.7
Education	1.7	1.8	4.7	0.9	0.0
Other	5.6	6.3	0.0	2.2	7.5
Total	100.0	100.0	100.0	100.0	100.0

Source: SPDC estimates based on Labour Force Survey, PBS

In rural areas, home-based workers are primarily engaged in activities related to agriculture and manufacturing (Table 3.18). Of the total male home-based workers in rural areas of Pakistan, 56 percent were associated with agriculture sector in occupations like subsistence agriculture and fishery workers. The other 21.4 percent were linked with the manufacturing sector as craft related workers. Since Punjab dominates in locating the home-based workers, it reflects the overall picture of rural areas of Pakistan. In other provinces, the situation is somewhat different. In Sindh a small proportion of males was associated with manufacturing activities and over 10 percent were also associated with retail trade. In Khyber Pakhtunkhwa the proportion of males engaged in agricultural activities was far below than that in other provinces. Instead, they were also engaged in construction and retail trade. In Khyber Pakhtunkhwa, a relatively greater proportion of males work in activities related to manufacture of wearing apparel and dyeing while in Balochistan comparatively greater proportion of males are involved in manufacture of furniture, and other wood and cork products. Other activities among males represent wholesale trade, tanning and dressing of leather, manufacture of luggage, manufacture of machinery and equipment, land transport, and various business activities.

Among females, of the total home based workers in rural areas of Pakistan over 45 percent perform activities related to both agriculture and manufacturing each. A similar picture is revealed in the province of Punjab. The activities carried out by female home-based workers in other provinces are rather different. For example, over 90 percent of females undertake manufacturing activities linked to textiles, wearing apparel, wood and products of wood/cork as craft and related trade workers in Sindh and Balochistan. In Khyber Pakhtunkhwa over 60 percent of females carry out activities related to manufacturing, particularly wearing apparel as home-based workers. Other activities of females include tanning and dressing of leather; manufacture of food products, beverages, luggage, handicrafts, rubber and plastics products, paper and paper products, non-metallic mineral products and activities related to health and social work.

CONCLUSION AND POLICY RECOMMENDATIONS

The analysis of rural employment indicates that rural economies are generally mixed where rural populations earn their living from interdependent agricultural and non-agricultural activities. Rural labour markets are largely comprised of unskilled labour with little formal education or training. The majority of the rural population (both males and females) derive their earnings from agriculture which is subject to risks of weather and price volatility that tend to affect the overall demand for labour. These fluctuations in labour demand and labour productivity throughout the agricultural cycle cause seasonal migration and seasonal employment patterns, persistent underemployment, prevalence of casual over permanent employment. A significant quantum of people also works as unpaid labour, particularly among females. In the non-agriculture

sector, people largely work in the informal sector and are usually less educated. Consequently, they are less paid than those employed in the formal sector. At the same time they are confronted with unpaid work, underemployment and seasonal employment that tend to create huge fluctuations in employment, particularly among females.

The provision of decent and productive employment in rural areas is a challenge due to prevailing deficiencies including low pay, poor-quality jobs that are unrecognised and provide inadequate social protection. The following initiatives of public-private partnership can play an instrumental role not only in generating employment opportunities but also in accelerating economic growth.

- The role of the livestock sector in the rural economy has increased significantly over time. The share of livestock in agriculture has increased from 45 percent in 1999-00 to 55 percent in 2012-13. In this connection, livestock development with reference to dairy products can serve not only in enhancing milk production and its export but also employment in rural areas. Dairy companies can expand their network of milk purchasing centres at the village level. Since these companies have full-time agronomists, veterinary doctors and agricultural engineers, public-private partnership initiatives can be set up in providing technical training related to breeding, feeding, preventive health of animals and marketing of products as well as veterinary expertise by collaborating with local NGOs. In particular, women, who are a crucial part of the livestock sector, and who work largely as unpaid labour, can be given these trainings in order to bring them into the paid labour force, which leads to enhancement in their productivity.
- Although there are differences in the types of technologies and infrastructure used, there exists diversity among sectors in generating employment. While the manufacturing sector has a tendency to generate employment at a higher rate, the services sector has a lower capability for employment creation. The agricultural sector tends to have extremely low rates of employment generation, except for low-productivity subsistence agriculture. Therefore, rural employment policies need to support labour-intensive manufacturing sector by emphasising small-scale and cottage industries as they require capital on a much smaller scale and use less sophisticated technologies. It is equally necessary to encourage self-employment or home-economic activities. The analysis shows that in Pakistan, home-based work largely prevails in Punjab; there is a need to promote it in other provinces as well.

  Improving a business environment for such enterprises is fundamental for sustainable employment in rural areas. Centres for vocational training and entrepreneurship skills can be developed to provide services such as credit, skill training, marketing, managerial advice and technical assistance in areas like stitching, embroidery, handicrafts, food processing and so on.

- The rural employment guarantee scheme is another initiative to create demand-driven employment opportunities in rural areas. This scheme can be aimed at offering employment to capable persons per rural household per year on public works programme for a period of at least three months (particularly during off-seasons) at the prevailing minimum unskilled wage rate. Activities that can be covered under this scheme may include unskilled work like water conservation, provision of irrigation systems, flood control, construction of roads, manual earthmoving, shifting soil, and breaking rocks. This scheme can be implemented by district level government in collaboration with local non-government organisations and community based organisations. Such an initiative can help in boosting the rural economy and enhancing overall economic growth as well as deterring the rural poor from migrating to already crowded urban areas in search of employment. At the same time it may also provide opportunities to females to enter the labour force by ensuring them a minimum amount of paid work. Such a programme therefore contributes not only in reducing poverty but also assists in addressing infrastructural, environmental and social deficiencies within rural communities.

NOTES:

1. General Musharraf took over in 1999 and declared himself the Chief Executive of the country. He became President in 2001. General elections were held in 2002 when his allied party formed the government. In March 2008, Pakistan People's Party (PPP) formed the government after general elections. Subsequently, General Musharraf resigned in August 2008.

The State of Education in Rural Pakistan

4

4 The State of Education in Rural Pakistan

The Constitution of Pakistan has placed the responsibility for basic education on the State. This obligation is reflected in the principles of policy in Article 37, which declares: "The State shall: (a) Promote, with special care, the educational and economic interests of backward classes or areas. (b) Remove illiteracy and provide free and compulsory secondary education within minimum possible period." Although Article 37 (b) exclusively dealt with removal of illiteracy and provision of free and compulsory secondary education it did not prescribe a time period rather the provision mentioned is 'within minimum possible period'.

The 18th Amendment in the Constitution of Pakistan has abolished the "concurrent list" and gives much more provincial autonomy in education, health and several other sectors. Section 9 of the Constitution (Eighteenth Amendment) Act inserted a new Article 25a in the Constitution, with effect from April 19, 2010. It says: "Right to education — The State shall provide free and compulsory education to all children of the age of 5-16 years in such manner as may be determined by law". Through this amendment in the Constitution, education has become an enforceable right. The caveat however, remains that compulsory education to all children shall be provided, 'as may be determined by law'. Unfortunately there is no law on the subject at the moment. The subordinate legislation has to be enacted by the respective provincial legislatures. So far, none of the members of the Provincial Assembly in Pakistan have endeavored to table the necessary legislation.

Despite these caveats and anomalies in the Constitution, various governments have, over the years, formulated an assortment of policies and plans to fulfill the constitutional commitment of providing education to the people and removing inequalities. Success has been limited, though, with the result that the current state of education in Pakistan is deplorable. Education in Pakistan has suffered from myriad issues, as reflected by various educational indicators including low levels of public spending, high levels of dropout from the schooling system and more importantly, acute gender, provincial and regional inequalities.

There is consensus among development economists that equitable access and learning is vital for sustained development. Education inequality in various dimensions results in asymmetrical growth that may relegate the already marginalised population and groups to unending poverty.. One of the important dimensions of inequality is the urban-rural divide. It is estimated that a rural child is 32 percent less likely to go to school than an urban child. The relative disadvantage of the rural areas compared to the urban becomes more discriminating at the secondary level and above. Thus to highlight the major characteristics of schooling in rural Pakistan, this chapter presents a situation analysis through indicators of access, equality and quality of education. A cohort-wise analysis is carried out to look at the prevailing situation across provinces.

Box 4.1 Why Education in Rural Areas Matters

There is no dispute that education is critical to economic and social development. The importance of education in improving individual lives in the rural context has also been argued from various perspectives. From a narrow perspective of agricultural improvements, basic education improves farmer productivity, while from a somewhat broader perspective of rural development, it facilitates off-farm employment and the economic development of rural areas.

According to a World Bank research in 18 low-income countries on the relationship between primary education and annual farm output, it was concluded that "if a farmer had completed four years of elementary education, his productivity was, on the average, 8.7 percent higher than that of a farmer with no education. The report also indicates that "in cases where complementary inputs were available, the annual output of a farmer who had completed four years of primary schooling was 13.2 percent higher, on the average, than that of a farmer who had not been to school". The study also shows that "education is much more likely to have a positive effect in more progressive, modernizing agricultural environments rather than in traditional ones" (Lockheed, Jamison, and Lau, 1980).

Other studies carried out in Korea, Malaysia, and Thailand indicate that the effects of education on the physical output of farmers are "positive, statistically significant, and quantitatively important" (Jamison and Lau, 1982). A meta-analysis of 14 empirical studies found a reasonably clear pattern of a positive relationship between schooling and agricultural productivity (Moock, 1994). Thus, the direct effect of basic education on agricultural productivity is well documented.

Non-farm sources of income are also important for the rural poor because of the highly seasonal nature of agricultural employment, water shortage and droughts. Moreover, expansion of off-farm job opportunities is necessary to prevent overcrowding on the land and make possible higher levels of productivity and per capita income.

Studies on returns to investments in education usually come from urban labour market surveys, so there is little information on how education affects rural incomes. However, a World Bank study in Kenya that calculated rates of return to rural and urban education showed that the impact of education is greater on off-farm income than on farm income (Lanjouw, 1999). Lanjouw looked at the heterogeneity of off-farm labour. He found that the probability of employment of salaried workers in rural areas rises as education levels rise, though the same is not true for casual non-farm wage employment. Self-employment is most likely for those with some basic education but lower for those who are illiterate. In addition, the many youth and adults who migrate to urban areas are much more likely to find productive employment if they have attended school and learned basic skills.

Finally, basic education may also help to protect the environment. Rural families with better educated parents and hence fewer children reduce demographic pressure on natural resources and the environment. Educated people can assimilate more information and employ means to protect the environment and better manage resources (World Bank, 2000).

STATUS OF SCHOOL ENROLMENT

Access to education is generally gauged with reference to the gross and net enrolment rates, based on the relevant age group. Traditionally in Pakistan, enrolment rates are calculated on the basis of age group 5-9 years and 10-14 years for primary and secondary levels of education respectively[1]. Therefore, following the tradition, these age groups are preferred for documentation of the educational status of rural children in terms of out-of-schooling, enrolment in public, private or religious institutions, Access and equality indicators are derived from Pakistan Social and Living Standard Measurement (PSLM) surveys, while the available physical facilities in rural primary and secondary schools are ascertained from Pakistan Education Statistics.

Table 4.1 Educational Status of Rural Children of 5-9 Age Group [Column Percentage - 2010-11]

	Pakistan	Punjab	Sindh	Khyber Pakhtunkhwa	Balochistan
Out of School	36.3	28.4	49.9	35.9	55.9
Enrolled in Public Schools	47.8	48.1	46.6	49.9	43.4
Enrolled in Private Schools	15.3	22.7	2.7	13.8	0.5
Enrolled in Religious Schools	0.4	0.6	0.2	0.3	0.1
Enrolled in Schools Run by NGOs	0.3	0.2	0.5	0.1	0.1

Source: SPDC estimates based on household level data of Pakistan Social and Living Standards Measurement Survey (PSLM) 2010-11.

Access to Rural Education

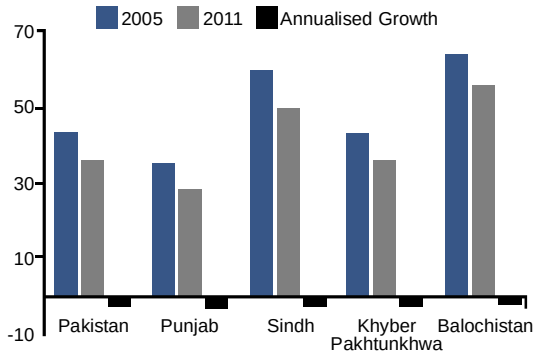
Table 4.1 displays the educational status of rural children for the 5-9 age group. Overall, about 36 percent (approximately 10 million) children of the primary age group were out of school in the year 2011. The lowest incidence (28.4 percent, approximately 4 million) of out-of-school children is observed in the Punjab province. As expected, a relatively dismal picture is evident with reference to out-of-school children in rural Balochistan and in rural Sindh where about half the rural children of primary age were not attending school.

The private school phenomenon also does not exist significantly in rural Sindh and Balochistan. Overall, about 15 percent (approximately 4 million) rural children were enrolled in private institutions according to the estimates from household survey (PSLM, 2011). The highest (23 percent) prevalence of private school enrolment is observed in Punjab, followed by 14 percent in Khyber Pakhtunkhwa province. Moreover, the table indicates that less than 1 percent (approximately 200,000) rural children in the 5-9 age group were enrolled in religious schools or schools run by non-governmental organisations during the survey year of 2011. The incidence of religious school enrolment is however relatively more pronounced in rural Punjab and Khyber Pakhtunkhwa provinces.

The trend in the incidence of out of schooling at primary level is highlighted in Chart 4.1. Overall, about 8 percentage point decline is observed in the incidence of out of school children. Highest drop in the incidence of out-of-school children (and thus highest improvement in enrolment) is evident in Punjab with 3.3 percent annualised reduction. The improvement in enrolment is more or less the same in the rural areas of Sindh and Khyber Pakhtunkhwa provinces, while about 9 percentage point decline (2.2 percent annual decline) in the incidence of out of school children is observed in rural Balochistan.

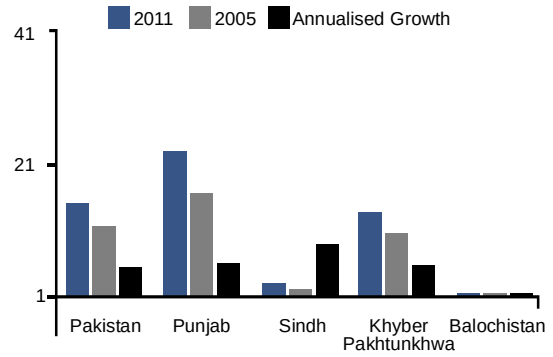
The phenomenon of private schooling is an increasingly important factor in education in Pakistan, particularly at the primary level. Contrary to popular belief, private schools are no longer an urban elite phenomenon. They are not only prevalent in rural areas but also are affordable to middle and even low income groups. While the rural-urban gap is enormous and still remains, the growth trends showed a marked improvement in rural private schooling.

Chart 4.1 Trend in the Incidence of Out of Schooling [Percentage of 5-9 Age Cohort]



	Pakistan	Punjab	Sindh	Khyber Pakhtunkhwa	Balochistan
2005	43.6	35.4	60.0	43.4	64.5
2011	36.3	28.4	49.9	35.9	55.9
Annualised Growth	-2.8	-3.3	-2.8	-2.9	-2.2

Chart 4.2 Trend in Enrollment in Private Schools [Percentage of 5-9 Age Cohort]



	Pakistan	Punjab	Sindh	Khyber Pakhtunkhwa	Balochistan
2011	15.3	22.7	2.7	13.8	0.5
2005	11.5	16.7	1.8	10.2	0.5
Annualised Growth	5.5	6.0	8.9	5.9	1.0

Source: SPDC estimates based on household level data of PSLM (2010-11 and 2004-05)

Chart 4.2 presents the evidence of growth of enrolment during the period 2005-2011 in rural private schools across provinces. Instead of the official statistics regarding enrolment, these results are derived from district representative household surveys (PSLMs) and thus provide factual information in terms of demand for private schooling at primary level. The magnitudes clearly distinguish rural Punjab and Khyber Pakhtunkhwa provinces with respect to the incidence of enrolment in private schools. Incidentally, an annual growth rate of 6 percent in the share of private school enrolment is observed in both provinces during the period 2005-2011. Although the incidence of private school enrolment is minimal in Sindh province, the highest (about 9 percent) annual growth is evident from the chart.

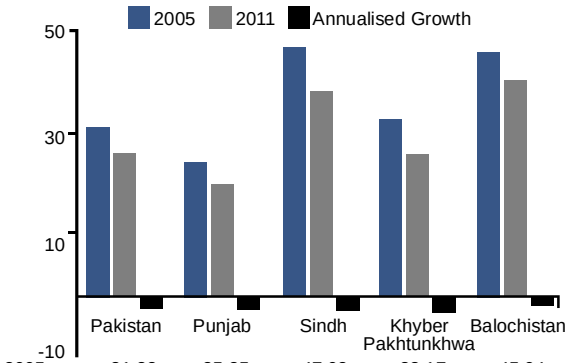
Table 4.2 documents the educational status of rural children in the 10-14 age group. Overall, about 27 percent (approximately 6 million) rural children of the 10-14 age cohort were not attending school during 2011. The provincial trends are more or less similar to the trends in primary schooling. Punjab and Khyber Pakhtunkhwa provinces have a clear edge over rural Sindh and Balochistan in terms of out-of-schooling and enrolment in private institutions.

Table 4.2 Status of Rural Children of 10-14 Age Cohort [Column Percentage - 2010-11]

	Pakistan	Punjab	Sindh	Khyber Pakhtunkhwa	Balochistan
Out of School	26.8	21.2	38.6	26.7	40.6
Enrolled in Public Schools	52.0	51.6	48.6	58.3	47.3
Enrolled in Private Schools	12.1	17.0	2.3	11.2	0.7
Enrolled in Religious Schools	1.0	1.4	0.3	0.8	0.4
Enrolled in Schools Run by NGOs	0.3	0.2	0.9	0.2	0.1
In Employed Labour Force	7.8	8.6	9.3	2.8	10.9

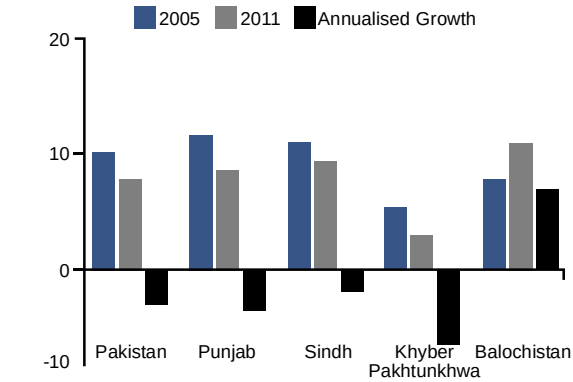
Source: SPDC stimated based on household level data of PSLM 2010-11

Chart 4.3 Trend in Out of Schooling [Percentage of 10-14 Age Cohort]



	Pakistan	Punjab	Sindh	Khyber Pakhtunkhwa	Balochistan
2005	31.82	25.35	47.02	33.17	45.94
2011	26.76	21.17	38.56	26.66	40.61
Annualised Growth	-2.65	-2.75	-3.00	-3.27	-1.93

Chart 4.4 Inter-temporal Change in Employed Labour Force [Percentage of 10-14 Age Cohort]



	Pakistan	Punjab	Sindh	Khyber Pakhtunkhwa	Balochistan
2005	31.82	25.35	47.02	33.17	45.94
2011	26.76	21.17	38.56	26.66	40.61
Annualised Growth	-2.65	-2.75	-3.00	-3.27	-1.93

Source: SPDC estimates based on household level data of PSLM (2010-11 and 2004-05)

An important aspect in the 10-14 age group, especially in the rural areas, is the participation of children in the labour market. About 8 percent (approximately 1.8 million) children of this age group were working in the labour force. Barring Khyber Pakhtunkhwa province, the percentage of child labour is 9 to 11 percent across other provinces.

The provincial trend in out-of-schooling for the secondary age group is portrayed in Chart 4.3. Overall, the ratio of out-of-school children decreased from 32 percent in 2005 to 27 percent in 20011. The least annual improvement was reflected in secondary school enrolment in Balochistan.

Chart 4.4 displays the trend in child labour during the period 2005-2011. It is encouraging that barring Balochistan, a declining trend is observed in the percentages of child labour in the 10-14 age cohort. Surprisingly, the trend is more distinct in Khyber Pakhtunkhwa province with a declining rate of 8 percent per annum. Conversely, the province of Balochistan shows about 7 percent growth in child labour during the period.

Gender Disparities in Education

The target of MDG goal 3a is to eliminate gender disparity in primary and secondary education, preferably by 2005, and in all levels of education no later than 2015. The Government policy also declares that "*The State shall provide free and compulsory education to all children of the age of five to sixteen years in such manner as may be determined by law*" (GoP, 2009). However, in the context of rural Pakistan, it seems less likely to achieve the target unless concerted efforts are made. This section briefly describes gender differences in rural Pakistan with reference to enrolment, private schooling and child labour.

According to Chart 4.5 which highlights the gender dimension of out-of-school incidence of primary age children, the gender disparity in terms

of enrolment is quite high in rural Balochistan where about 70 percent girls in the 5-9 age group were not attending school in the year 2011 as against 45 percent boys. Interestingly, the magnitude of gender difference in enrolment is almost identical in both rural Sindh and Khyber Pakhtunkhwa provinces. The lowest difference, as expected, is observed in rural Punjab. The pertinent information with respect to 10-14 age cohort is displayed in Chart 4.6. It is evident from the chart that except for Punjab province the magnitude of disparity between education of girls and boys is enormously high as compared with the 5-9 age group.

Studies on the private school phenomenon show that private schools are mainly co-educational with a majority of female teachers, and have a high percentage of girls' enrolment. Charts 4.7 and 4.8 respectively display gender disparities in private school enrolment for the 5-9 and 10-14 age cohorts. The gender disparity in the primary age cohort is relatively low, as compared to the secondary age group. According to Chart 4.8, gender disparities are significantly high in all provinces, except Punjab.

A summary index "Gender Parity Index (GPI)" is commonly used to assess gender differences. It is the value of an indicator for girls divided by that for boys. A value of less than one indicates differences in favor of boys, whereas a value near one indicates that parity has been more or less achieved. Chart 4.9 and Chart 4.10 are developed to document the prevalence and inter-temporal changes in gender disparities in school enrolment during the period 2005-2011 for the children in primary and secondary age groups respectively.

As expected, the highest gender disparity is observed in Balochistan province for school enrolment in the 5-9 age cohort with GPI magnitude of 0.46. Barring Balochistan, all provinces show a moderate positive change of about 4 to 6 basis points in GPI during the period of primary schooling. However, the value of the index in Balochistan has dropped up to 5 basis points which reveals increasing gender disparity in the province. Similarly, gender equality in secondary school enrolment is worsening in Sindh and Balochistan during the period 2005-2011. In contrast, a slight improvement in GPI is evident in Punjab and Khyber Pakhtunkhwa provinces from the Chart 4.10.

Availability of Physical Facilities in Rural Schools

Despite the growing concern about the quality of education, its crystallised definition is somewhat difficult to gauge (GoP, 2003), largely due to a wide array of stakeholders and consumers along with the complexities of the teaching-learning process, which needs to be continuously unfolded. Most people view quality of education as the learning outcomes of students, which is the primary concern of all stakeholders. However, quality education output cannot be expected without quality inputs.

According to a report, prepared for the Ministry of Education, Government of Pakistan in collaboration with UNESCO (GoP, 2003), a general picture of inputs in rural schools can be portrayed as under:

Chart 4.5 Out of School incidence - 2010-11 [Percentage of 5-9 Age Cohort]

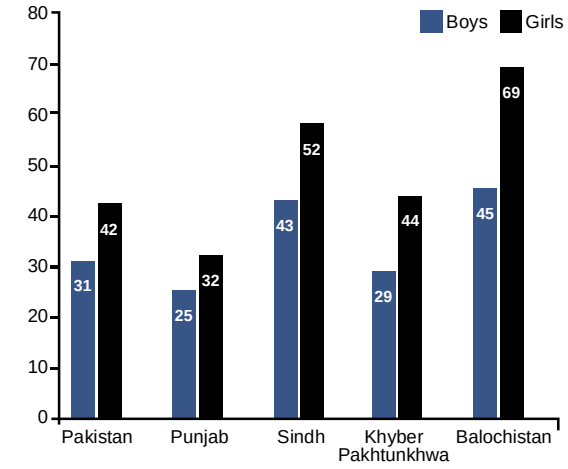


Chart 4.6 Out of School Incidence - 2010-11 [Percentage of 10-14 Age Cohort]

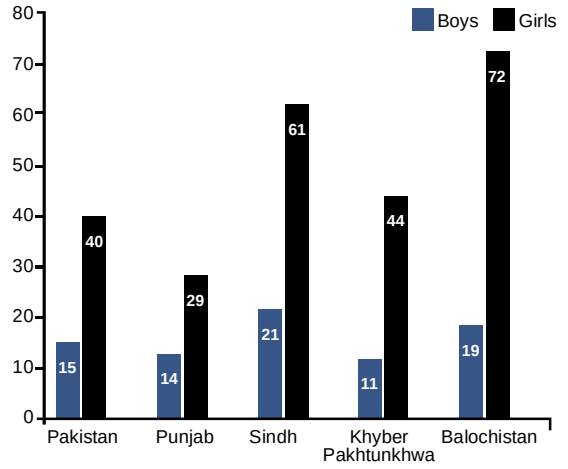


Chart 4.7 Enrollment in Private School - 2010-11 [Percentage of 5-9 Age Cohort]

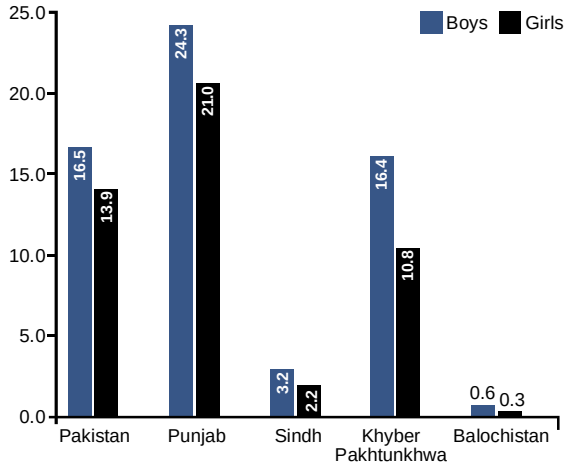


Chart 4.8 Enrollment in Private School - 2010-11 [Percentage of 10-14 Age Cohort]

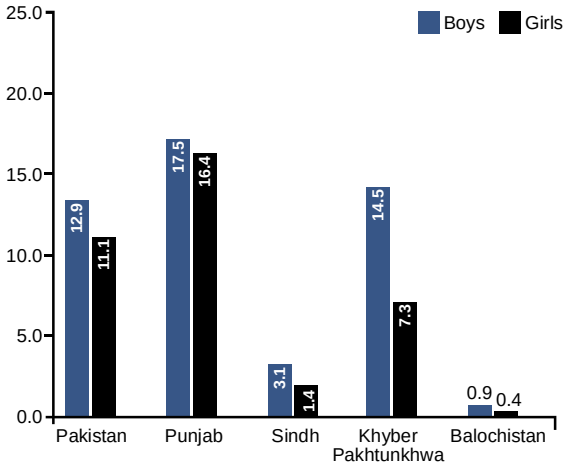


Chart 4.9 Gender Parity Index in Rural Primary Enrollment [5-9 Age Cohort]

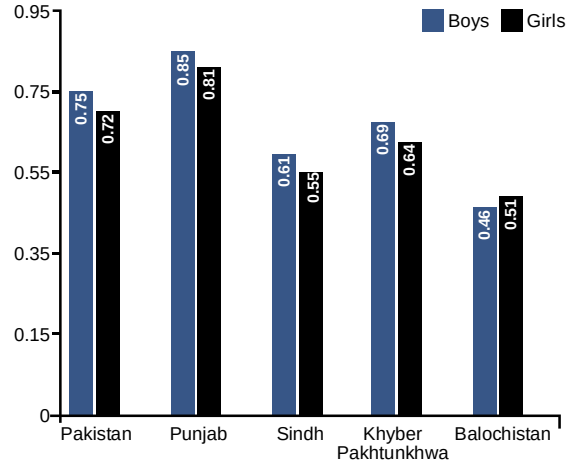
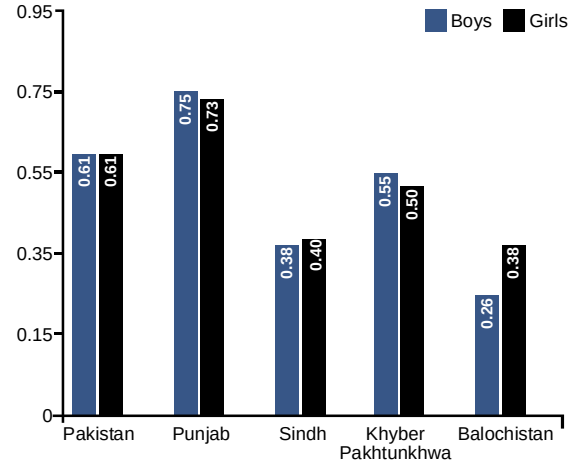


Chart 4.10 Gender Parity Index in Rural Secondary Enrollment [10-14 Age Cohort]



Source: SPDC estimates based on household level data of PSLM (2010-11 and 2004-05)

- Facilities in primary schools are very poor.
- Nearly 1/6th of the primary schools are shelter-less.
- The schools with buildings have insufficient accommodation - 2 rooms and a veranda.
- Students mostly sit on mats/tat.
- Per school average number of teachers is 2.35.
- In mosque schools the average number of teachers is 1.3 per school.
- Textbooks for teachers: Never provided.
- Teaching Kit: Supplied in mid seventies. Never updated or repaired.
- Copy of curriculum: Never provided.
- Resource Materials: Never provided.
- Community support at the lowest

Due to data constraints in terms of various indicators of quality inputs, this section only describes the available physical facilities in rural schools, which is the most important pillar of quality input to education. These statistics are collated from the Pakistan Education Statistics, 2010-11. However, the report categorically says that the data regarding the physical facilities is only available at public sector education institutions[2]. School buildings, drinking water, boundary walls, electricity and toilets for students are considered basic facilities.

Tables 4.3 and 4.4 summarise the extent of available facilities across provinces for primary and secondary (including middle) levels of education respectively. Enormous differences exist across provinces in terms of facilities, especially with respect to electricity, drinking water and availability of latrines.

Overall, electricity is available in only 37 percent primary schools, while 60 percent primary schools operate in the unsatisfactory condition of buildings. About 10 percent primary schools in rural areas have no building, whereas about 30 percent run without boundary walls.

The situation in middle and high schools is however comparatively better. Electricity and drinking water are available in 78 and 86 percent schools respectively. About 90 percent school buildings have 'pacca' structure, while about 41 percent secondary school buildings are in satisfactory conditions.

Table 4.3 Characteristics of Primary Schools in Rural Areas [Percentage of Schools]

	Pakistan	Punjab	Sindh	Khyber Pakhtunkhwa	Balochistan
Boundary Wall Exists	62.6	79.3	49.3	68.4	26.9
Building Availability	89.7	98.0	76.0	98.3	91.7
'Pacca' Structure of Schools	82.0	92.2	72.2	87.8	63.3
Satisfactory Building Condition	39.4	56.1	23.7	46.1	13.7
Electricity Availability	37.7	55.1	18.0	47.3	14.3
Drinking Water Availability	66.7	86.7	46.3	63.0	72.8
Latrine Availability	63.8	80.3	52.6	71.6	14.5

Source: Pakistan Education Statistics, 2010-11

Table 4.4 Characteristics of Middle and High Schools in Rural Areas [Percentage of Schools]

	Pakistan	Punjab	Sindh	Khyber Pakhtunkhwa	Balochistan
Boundary Wall Exists	84.0	91.5	72.3	79.2	58.1
Building Availability	98.0	99.9	87.5	99.8	99.4
'Pacca' Structure of Schools	90.0	95.0	84.9	79.7	90.7
Satisfactory Building Condition	41.6	51.2	22.9	37.6	11.1
Electricity Availability	78.6	92.6	43.5	74.8	45.4
Drinking Water Availability	86.4	96.5	64.6	78.1	72.8
Latrine Availability	87.8	94.7	75.0	88.2	52.6

Source: Pakistan Education Statistics, 2010-11

CONSTRAINTS IN SCHOOL PARTICIPATION

Table 4.5 documents the reasons for not attending school. Interestingly, the results show significant differences in respondents' opinions among provinces. For instance, education is considered costly only by 7 and 6 percent of respondents in Sindh and Balochistan provinces, whereas the corresponding percentages are 17 and 16 for Punjab and Khyber Pakhtunkhwa provinces.

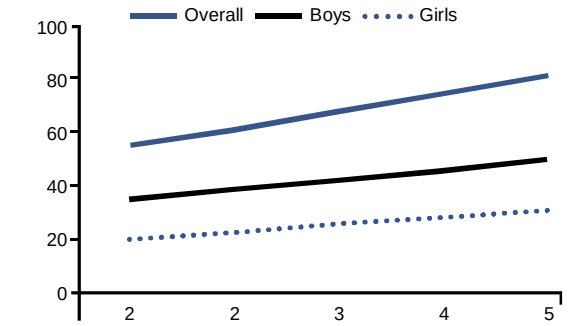
Overall, about 26 percent children were out of school due to economic reasons, while about 32 percent girls were not attending schools due to parents' refusal to send them to schools. The highest percentage that recorded culture constraints regarding girls' schooling belong to Balochistan, followed by Khyber Pakhtunkhwa province. Supply side constraints which include distance to school, shortage of teachers and school quality in terms of physical facilities are reported by about 20 percent respondents. Another important reason, 'child not willing' is

Table 4.5 Major Reasons for not Sending Children to School in Rural Pakistan [Age Cohort 5-14 Years]

	Pakistan	Punjab	Sindh	Khyber Pakhtunkhwa	Balochistan
Economic Reasons					
Education is Costly	13.0	17.2	7.1	15.7	6.1
Helping in Work	10.9	10.4	11.4	7.9	16.3
Employed/Working	2.4	2.7	2.8	0.7	2.8
Child Specific Reasons					
Minor	12.5	12.9	8.7	17.0	13.8
Ill/incapacitated	2.8	4.0	1.5	3.2	0.6
Subjective Reasons					
Not Useful	3.9	2.2	5.6	4.5	6.2
Parents do not permit - Boys	6.1	7.2	4.4	7.8	3.4
Parents do not permit – Girls	31.6	30.7	28.7	33.5	40.0
Supply Side Reasons					
School is too far	13.3	16.0	10.3	11.1	13.5
Shortage of Teachers	3.4	0.9	8.0	3.0	2.4
Substandard School	2.5	1.0	5.3	2.6	1.3
Child not Willing	29.2	27.9	35.2	23.5	28.2

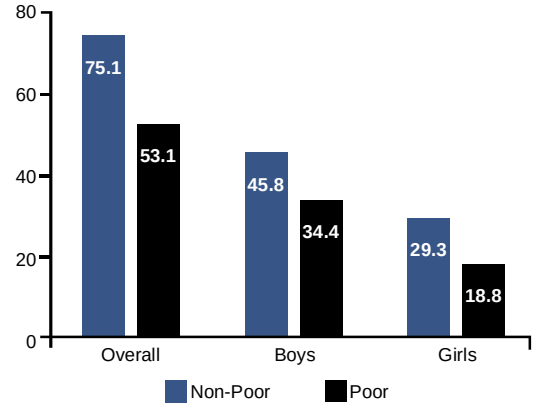
Source: SPDC Estimates based on household level data of PSLM 2010-11

Chart 4.11 Enrolment Rates by Per Capita Consumption Quintiles [5-14 Age Cohort]



	2	2	3	4	5
Overall	55.2	61.0	68.2	74.4	81.1
Boys	35.2	38.3	42.2	46.0	50.3
Girls	20.0	22.8	26.0	28.4	30.8

Chart 4.12 Enrolment Rates by Household Poverty Status [5-14 Age Cohort]



Source: SPDC estimates based on household level data of PSLM (2010-11)

mentioned by about 29 percent respondents. This category is also included in supply side constraints as it reflects the failure of the education system in attracting children, perhaps due to deficiencies in quality.

Poverty and Education

While the contraction of resources for education constitutes a supply-side constraint, poverty constitutes a demand-side constraint. It is therefore important to examine the contribution of poverty in restricting school enrolment. This section highlights this relationship in terms of income/consumption quintiles and household poverty status[3].

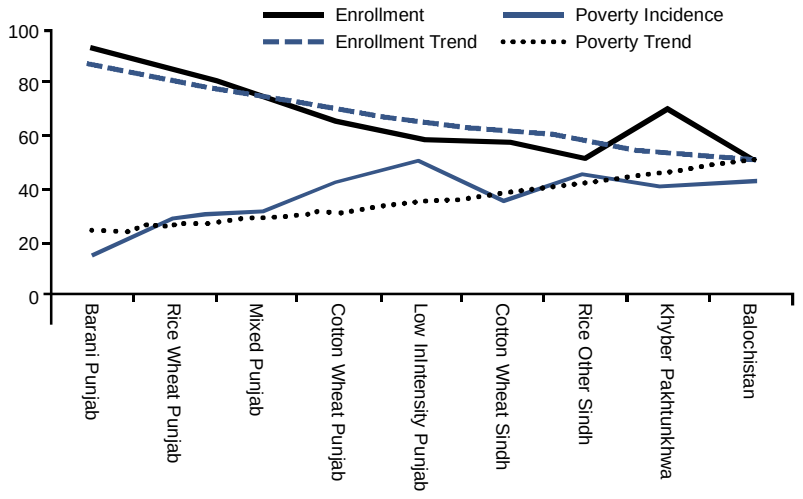
Chart 4.11 shows a progressive increase in rural primary school enrolment rates with the increase in consumption level. Overall, about 26 percentage point increase in the enrolment rate is evident as one moves forward from lowest to the highest quintile. The chart also reveals that the lowest-to-highest quintile difference in the enrolment ratio is sharper for girls as compared with boys.

Enrolment information with respect to household poverty status is portrayed in Chart 4.12. Overall, the enrolment rate in non-poor households is 75 percent as compared with 53 in poor households. About 10 to 11 percentage point difference between poor and non-poor households is evident in boys' and girls' enrolment rates. Chart 4.13 plots poverty incidence and enrolment rate of the 5-14 age cohort across Agro-Climatic Zones of rural Pakistan. An understandable relationship between poverty incidence and enrolment rate is visible in the chart. The estimated magnitude of correlation coefficient is -0.85 which confirms statistically significant negative correlation between poverty and enrolment rate.

Factors Affecting School Participation

A multivariate analysis is carried out by estimating logistic regression function for school participation of 5-14 age cohort children. All potential correlates of school participation are included in the logistic function to assess the probability and marginal effect on the household decision to

Chart 4.13 Relationship between Enrollment Rates and Poverty Incidence [5-14 Age Cohort]



Source: SPDC estimates based on household level data of PSLMs and HIES (2010-11)

Box 4.2 Inequality in Land Ownership and Rural Schooling

Land inequality is not only shown to be a principal factor in poverty, but is also a major factor in education inequality, which in turn sustains poverty. This is highlighted by an empirical analysis of the relationship between land and education inequality (SPDC, 2003). The former is measured on the basis of available farm size data, and the latter by a measure of School Life Expectancy (SLE) of students 5-24 years of age.

The main agrarian regions of Pakistan are Punjab and Sindh. Punjabis are considered to be more advanced, in terms of transition from traditional forms of agriculture than Sindh, According to SPDC (2003), "the analysis of the link between land inequality and education has been carried out for Punjab, primarily because the latest data is available for the province". The analysis shows that districts of Punjab with high land inequality report low rural SLE.

A formal examination of the impact of patterns of land ownership on the SLE of students of 5-24 years of age has been carried out through regression analysis, which shows the link between land and education inequality. The regression equation measures SLE as a function of the District Development Index (DDI), Gini coefficient of land ownership, proportion of tenant households, and proportion of households with no access to land.

The results of regression analysis show that school life expectancy is positively related to level of development, but negatively to land inequality, proportion of tenant households, and proportion of households with no access to land. This data indicates that SLE in central Punjab is higher at 6.9 compared to 5.0 in southern Punjab. The following table which quantifies the impact on schooling shows that, holding district development constant, a 10 percentage point decrease in land inequality index leads to an increase of 1.2 years in SLE. Similarly, a 10 point decrease in tenancy is associated with an increase of 1.9 years in SLE. A similar increase in access to land raises SLE by 0.6 years.

Change in School Life Expectancy (Years)

	Total	Male	Female
Ten percentage point change in:			
District Development Index	0.4	0.3	0.5
Land Inequality (Gini Land Ownership)	1.2	1.0	1.7
Proportion of Tenant Household	1.9	1.6	2.4
Proportion with Access to Land	0.6	0.5	0.7

Source: SPDC estimates based on Population and Housing Census (1998) and Agriculture Census (2000)

The impact of lower land inequality on female educational level appears to be even more pronounced. A 10 point decrease in land inequality leads to an increase of 1.7 and 1.0 years in female and male rural SLE respectively. Similarly, a 10 percentage point decrease in the proportion of tenant households is associated with an increase of 2.4 and 1.6 years in female and male rural SLE, respectively. A 10 point increase in access to land raises female and male rural SLE by 0.7 and 0.5 years, respectively.

Table 4.6 Determinants of School Participation by Rural Population of 5-14 Age Cohort [Logistic Regression - Dependent Variable Enrolled=1, Out of School=0]

	Estimated Coefficients	P-value	Marginal Effect
Girls Participation	**-1.26**	**0.00**	**-28.85**
Family Size	-0.03	0.00	-0.59
Female Headship	0.52	0.00	9.34
Education Level of Head of Household	0.10	0.00	1.47
Education Level of Spouse	0.15	0.00	2.60
Head Occupation – NONFARM	-0.15	0.00	-2.82
Head Occupation – Share Cropper (Tenant)	-0.26	0.00	-4.79
House Ownership	0.22	0.00	3.52
RCC Roofing	0.27	0.00	4.78
'Pucca' Wall Structure	0.20	0.00	3.53
Household Asset Score	0.14	0.00	1.48
Livestock Ownership	0.05	0.02	0.82
Time to Reach Public Transport (Proxy of Remoteness)	-0.03	0.00	-0.64
Time to Reach Primary School	-0.27	0.00	-5.73
Time to Reach Middle School	-0.06	0.00	-1.08
Agro Climatic Zone 4 – Districts of South Punjab	-0.53	0.00	-9.89
Agro Climatic Zone 3 – Districts of South Punjab	-0.54	0.00	-10.15
Sindh	-1.03	0.00	-21.20
Khyber Pakhtunkhwa	-0.35	0.00	-6.57
Balochistan	-0.95	0.00	-19.09
Intercept [Constant]	**1.16**	**0.00**	
Model Summary:			
-2 Log likelihood		90500	
Cox & Snell R-Square		0.249	
Nagelkerke R-Square		0.339	
Percentage of Correct Prediction:			
Participating		84.3	
Not Participating		58.2	
Overall		74.6	

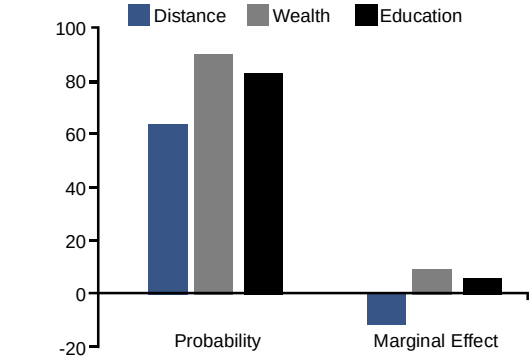
Source: SPDC Estimates based on household level data of PSLM (2010-11)

Note: Zero of near zero p-value indicates that the coefficient (β) is statistically significant and strongly rejects the null hypothesis that β = 0.

enrol in school. The logistic function incorporates head of household and spouse characteristics, besides pertinent demographic, social, economic and locational factors. The summary statistics of the logistic regression indicate a good-fit of the model with a high percentage (75 percent) of correct predictions and expected signs of all coefficients associated with variables. Table 4.6 displays estimated coefficients, level of significance and marginal effect with respect to probability to enrol. Model summary statistics are also provided in the table.

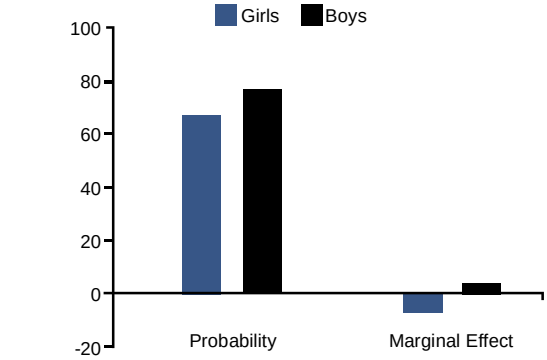
An important finding of this study is the significant role of female headed households in the decision to send children to school. The variable of female headship appears statistically significant with large marginal effect. Similarly, spouse education level is more effective than head of household in influencing decision to enrol.

Chart 4.14 Probability and Marginal Effect of Demand and Supply Constraints to School participation [5-14 age Cohort]



	Probability	Marginal Effect
Distance	65	-12.0
Wealth	91	9.5
Education	84	6.4

Chart 4.15 Probability and Marginal Effect of Gender Disparities in School Enrolment [5-14 age Cohort]



	Probability	Marginal Effect
Girls	68	-8.2
Boys	79	3.1

Source: SPDC estimates based Logistic Regression

All variables of household wealth (house ownership, RCC roofing, 'Pacca' wall structure, household asset scores and livestock ownership) are statistically significant with high marginal effect on probability to enrol. Among these the impact of RCC roofing is relatively substantial.

The supply side constraints are represented by distance to primary and middle school, while 'time to reach public transport' is used as a proxy for village remoteness. All these proxies are negatively correlated with the enrolment decision. The large negative marginal effect is associated with the variable 'Time to reach Primary School'.

To capture the provincial and regional differences in terms of population and level of rural development, locational (province and South Punjab agro-zones) dummy variables are incorporated in the model. All these appeared significant with signs according to a priori expectation. The negative coefficients with high marginal effect of rural Sind and Balochistan with reference to Punjab confirm the descriptive information presented above. Similarly, variables representing districts of south Punjab, which have relatively high percentage of poverty incidence, are showing large negative impact on the probability for school enrolment.

To compare the relative importance of demand and supply constraints, an effort is also made to assess probability and marginal effect of a combination of variables. Chart 4.14 displays these estimates. The probability associated with household wealth (Wealth), which is a combination of five variables, is estimated at 91 percent or 0.91 with a marginal effect of 9.5. In contrast, supply constraints (Distance) which is represented by three variables have a probability of 0.65 (65 percent) with marginal effect of -12.5. Education levels of both head and spouse have a combined marginal effect of 6.4 percent with a probability of 0.84 (84 percent). From the logistic regression results, the probability and marginal effect of boys and girls to enroll in school are also estimated.

According to Chart 4.15, the probability of girls to enrol is significantly less than that of boys with a negative marginal effect of -8.2 percent.

An interesting exercise is also carried out from the logistic regression analysis to estimate the marginal effect of distance to primary school in terms of time to reach, on the probability to enrol. For this purpose, an additional logistic model is estimated by incorporating separate dummy variables for different categories of time to reach school. Chart 4.16 reports the impact of distance on school participation with respect to these categories. The chart clearly shows a cut-off point of 'half an hour' from where the negative marginal effect on probability to enroll commences. The highest marginal effect of 11.3 percent is observed in the category of less than 15 minutes followed by the category of 15-29 minutes with marginal effect of 4.6 percent.

ADULT LITERACY IN RURAL PAKISTAN

According to UNDP (2013), Pakistan has been placed at the 146th position out of 187 countries in terms of the Human Development Index, with overall adult literacy rate of 54.9. Over the years, several non-formal literacy programmes were launched but these suffered from lack of political commitment, adequate financial support, weak implementation structures and absence of effective supervision and monitoring. The National Education Policy (GoP, 2009) also developed a set of policy actions to improve literacy rates in the country (Box 4.3), but these are

Box 4.3 A Wish-List to Improve Literacy Rate

The National Education Policy (2009) specifically addressed literacy, and developed a set of the following policy actions to improve literacy rates in the country.

- Government shall develop a national literacy curriculum and identify the instructional material and professional development programmes to support the curriculum. The curriculum shall be objective driven, so as to facilitate assimilation of trainees into mainstream economic activity.
- Government shall develop and enforce minimum quality standards for organisations involved in literacy in the form of literacy certification and accreditation regime. The literacy providers shall be required to offer the literacy programmes according to specified standards.
- A system shall be developed to mainstream the students in non-formal programmes between the ages of 11 and 16 into the public education system, and a system of equivalence shall be developed to permit such mainstreaming. New literates shall receive formal certification so as to facilitate their entry into government schools.
- Linkages of non-formal education with industry and internship programmes shall be developed to enhance the economic benefits of participation.
- Horizontal linkages between schools and vocational/skills training centres shall be established.
- Government schools shall initiate non-formal education stream for child labourers. Children involved in various jobs or work shall be brought within the ambit of nonformal education system with need-based schedules and timings.
- Special literacy skills programmes shall target older child labourers, boys and girls (14 to 17 years). Special educational stipends shall be introduced to rehabilitate child labourers.
- Arrangements shall be made to use school buildings for adult literacy after school hours.
- Government shall develop guidelines for post-programme initiatives. Regular followup shall be made a part of the literacy programmes.

just ideas and even now need the attention and political will of provincial and federal governments to reach fruition.

Table 4.7 documents the adult (15 plus age cohort) literacy rates for rural Pakistan, while the growth in literacy during the period 2005-2011 is portrayed in Chart 4.16. According to the table, literacy rates in rural Pakistan are 45 percent for the overall rural population, with 60 percent for males and 46 percent for females. The trend across provinces is more or less similar to the pattern in school enrolment. Rural Punjab and Khyber Pakhtunkhwa have a clear edge over rural Sindh and Balochistan in terms of overall and gender literacy rates. Highest (37 percent) female literacy rate is observed in rural Punjab, whereas only 9 percent females are literate in rural Balochistan.

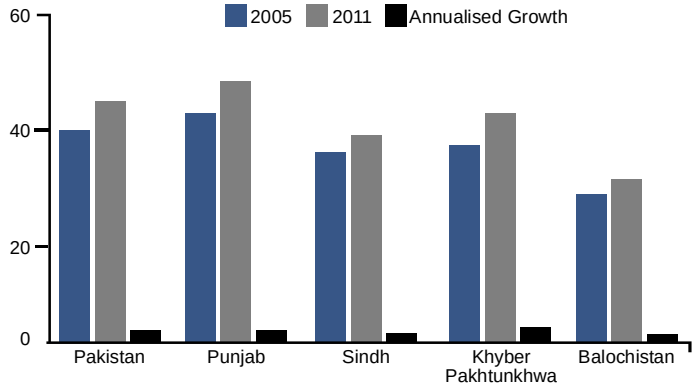
According to Chart 4.16, about 2 percent annual growth in adult literacy rate is documented during the period 2005-11. Incidentally, highest (2.6 percent) annual growth is observed in Khyber Pakhtunkhwa province, followed by Punjab with a magnitude of 2.3 percent. In rural Sindh and Balochistan, growth of 1.5 percent per annum is recorded.

Table 4.7 Adult Literacy Rate in Rural Areas [2010-11] [15 plus age Cohort]

	Overall	Male	Female
Pakistan	44.9	60.0	29.9
Punjab	48.7	60.9	36.7
Sindh	38.6	48.0	17.2
Khyber Pakhtunkhwa	42.5	62.4	23.8
Balochistan	30.2	49.2	9.0

Source: SPDC estimates based on household level data of PSLM 2010-11

Chart 4.16 Inter-temporal Change in Employed Labour Force [Percentage of 10-14 Age Cohort]



	Pakistan	Punjab	Sindh	Khyber Pakhtunkhwa	Balochistan
2005	39.7	42.8	35.5	36.7	27.7
2011	44.9	48.7	38.6	42.5	30.2
Annualised Growth	2.2	2.3	1.5	2.6	1.5

Source: SPDC estimates based on household level data of PSLM (2010-11 and 2004-05)

NOTES:

1. However, more recently, official statistical sources have also started reporting enrolment rates using the age group 6-10 years for primary school enrolments. Although, this age group has also been suggested by the National Education Policy (GoP, 2009), the Policy has not yet been owned and implemented by any provincial government.
2. In Pakistan, there is a marked distinction between facilities in public and private schools as well as in schools in urban and rural areas. While government schools in urban areas are better equipped than those in rural areas, private schools have better provision of facilities than public schools.
3. The enrolment rates are estimated from PSLM, 2010-11. However the PSLM does not collect income of consumption information. By combining consumption information from HIES, 2011 data and applying Small Areas Estimation Technique, predicted consumption is estimated for the PSLM data set. Thus this section provides evidence of relationship between school enrolment and predicted consumption and predicted poverty status. For methodological detail see Jamal (2013).

The State of the Health Sector in Rural Pakistan

5

5 The State of the Health Sector in Rural Pakistan

It is widely acknowledged that human capital is vital to the growth and development of a nation; the significance of improved health status in this regard has also been well recognised. Therefore, keeping the masses healthy is as important as providing them with basic education. The state of people's health in Pakistan is characterised by poor health indicators, including high levels of infant, child and maternal mortality. There is significant incidence of communicable diseases, low life expectancy, and a high rate of population growth. Urban-rural disparities further contribute to aggravation of the problems. Poor health status and high fertility rates are believed to be among the major obstacles for poverty eradication. The severity of health poverty in Pakistan becomes more evident when national indicators of health outcomes are compared with other regional countries.

As highlighted in Table 5.1, Pakistan lags behind in all indicators when compared to other countries in South Asia and some other regional countries. Life expectancy at birth in Pakistan is estimated to be 65.7, which is the lowest among the countries in comparison. At the same time, infant mortality (59) and mortality under 5 years of age (72) are the highest. A mortality rate of 72 in 2011 implies that 1 in every 14 children born in Pakistan between 2006 and 2011 died before reaching five years of age. According to WHO (2006), the major causes of high rates of child and infant mortality include malnutrition, diarrhoea, acute respiratory illness and other communicable and vaccine-preventable diseases.

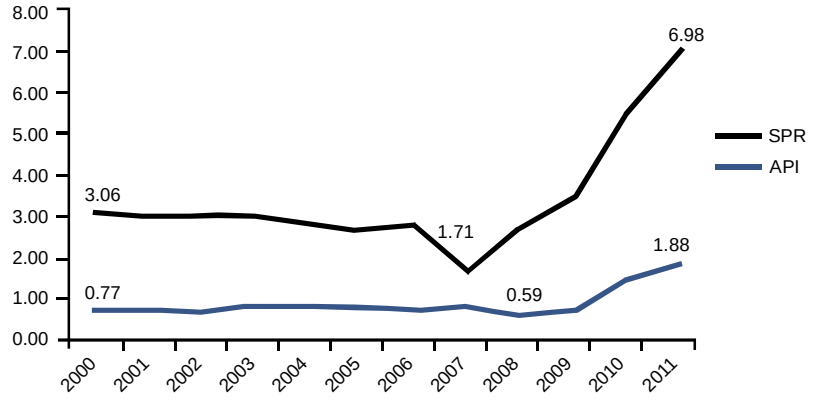
Similarly, maternal mortality rate is 260 per 100,000. It is disturbing to see that mortality rates in Pakistan are exceptionally high and are above the average in South Asia. Population growth rate is 2.03, which is again highest among the regional countries.

Table 5.1 Regional Health and Population Indicators

	Life Expectancy at Birth 2012	Mortality Rate under 5[a] 2011	Infant Mortality Rate[a] 2011	Maternal Mortality Rate[b] 2010	Population Growth Rate[c] 2012
Pakistan	65.7	72	59	260	2.03
India	65.8	61	47	200	1.31
Bangladesh	69.2	46	37	240	1.58
Sri Lanka	75.1	12	11	35	0.91
Nepal	69.1	48	39	170	1.77
Bhutan	68.0	54	42	180	1.18
China	73.7	15	13	37	0.48
Malaysia	74.5	7	6	29	1.57
Indonesia	69.8	32	25	220	1.03
Philippines	69.0	25	20	99	1.87
Thailand	74.3	11	12	48	0.54

Source: Human Development Report 2013 & UNICEF; Pakistan Economic Survey, 2012-13
a – per 1,000 ; b – per 100,000 live births; c – percent

Chart 5.1 Incidence of Malaria in Pakistan



API: Annual Parasite Incidence = Total number of positive slides for parasite in a year x 1000 / Total population

SPR: Slide Positivity Rate – defined as the number of laboratory-confirmed malaria cases per 100 suspected cases examined.

Source: Directorate of Malaria Control, Government of Pakistan.

Prevalence of communicable diseases is also high, which accounts for about half the deaths in the country. Pakistan is among 22 countries of the world that have extremely high and endemic burden of tuberculosis (actually it ranks number 10). In 2012, the incidence of tuberculosis (TB) in Pakistan is estimated to be 231 cases per thousand of population per year, which is the highest in South Asia and the third highest in Asia, only next to Myanmar and Philippines (WHO, 2012). A more frightening fact is that the incidence of TB has increased from 177 in 2006 to the current level of 231.

Similarly, malaria remains a major public health hazard in the country. The incidence of malaria has risen over the last decade. As shown in Chart 5.1, annual parasite incidence of malaria has increased from 0.77 in 2000 to 1.88 in 2011. Similarly, slide positive rate (defined as the number of laboratory-confirmed malaria cases per 100 suspected cases examined) has also increased from 3.06 to 6.98 during the same period. This is despite the fact that not all the cases are recorded in the health system. It is acknowledged by the authorities that not more than 20 percent of the actual number of cases are recorded (WHO, 2006).

Prevalence of hepatitis B and C is high as well. A study conducted by the Pakistan Medical and Research Council (PMRC, 2008) found that prevalence of hepatitis B and C was 2.5 percent and 4.9 percent respectively. Overall, the positivity was 7.4 percent indicating that almost 12 million people were positive for both viruses in 2008.

STATUS OF HEALTH IN RURAL AREAS

Health indicators of the rural population are particularly poor. A review of selected national health indicators depicts a gloomy picture of rural areas; urban-rural gaps are significantly wide, indicating that the rural population is at a clear disadvantage in terms of access to health services.

Table 5.2 Malnutrition in Pakistan [children under 5 years of age]

	2001-02	2010-11		
		Total	Urban	Rural
Underweight	38.0	31.5	26.6	33.3
Stunted	36.8	43.7	36.9	46.3

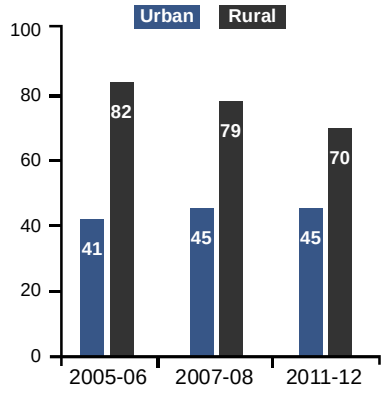
Sources: National Nutrition Survey 2011, Government of Pakistan; Zaidi (2011)

The level of malnutrition, which is indirectly responsible for 35 percent of childhood deaths, is alarmingly high in Pakistan, particularly in rural areas (Zaidi, 2011). Currently, about 32 percent of children are underweight and 44 percent are stunted . Although the ratio of underweight children has shown a slight decline over the last decade, the ratio of stunting has actually increased (Table 5.2). The urban-rural divide is also evident where the ratio of underweight children in rural areas is 33 percent, as compared to 27 percent in urban areas. Similarly, 46 percent of children in rural areas are stunted as opposed to 37 percent in urban areas.

As shown in Chart 5.2, there has been some improvement in the infant mortality rate (IMR) in rural areas since 2005-06. However, there exists a very high urban-rural gap as IMR in rural population is 1.6 times greater than that in urban areas. Similarly, the Pakistan Demographic and Health Survey 2006-07 reveals a high degree of regional variation in maternal mortality rates – 319 in rural areas as compared to 175 in urban areas (Chart 5.3). This is mostly attributed to a high fertility rate, low rate of skilled birth attendance, illiteracy, malnutrition and insufficient access to emergency obstetric care services (WHO, 2006).

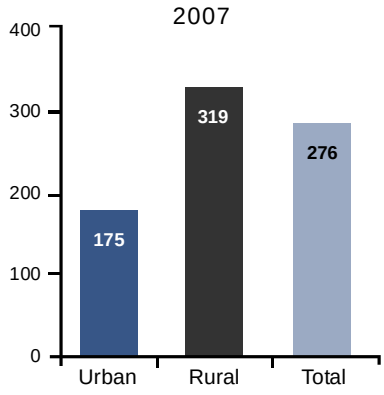
Expanded immunisation coverage, linked with other health services, is strongly associated with low infant mortality and low levels of malnutrition. WB (2010) shows estimates that with the full package of interventions, the IMR in the country could decline by 35 infant deaths per 1,000 live births in five years while the child underweight rate is expected to decline by 16 percentage points.

Chart 5.2 Infant Mortality Rates



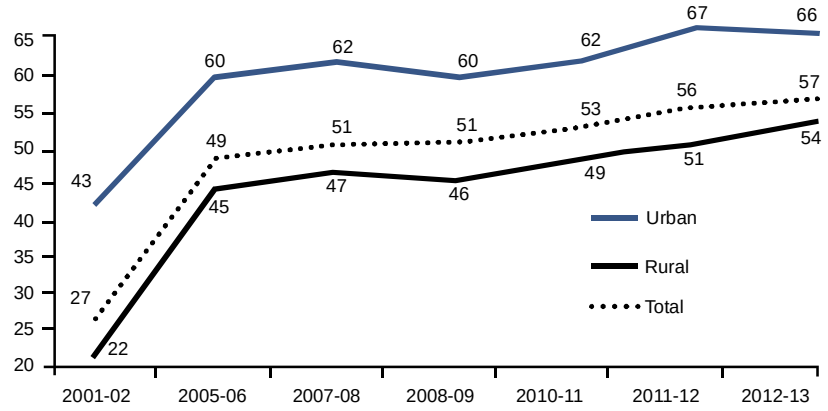
Source: Pakistan Social and Living Standards Measurement Surevy (PSLM)

Chart 5.3 Maternal Mortality Rates



Source: Pakistan Social and Living Standards Measurement Surevy (PSLM)

Chart 5.4 Immunisation Coverage*



***Percentage of children aged 12-23 months that have been fully immunised (based on record)**
Source: PSLM

The Expanded Programme on Immunisation (EPI) in Pakistan was launched more than three decades ago. Some specific objectives of the programme included interruption of polio virus by 2012, elimination of neo-natal tetanus by 2015, elimination of measles by 2015 and reduction of diphtheria and childhood tuberculosis to a minimum level.

However, despite continued efforts by the government and support of international partners, Pakistan's immunisation indicators have yet to reach the expected benchmarks (WHO, 2013). There has been upsurge of polio cases since 2007-08. The number of reported polio cases declined from 119 to 32 between 2001 and 2007 but gradually increased to 197 in 2011 (PILDAT, 2012).

As shown in Chart 5.4, not only does the immunisation coverage remain sub-optimal, the huge urban-rural gap is also persistent. Overall, the immunisation coverage improved sharply from 2001 to 2006, increasing from 27 percent to 49 percent. Improvement was more promising in rural areas where the coverage was doubled. However, after 2005-06 the rate of increase remained almost stagnant till 2011 and improved slightly afterwards. Currently, 43 percent of the children aged 12-23 months remain out of immunisation coverage.

ISSUES IN HEALTH SERVICE PROVISION

The poor condition of the country's health sector is generally attributed to the ineffective delivery of services as well as to the low level of public spending on health. Pakistan's National Health Accounts for 2007-08 show that out of total health expenditures in the country, 25 percent are funded by the government, over 70 percent through private sector (mainly out of pocket expenses by households). Development partners/donors organisations have a 3 percent share in total health expenditures. Hence, with the private sector being the major service provider, most of the burden of health expenditures remains on the households. The role of the private sector is detailed in Box 5.1.

Box 5.1 Consultation by Type of Provider

Private sector is the major provider of health care in Pakistan. In 2010, the total number of private hospitals in Pakistan was 4380 as compared to 972 public hospitals. The role of the private sector has increased significantly over time.

Data from Pakistan Social and Living Standards Measurement Surveys shows that 78 percent of the population in urban areas, and 67 percent in rural areas accessed private sector providers for health consultation in 2010-11. Overall, the proportion of population consulting private sector providers has increased from 54 percent in 1998-99 to 71 percent in 2010-11.

Within the private sector, the role of the non-profit sector is also important. The number of non-profit hospitals is 529 (out of 4380). However, most of the NPOs involved in health care activities operate in urban areas. Therefore, the rural population is mainly catered to by the for-profit sector.

There are some issues of concern regarding for-profit private sector provision in Pakistan. For example, private hospitals charge high tariffs and mainly cater to middle to upper income groups. However, as Zaidi (2011) states that 'due to low quality of care at public sector hospitals there has been an increasing trend of low middle income groups to utilise private sector hospitals despite high costs and an unchecked proliferation of private sector hospitals in low income neighbourhoods'.

Another important issue is that relatively lower wages, on average, are offered in private sector health facilities as compared to remuneration offered in the public sector equivalent. Financial accountability is also poor among the private entities. As per the National Health Accounts of Pakistan 2007-08, most of the hospitals are under individual proprietorship (3,328 out of 4380). Most of the private hospitals do not pay taxes. According to the Annual Report of the Federal Board of Revenue (2009-10), the number of private hospitals under the jurisdiction of Regional Tax Offices was 1176. Only 240 hospitals had filed tax returns in 2008-09 while 936 remained out of the tax net.

Health Consultation by Type of Provider

	Private	Public	Others
Urban			
1998-99	66	21	13
2004-05	72	21	8
2006-07	74	19	7
2008-09	79	17	4
2010-11	78	17	5
Rural			
1998-99	50	29	21
2004-05	64	24	12
2006-07	66	21	13
2008-09	67	23	10
2010-11	67	24	9
Overall			
1998-99	54	27	20
2004-05	67	23	10
2006-07	69	20	11
2008-09	71	21	8
2010-11	71	22	7

Source: Pakistan Social and Living Standards Measurement Survey, Pakistan Bureau of Statistics (various issues).

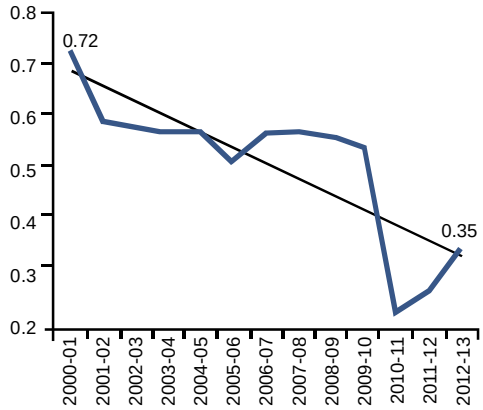
Public Expenditure on Health

Although higher health expenditure does not necessarily lead to better health outcomes, the level of public spending reflects the degree of commitment of the government toward improving health conditions of the people.

Chart 5.5 depicts a rather depressing picture of public spending on health in Pakistan where the current level of expenditure is merely 0.35 percent of GDP. More disappointing is the fact that expenditures on health relative to GDP show a declining trend over the past 13 years. They declined from 0.72 in 2000-01 to 0.59 in 2001-02. Since then they ranged between 0.51 and 0.58 till 2009-10 before falling to extremely low level of 0.23 in 2010-11 and improved slightly afterward.

Not only is spending on the health sector low, its allocation within the sector is also directed towards curative services with lower priority given to preventive healthcare. Over 80 percent of total government spending is on general hospitals and clinics (GoP, 2012).

Chart 5.5 Public Expenditure on Health as percentage of GDP



Source: Pakistan Economic Survey, 2012-13

Coverage of Public Health Facilities

Moreover, as asserted by Zaidi (1998), health services in Pakistan are highly inequitable and urban biased. Keeping aside the governance issues related to service delivery, coverage of public health facilities in rural areas seems to have deteriorated over the years (Table 5.3). Population per BHU has increased from 18,000 to 21,000 during 1991 and 2011. Similarly, two decades ago there was one MCH centre available for a population of 74,000 which now serves 165,000 people. Rural Health Centre (RHC) is the highest level of public health facility in rural areas. Population per RHC has increased from 168,000 to 174,000. In addition to the issue of coverage, the quality of service delivery is adversely affected by poor infrastructure and maintenance, inadequate supply of equipments and medicines, shortage of doctors and paramedics (particularly for retention of female staff) and absenteeism of staff.

One of the most important principles of primary healthcare is people's access to health services. The availability of services is determined by the geographic distribution of healthcare facilities. As shown in Table 5.4, the average distance of a Mouza (village/cluster of villages) from a BHU is 15 kilo metres (km), which is quite a long distance as far as universal coverage and accessibility is concerned. Fairly large disparities exist among the provinces in the geographical accessibility of health service facilities where average distance from a villager's home to a BHU ranges from 8 to 39 km. The situation in the case of MCH centres is even worse.

Table 5.4 also presents percentage distribution of population by average distance from a BHU. Overall, only 12 percent of the rural population is located within 1 km from a BHU. The majority of people (56 percent) have to travel up to 10 km to find a BHU. For a sizable population (12 percent), a BHU is located at a distance of 50 km or more from the settlement.

Table 5.3 Population (in thousands) per Rural Health Facility

	Basic Health Unit (BHU)	Mother and Child Health Centre (MCH)	Rural Health Centres (RHC)
1990	18	74	168
2000	18	109	176
2013	21	165	174

Source: Estimates based on Pakistan Economic Survey 2013-14

Table 5.4 Distance of Mouzas* from various Types of Health Facilities in Rural Areas

	Hospital/ Dispensary	RHC	BHU	MCH Cetre
Overall Mean Distance (Kilometers)				
Punjab	9	9	8	11
Sindh	12	13	13	16
Khyber Pakhtukhwa	18	17	16	22
Balochistan	45	43	39	63
Pakistan	**17**	**16**	**15**	**22**
Percentage distribution of population by distance to BHU				
	Less than 1 km	1-10 km	11-25 km	50 km and above
Punjab	13	67	17	3
Sindh	13	52	27	9
Khyber Pakhtukhwa	11	54	20	15
Balochistan	7	24	25	44
Pakistan	**12**	**56**	**20**	**12**

* A Mouza is a cluster of rural settlements. Average population size of a Mouza in Punjab, Sindh, Khyber Pakhtunkhwa and Balochistan is 23941, 5573, 11540 and 6428 respectively.

Source: Pakistan Mouza Statistics 2008, Pakistan Bureau of Statistics.

Utilisation of Public Health Facilities

Due to the factors mentioned above, the public health facilities are poorly or sub-optimally utilised in rural areas, and people are left with no choice but to consult the private sector providers subject to their affordability. Based on the PSLM data, Table 5.5 presents the trend of health seeking behaviour of rural population in terms of consultations with various types of providers for primary health services. The survey data of 2010-11 shows that among the people who consulted any health service provider, only 24 percent went to any public hospital, BHU or RHC while 67 percent resorted to the private providers. It is important to note that use of public healthcare facilities shows an overall declining trend since 1998-99.

Reasons stated by the respondents of PSLM survey for not consulting government facility first (in the case of treatment for diarrhoea) endorse the issues of governance and accessibility that are believed to be responsible for poor service delivery (Table 5.6). The majority of people (26 percent) have stated that the government facility is too far away to be accessed. Other major reasons include unavailability of doctors, shortage of medicines and impolite behaviour of medical staff.

Table 5.5 Health Consultation by Type of Provider in Rural Pakistan [percent of population]

	Private	Public	Others
1998-99	50	29	21
2004-05	64	24	12
2006-07	66	21	13
2008-09	67	23	10
2010-11	67	24	9

Table 5.6 Reasons for not Consulting Government Facility* (Rural) [percent of population]

Too far away	26
Doctor not/never available	16
No government facility	18
Not enough medicines	11
Staff not courteous	8
Others	21

* For diarrhoea treatment

Source: PSLM 2011-12

Inaccessibility of medical services in rural areas also has serious implications for maternal health of females, leading to higher maternal mortality. As shown in Table 5.7, although the proportion of women who receive pre-natal check-up has improved over the past few years, consultation made with public sector providers has actually declined during the same period.

In 2005-06, of the total women who received pre-natal consultation, 46 percent got their check-up by public health providers. In 2012-13 this proportion is reduced to 43 percent. This decline may be attributed to the accessibility and quality of public health services in rural areas. Similarly, the proportion of institutional child delivery (private and public combined) remained fluctuating between 22 and 41 percent. Child delivery at government hospitals/clinics has declined from 15 percent in 2005-06 to 12 percent in 2012-13. The majority of births (59 percent) still take place at home in rural Pakistan. This explains the exceptionally high rate of maternal mortality (319) in rural areas as compared to that in urban areas (175).

Table 5.7 Indicators of Maternal Health (Rural)

	Pre-Natal Consultations		Location of Child Deliverty		
			Institutional Delivery		At Home
	Proportion of women who received pre-natal check-up[a]	Consultations made with public providers[b]	Private Hospital/ Clinic	Government Hospital/ Clinic	
2005-06	42	46	23	15	60
2006-07	45	40	15	7	78
2008-09	50	35	19	9	71
2010-11	57	44	22	9	68
2011-12	62	37	27	11	60
2012-13	63	43	29	12	59

a – Ever-married women aged 15-49 years who received post-natal check-up expressed as a percentage of all ever-married women who had a birth in the last three years.

b – As percent of total women who received post-natal check-up.

Source: PSLM

Alternative Delivery Mechanisms

In view of the poor performance of health departments in the delivery of services, attempts have been made by governments to introduce alternative service delivery and financing models.

In Punjab, the Chief Minister's Initiative for Primary Health Care (CMIPHC) was initiated as a public private partnership (PPP) by the provincial government with the objective to improve the provision of basic health facilities in rural areas. To replicate the successful experiments under CMIPHC, the federal government launched a country-wide Programme, known as the People's Primary Health Care Initiative (PPHI) to strengthen the services provided in government health facilities. Under PPHI, the management and finances of running the Basic Health Units (BHUs) were handed over to the Rural Support Programmes (RSPs) in their respective provinces . The federal government provides financial support for the administrative structure of PPHI in addition to one-time upgrading/rehabilitation of BHUs while the cost of management contracts is borne by the provincial governments. RSPs could hire any staff on contract including medical officers and paramedics. They also have flexibility to incentivise the staff.

According to a third-party evaluation of PPHI conducted in all provinces except Punjab (TRF, 2010), PPHI achieved significant improvements in staffing, availability of drugs and equipment and physical condition of facilities. Some key findings are listed here:

- *PPHI has had considerable success in attracting additional Medical Officers (including female MOs) to BHUs. However, it was equally successful in attracting Lady Health Visitors (LHVs).*
- *Outpatient attendance increased by 20 percent on average in PPHI districts and fell by about the same in the districts managed by District Department of Health (DDOH) between 2007 and 2010.*
- *Attendance for antenatal and postnatal care services increased in PPHI districts when compared to the starting point. However, attendance figures for both PPHI and DDOH districts were found to be quite low when population estimates were used.*
- *In terms of safe delivery, a higher percentage of deliveries were performed by BHU staff in PPHI districts (37 percent) than in DDOH districts (18 percent). However, most of these deliveries took place at home rather than in BHUs.*
- *Availability of certain diagnostic tests (e.g. Malaria) and treatment for snake and dog bite was found higher in PPHI BHUs.*
- *PPHI BHUs had slightly better referral record keeping practices.*
- *Consumer satisfaction measured through exit polls revealed that users had selected the BHU because it offered better quality of service than other providers at a rate of 47 percent in PPHI and 36 percent in DDOH BHUs.*

Nevertheless, there are some areas where improvements and further reforms are needed. Some of the key issues brought forward by TRF (2010) include the following:

- *Although the coverage has improved as compared to the baseline, utilisation of health facilities (in terms of percent of population) still remains very low in both DDOH and PPHI districts. PPHI has not*

performed so well in terms of family planning services. Contraceptive prevalence rates are found to be a bit higher in DDOH areas (47 percent) than in PPHI areas (40 percent); in the former services are mainly provided by Lady Health Workers (LHWs).

- *PPHI was established as a time-specific initiative but no exit strategy has been developed.*
- *PPHI contracts are not open to competition with other providers.*
- *Technical oversight is the missing element in the model. There is no clear role assigned to the health ministry or the provincial health departments in this regard.*
- *Similarly, there is an absence of performance monitoring.*
- *Some other issues identified include lack of contract management experience in government, conflict resolution and contract weaknesses, and lack of the use of arbitration.*

Nevertheless, despite its limited success and shortcomings in implementation, coordination and monitoring mechanisms, PPHI seems to have paved the way to adopt innovative approaches for effective delivery of social services.

Vertical Programmes

Following the 18th Amendment to the Constitution, the health sector has been devolved to the provinces. Even before the amendment, responsibility of health service provision lay mainly with the provincial governments. In order to supplement the efforts of provincial governments, the federal government had launched several vertical programmes, which include the Programme for Family Planning and Primary Health Care (commonly known as Lady Health Workers Programme); Expanded Programme for Immunisation (EPI); Malaria Control Programme; TB Control Programme; HIV/AIDS Control Programme; Maternal & Child Health Programme (MNCH); Prime Minister's Programme for Prevention and Control of Hepatitis; National Programme for Prevention and Control of Blindness, and National Programme for Prevention and Control of Avian Pandemic Influenza.

Table 5.8 shows that the total size of allocations to these programmes in the federal Public Sector Development Programme (PSDP) for fiscal year 2013-14 is over Rs 22.4 billion. After the 18th Amendment, financing of the vertical programmes emerged as critical issues. The provincial governments were of the view that the 7th NFC Award preceded the 18th Constitutional amendment. Therefore, the additional liabilities transferred to the provinces were not coupled with the transfer of additional resources. Hence, it would be difficult for the provinces to continue execution of these projects without a meaningful transfer of additional resources at least till the currency of 7th NFC Award. As opposed to this, the federal government argued that the provinces are already enjoying enhanced fiscal space under the 7th NFC Award. Therefore, they should be able to finance the additional responsibilities, which have been constitutionally transferred to them (GoP, 2011).

Table 5.8 Development Allocations to Vertical Programmes [Rs in Billions]

	Cost	Expenditure upto June 2014	Throw-Forward July 2014	Allocations 2014-15
Family Planning & Primary Health Care	53.4	15.6	37.8	11.0
Population Welfare Programmes (all provinces)	43.4	21.4	21.9	7.8
Maternal, Neonatal and Child Health	20.0	3.1	16.9	2.4
Prevention & Control of Hepatitis	13.9	0.9	13.0	0.7
Prevention and Control of Blindness	2.8	0.25	2.5	0.25
Rollback Malaria	0.7	0.2	0.5	0.12
TB Control	1.2	0.12	1.1	0.12
Prevention and Control of Avian Influenza	0.3	0.03	0.3	0.04
Total				**22.4**

Source:Public Sector Development Programme (PSDP), 2013-14, GoP

These issues were addressed in the meeting of the Council of Common Interests (on April 28, 2011) and it was decided that the federal government would provide financing for vertical programmes of health and population sectors till the next NFC award due in 2014-15.

Some vertical programmes such as the Lady Health Workers Programme have achieved significant success in the provision of health services to communities in rural areas (see Box 5.2). Similarly, the EPI programme provides immunisation against the seven vaccine-preventable diseases, including childhood tuberculosis, poliomyelitis, diphtheria, pertussis, neonatal tetanus, measles and hepatitis B.

It would be unfortunate if these programmes, which confer significant benefits to the people, are discontinued by provinces due to insufficiency of resources. Therefore, there is need to identify a sustainable exit strategy before the 8th NFC Award so that financing of these programmes is ensured in future, once these are transferred to the provinces. EPI has already been transferred to the provinces to a greater extent whereby the federal government took the responsibility of procurements, coordination and technical guidance while provincial governments are largely responsible for implementation of the programme. As far as resource mobilisation is concerned, vertical programmes are ideal candidates for mobilising donor support as most of these programmes contribute to the achievement of the MDGs. However, effort will be needed to improve their operations and enhance effectiveness. For instance, execution of a large number of separate programmes is usually a cause of inefficiencies. Some resources can certainly be spared through administrative integration of some of the vertical programmes. For example, Zaidi (2011) has suggested that the 9 vertical programmes may be merged into 3 more substantive vertical programmes in the categories of communicable diseases, Maternal, Newborn and Child Health, and Nutrition & Community.

Box 5.2 Lady Health Workers Programme

In 1994, government of Pakistan launched a community health initiative entitled 'National Programme for Family Planning and Primary Health Care', which is popularly known as Lady Health Workers (LHW) Programme. The major purpose of the initiative was to provide integrated primary healthcare services at the doorsteps of communities with particular focus on maternal, neonatal and child health.

The programme is executed through LHWs. Recruitment criteria include: age 18-45 years, being a local resident, at least 8 years of schooling, preferably married, and being acceptable to the community. They are trained for 15 months in the prevention and treatment of common illnesses. Each LHW is attached to a government health facility, from which they receive training, a small allowance and medical supplies. One LHW is responsible for approximately 1000 people, or 150 homes. The scope of work of the LHW includes health education in terms of antenatal care and referral, immunisation services and support to community mobilisation, provision of family planning and basic curative care. In addition, the house of each LHW has been declared as a Health House where people can come in case of emergency to receive basic treatment or guidance.

The programme did face initial skepticism from various stakeholders with regard to the viability of recruiting effective female health workers from conservative rural societies but was replicated successfully. The unlimited access of LHWs to the households, free interaction with local women and their proven high level acceptability have been regarded as the key factors behind their success (Hafeez et al, 2011). Currently, more than 100,000 LHWs are working throughout the country.

The evidence suggests that the initiative has contributed significantly in improving the accessibility of basic health services to the rural communities. For example, an external evaluation of the programme in 2000 found that the population served by LHWs had substantially better health indicators than the control population (WHO, 2008). Similarly, Pakistan Demographic Survey (2006-07) observed significant fall both in maternal and in childhood mortality in Pakistan. The improvement was more prominent in the LHW covered areas when a comparison was made between indicators like infant mortality rate (IMR), maternal mortality rate (MMR), contraceptive prevalence rate (CPR) and others between the LHW covered areas and the national average (Hafeez et al, 2011).

A study conducted by Bhutta et al (2011) – based on targeted trials involving LHWs in rural locations – has shown visible success in reducing pre-natal and neonatal mortality. Stillbirths were reduced in intervention clusters, where 39.1 stillbirths (per 1000 births) occurred compared with 48.7 in control groups. The neonatal mortality rate was 43.0 deaths (per 1000 live births) in intervention clusters compared with 49.1 in control groups.

Several weaknesses have also been identified, which include the following:

- There is insufficient communication between federal, provincial and district level health departments/ offices, leading to drug supply problems and monitoring gaps. Health system referral support is poor at district level.
- Coverage remains imbalanced, partly because in some areas the entry-level qualifications are too high, resulting in few or no candidates.
- Delayed disbursement of remuneration of LHWs has occasionally resulted in disruption of services and violent protests from LHWs.
- The building of partnerships with non-governmental organisations (NGOs) has been limited.

However, despite the weaknesses, the evidence of success builds a strong case for retaining and expanding this initiative while addressing the issues of efficiency, effectiveness and coverage.

Sources: WHO (2008), Hafeez et al (2011), Bhutta et al (2011), OPM (2009), GoP (2013a)

CONCLUSION

The state of the health sector in Pakistan is characterised by poor health indicators, low level of public spending and ineffective delivery of service provision. The situation of rural areas is particularly poor. Large disparities exist among urban and rural areas in terms of health outcome indicators such as malnutrition, infant mortality, maternal mortality and immunisation. Geographic coverage and accessibility of public health services in rural areas is also very poor, which has serious implications for people's health. Federal and provincial governments have made attempts to introduce alternate models of service delivery in the form of public private partnerships, which have achieved some success. Moreover, vertical programmes of the federal government have also played an important role in supplementing the efforts of the provincial government. However, the dismal situation of health indicators demands that much more be done, possibly in every domain of the health sector.

Poverty, Inequality and Social Exclusion

6

6 Poverty, Inequality and Social Exclusion

Although poverty in urban areas is substantial and increasing, global poverty is still predominantly a rural phenomenon. According to IFAD (2011), about 70 per cent of the world's very poor people – around one billion – are rural, and a large proportion of the poor and hungry amongst them are children and youth. The report specifies that "*Neither of these facts is likely to change in the immediate future, despite widespread urbanization and ongoing or approaching demographic transitions across regions. Now and for the foreseeable future, it is thus critical to direct greater attention and resources to creating new economic opportunities in the rural areas for tomorrow's generations".*

The empirical literature suggests that rural areas require specific policies for poverty alleviation and rural development due to the distinctive characteristics of rural life: unfavorable demographic situation, remoteness, poor infrastructure, meagre labour market opportunities, low education level and inferior quality of institutions. These 'rural' characteristics may interact and generate 'vicious circles' which ultimately amplify the phenomenon of rural poverty.

In contrast, it is observed in the context of developing countries that national economic and social policies are generally urban biased, which may contribute to rural poverty by excluding the rural poor from the benefits of growth and development. According to Khan (2000), policy biases that generally work against the rural poor include:

Urban bias in public investment for infrastructure and provision of safety nets;

- Implicit taxation of agricultural products through so-called support prices and an overvalued exchange rate;
- Direct taxation of agricultural exports and import subsidies;
- Subsidies for Capital-Intensive technologies;
- Favouring export crops over food crops; and
- Bias in favour of large landowners and commercial producers with respect to rights of land ownership and tenancy, publicly provided extension services, and access to (subsidised) credit.

Moreover, social and economic deprivations of rural populations have been neglected, and often remain invisible in official statistics, documents and policy analyses. Two examples may be mentioned in the context of Pakistan. To determine poverty incidence, the official poverty line is estimated at national level instead of using separate urban and rural poverty lines. Second, the targeting of the largest social assistance programme (BISP) is based on the poverty score card. Here also, a

unique score card is used for identification of both urban and rural poor, despite the distinct characteristics of each component/segment/group. This situation indicates a lack of public awareness as well as unconsciousness of policy makers around the understanding of sources and drivers of poverty and social exclusion of rural population. This chapter partly fills the gap by profiling special features of consumption and multidimensional poverty, and also evaluates the extent of social exclusion in terms of multiple deprivations.

CONSUMPTION POVERTY IN THE RURAL CONTEXT

Traditionally, Household Integrated Economic Surveys (HIES) are used to estimate poverty in Pakistan. These nationally representative surveys are carried out by the Pakistan Bureau of Statistics (PBS) with a sample of around 16 to 18 thousand households across the country. Individual household level (unit record) data of HIES are used to estimate consumption poverty for rural areas.

Estimation of Consumption Poverty Line

Among the various approaches of defining income/consumption or traditional poverty, 'calorific approach' is the most popular in developing countries due to its practicality. Almost in all studies of poverty in LDCs including Pakistan, poverty level is defined in terms of food inadequacy which is typically measured by the lack of nutritional (calorie) requirements. Correspondingly, the Government of Pakistan adopted this approach for estimating official poverty line. According to the Poverty Reduction Strategy Paper (PRSP-I, GoP, 2003a), the Planning Commission described the following definition for estimating the poverty line.

"Calorific requirement approach wherein all those households (or individuals) are classified as poor who do not have income sufficient to allow a consumption pattern consistent with minimum calorie requirements (2350 calories per adult equivalent per day). It is also assumed that the households earning incomes equivalent to poverty line not only have sufficient food to meet the minimum nutrition requirements but also the non-food requirements".

However, the Government of Pakistan does not estimate separate urban and rural poverty lines. As the rural lifestyle in general requires a greater consumption of calories than the urban lifestyle, then for any given level of income, rural households are likely to consume more calories, on average, than their urban counterparts. Thus poverty estimates derived from official methodology using unique poverty line for both urban and rural households underestimate rural poverty and overestimate urban poverty.

To get rid of this deficiency, the Poverty Research Unit of Social Policy and Development Centre (SPDC) estimates separate urban and rural poverty lines using 2230 and 2550 calories per day per adult as the minimum calorie requirement[1] for urban and rural areas respectively. Thus the rural calorie norm (minimum calorie requirement), recommended by SPDC is used here to estimate rural consumption poverty line.

Box 6.1 FGT Poverty Aggregates

Various poverty aggregates (indices) are used to proxy the status of a group of individuals. A class of functional forms, which has been suggested by Foster, Greer, and Thorbeke (FGT), uses various powers of the proportional gap between the observed and the required expenditure as the weights to indicate the extent of and level of intensity of poverty. The higher the power the greater the weight assigned to a given level of poverty. Therefore, it combines both incidence and intensity. The following formula is used for measuring various poverty aggregates.

$$P^{\alpha} = (1 / N) \Sigma [(Z - EXP) / Z]^{\alpha}$$

Putting $\alpha = 0$, the formula shows the proportion of households whose consumption falls below the poverty line. This poverty **incidence or headcount** is the most popularly used in poverty empirics. The formula assigns equal weights to all of the poor regardless of the extent of poverty.

Putting $\alpha = 1$, the Proportionate Gap Index or **Poverty Gap** (PG) is calculated. The PG measures the average distance from the poverty line. Although the PG shows the depth of poverty, it is insensitive to distribution among the poor.

Putting $\alpha = 2$, FGT2 index is calculated. This index takes into account inequality amongst the poor and shows the **poverty severity** by assigning greater weights to those households who are far below the poverty line.

Thus, these three aggregate indices **(Headcount, Poverty Gap, and Poverty Severity)** are computed to give a picture of the extent and severity of poverty.

To estimate household expenditures which are required for obtaining the minimum required calories, Calorie-Consumption Function (CCF) is estimated. Poverty line is then computed by combining calorie norms and estimated coefficients of the CCF. Poverty can then be used to define the poor by total expenditure falling short of the poverty line; by the average dietary pattern, the expenditure would translate into fewer calories than required.

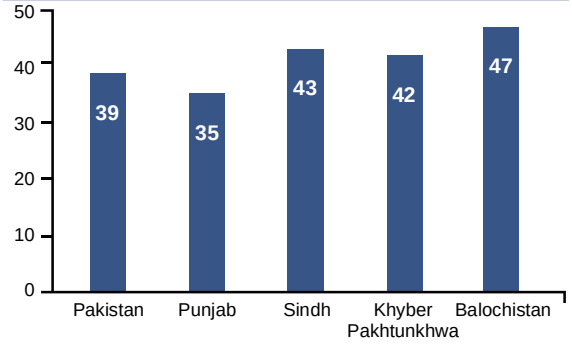
Once a poverty line is defined, and hence the individual/household poverty status determined through relating poverty line and household expenditure, the question is how to aggregate this information into a single index to proxy the status of a group of individuals. The most popular measure, namely the Headcount Index (incidence) assigns equal weights to all poor regardless of the extent of poverty. However, there are other measures which are sensitive to distribution among the poor and combine both the incidence and intensity of poverty. Three aggregate measures/indices are estimated: Headcount, Poverty Gap and Poverty severity. The formulae and the weights assigned to these indices are described in Box 6.1.

Latest Estimates of Rural Poverty

The estimated rural poverty line (Rs. 2298 per adult equivalent or Rs. 1926 per capita per month) from the latest available HIES data for the year 2010-11 is mapped on household per capita total expenditure for computing various poverty measures or aggregates. Chart 6.1 displays the estimated statistics of poverty incidence (headcounts).

Chart 6.1 Estimates of Consumption Poverty Incidence - 2010-11

[Percentage of Rural Population below Poverty Line]



Source: SPDC estimates based on household level data of HIES (2010-11)

Table 6.1 Estimated Rural Poverty Measures - 2010-11

(percent)

	Head Count Index [Incidence]	Poverty Gap Index [Depth]	FGT2 Index [Severity]
Pakistan	38.66	6.92	1.84
Punjab	35.49	6.21	1.60
Sindh	43.18	7.67	2.01
Khyber Pakhtunkhwa	41.79	8.04	2.40
Balochistan	46.85	8.27	2.06

Source: SPDC estimates based on household level data of PSLM 2010-11

It is estimated that overall about 39 percent of the rural population of Pakistan was poor during the year 2011. As expected rural poverty is the lowest in the Punjab province and highest in Balochistan province. The magnitude of rural poverty is almost equal in Sind and Khyber Pakhtunkhwa, while poverty in Balochistan province is relatively higher.

The information clearly conveys that the plight of the rural people may be obscured by ignoring the analysis of poverty and deprivation separately for the rural context. This is very much evident in the case of rural Sindh.

Table 6.1 summarises the famous FGT aggregate measures of rural poverty. Besides incidence or headcount, no significant differences are observed across provinces in the Poverty Gap Index (PGI) or poverty depth. The PGI informs the required per capita contribution to lift poor people out of poverty (as a proportion of the poverty line). Nonetheless, here too the magnitude is highest for Balochistan. Similar trends are evident in the measure of poverty severity. It is however worthy to note that poverty depth and severity indices are notional and are generally used to rank regions or territories or to track changes over time.

Most of the analyses of poverty have been carried out at the aggregate rural level due to the sample design of HIES which provides statistically reliable estimates of poverty and other characteristics only at the national or regional (urban/rural) levels. Because of this obstacle very few studies attempted to provide variation in poverty at disaggregated levels, especially in terms of agro-ecological differences[2] in rural Pakistan. These studies found significant differences in poverty levels; nonetheless these estimates are not representative and not statistically reliable as they have been derived from a district representative survey, and thus do not capture the inter-district differences in a particular agro-ecological or climatic zone.

The Poverty Research Unit of SPDC attempted, for the first time, to predict poverty with the help of non-income poverty correlates at sub-national levels by applying small area estimation technique in the context

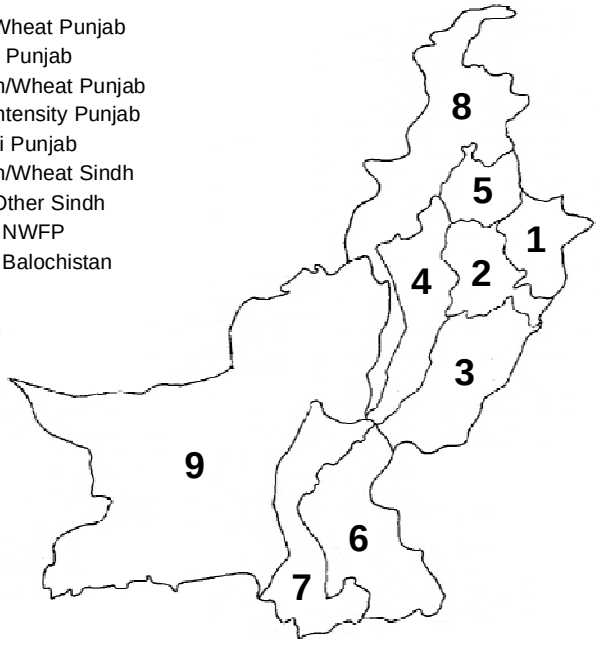
of Pakistan[3]. The technique employs two surveys: a small survey which is representative at national and regional level (HIES) and a large district representative survey (PSLM). Both surveys are conducted by PBS. This technique is used for this study to estimate consumption poverty at the levels of agro-climatic zones[4] of Pakistan (Box 6.2). Chart 6.2 highlights the estimated poverty headcount or incidence for the year 2010-11.

The highest incidence of consumption poverty is estimated for "Low-Intensity Punjab" (mostly South Punjab and D.I. Khan of Khyber Pakhtunkhwa) zone followed by "Rice-Other Sindh" zone. The estimated poverty incidence of "Cotton/Wheat-Punjab" zone is also high. Again this zone consists of districts of south Punjab.

Box 6.2 Pakistan Agro-Climatic Zones

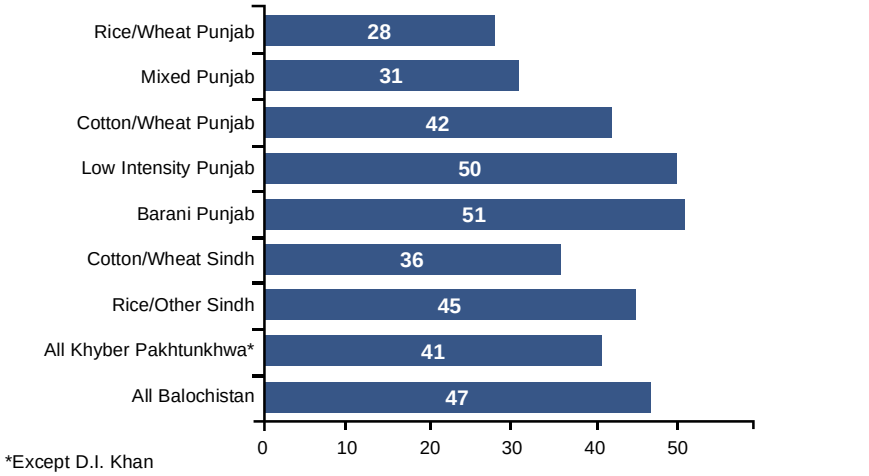
	Agro-climatic Zones	Districts
1	Rice/Wheat Punjab	Sialkot, Gujrat, Gujranwala, Sheikhupura, Lahore, Kasur, Narowal, Mandi Bahauddin, Hafizabad
2	Mixed Punjab	Sargodha, Khushab, Jhang, Faisalabad, Toba Tek Singh, Okara
3	Cotton/Wheat Punjab	Sahiwal, Bahawalnagar, Bahawalpur, Rahimyar Khan, Multan
4	Low Intensity Punjab	Dera Ghazi Khan, Rajanpur, Muzaffargarh, Layyah, Mianwali, Bhakkar and Dera Ismail Khan of Khyber Pakhtunkhwa
5	Barani Punjab	Attock, Jhelum, Rawalpindi, Islamabad, Chakwal
6	Cotton/Wheat Sindh	Sukkur, Khairpur, Nawabshah, Hyderabad, Tharparkar, Nowshero Feroz, Ghotki, Umerkot, Mirpur Khas, Sanghar
7	Rice/Other Sindh	Jacobabad, Larkana, Dadu, Thatta, Badin, Shikarpur, Karachi
8	Khyber Pakhtunkhwa	All Khyber Pakhtunkhwa except Dera Ismail Khan
9	Balochistan	All Balochistan

1. Rice/Wheat Punjab
2. Mixed Punjab
3. Cotton/Wheat Punjab
4. Low Intensity Punjab
5. Barani Punjab
6. Cotton/Wheat Sindh
7. Rice/Other Sindh
8. Other NWFP
9. Other Balochistan



Source: Pickney, Thomas C. 1989. "The Demand for Public Storage of Wheat in Pakistan", Research Report 77, International Food Policy Research Institute (IFPRI)
http://www.ifpri.org/sites/default/files/publications/rr77.pdf

Chart 6.2 Rural Poverty Incidence across Agro-Climatic Zones of Pakistan [2010-11]



*Except D.I. Khan

Source: SPDC estimates based on household level data of HIES (2010-11)

In contrast, lowest poverty (15 percent) incidence is estimated for "Barani" (rain-fed) zone of Punjab. Moreover, about 47 and 41 percent poverty incidence is estimated for Balochistan and Khyber Pakhtunkhwa provinces respectively. These provinces have a very small share in agriculture GDP.

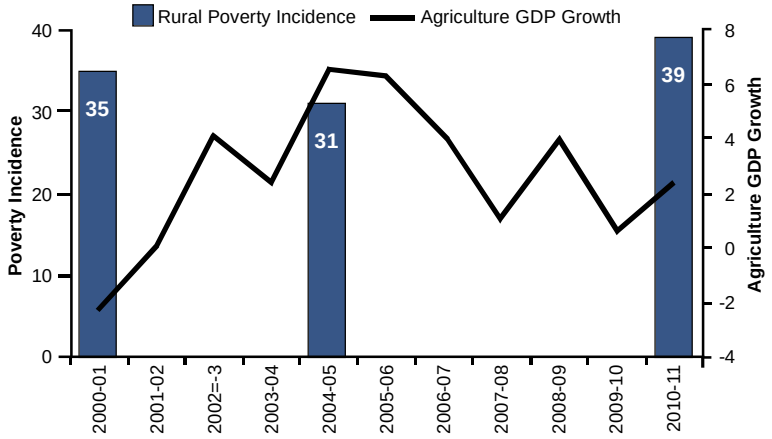
Despite methodological differences and other inconsistencies, surprisingly, the poverty trends are very much similar to earlier studies described in Malik (2005). High poverty levels are generally observed in Sindh and southern Punjab, while lowest level of poverty is observed in barani areas of the Punjab province.

Trends in Rural Poverty

There is consensus among researchers and analysts that economic growth may not always be a sufficient condition for poverty reduction, but it certainly is a necessary one. Chart 6.3 confirms this phenomenon by highlighting the inverse relationship between agriculture GDP and rural poverty incidence. A decline of 4 percentage points is observed during the periods 2001 and 2005. The principal factor for this decline in rural poverty was the remarkable growth of 7.5 percent in agriculture in 2004-05 as against 0.1 percent in the fiscal year 2000-01. In contrast, due to the decline in growth in agriculture GDP during 2005 and 2011, poverty level is reverting back and showing an upward trend with an increase of 8 percentage points during 2005-2011 periods.

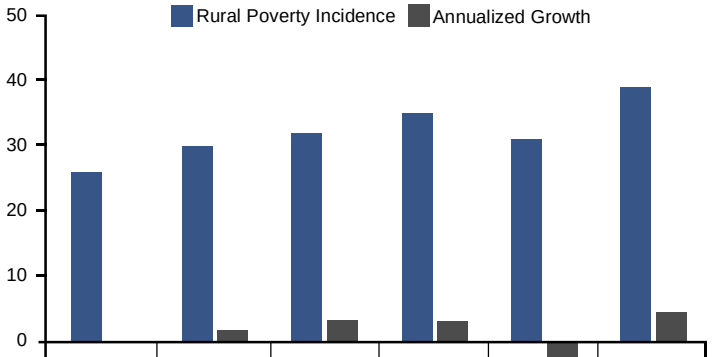
Chart 6.4 portrays the trend in poverty incidence from 1987-88. All these poverty numbers are estimated using unit record household level data of HIES and by applying throughout a consistent and identical methodology for estimating poverty lines and poverty indices. The chart indicates a rising trend in rural poverty incidence up to the period 2000-01. However, rural poverty has dropped with an annual growth rate of 4 percent during 2001-2005. Again, during 2004-05 and 2010-11, estimated poverty incidence has gone up with an annualised growth of 4 percent.

Chart 6.3 Rural Poverty and Agriculture GDP



Source: SPDC estimates based on household level data of HIES (various issues)

Chart 6.4 Inter-Temporal Incidence of Rural Poverty
[Percentage of Rural Poor Population]



	1987-88	1996-97	1998-99	2001-02	2004-05	2010-11
Rural Poverty Incidence	26	30	32	35	31	39
Annualized Growth	0	2	3	3	-4	4

Source: SPDC estimates based on household level data of PSLM (2010-11 and 2004-05)

Socio-Economic Correlates of Consumption Poverty

Understanding the key demographic and socio-economic characteristics of the poor is an essential prerequisite for the formulation of an effective and meaningful poverty alleviation strategy. An attempt is made to establish links between consumption poverty and social, demographic and economic attributes of households. The demographic characteristics include household size, dependency ratio, age and gender of the head of the household. Access to asset endowments is assessed based on ownership of land and livestock, as well as the educational attainment of the head and spouse of the household. Impact of remittances on poverty is evaluated by estimating separate poverty incidence for households which receive domestic or foreign remittances, and which do not. To establish the link between poverty and nature of work in the rural context, occupational characteristics are also considered.

The analysis is carried out by applying two different methods. First, poverty incidences are estimated for various categories of household characteristics. For instance, what would be the poverty level of households with less than five family members as compared with households with family size of more than nine? This bi-variate analysis, although it provides useful insights in terms of poverty determinants, fails to provide the net impact of an attribute on poverty status after controlling the other characteristics. Thus a multivariate analysis is supplemented by estimating logistic regression function. The summary statistics of the logistic regression indicate a good-fit of the model with a high percentage of correct predictions and expected signs of all coefficients. The findings of these exercises are collated in Tables 6.2 and 6.3.

Family size and dependency ratio are important determinants of rural poverty. The incidence of poverty is increasing significantly with the increase in family size. About 19 percent households with a family size less than five are designated poor, while the incidence is 47 percent of those households which have a family of more than 9 members. Similar differences are observed in the categories of dependency ratio. Very low magnitude of poverty incidence (10 percent) is evident in Table 6.2 for households which have less than 50 percent dependency ratio. Highly statistically significant coefficients of these two characteristics in the logistic regression (Table 6.3) corroborate the importance of population welfare programmes in alleviating rural poverty.

Female headship of households is considered a positive correlate of poverty. The experience of developing countries shows that, as heads of households, women face all kinds of cultural, social, legal and economic obstacles that men, even poor men, do not. However, to understand the true impact of female headship on poverty, it is essential to integrate the role of transfers and remittances into the analysis. By and large, women in Pakistan acquire the status of head of a household in two eventualities. First, when men migrate in search of better economic prospects and women temporarily take charge of the household. Such instances are particularly common in northern areas of Pakistan where the phenomenon of out-migration is prevalent. Second, when the male head of household dies or departs from the household and woman provides for her family. The results of poverty incidence (Table 6.2) show that in the latter case, the probability of the household being poor is high.

In the rural context, it is assumed that the education of head or spouse of household does not play an influential role in the income generating activities and hence is not as important as the endowment of physical capital (land, livestock, machinery etc.). However, the findings clearly demonstrate that education of the family head directly or indirectly influences poverty levels. The poverty incidence of households with illiterate head is 42, while it is as low as 8 in cases of households where head has intermediate or higher level of schooling. The findings of multivariate analysis also confirm the role of education of head as the coefficient associated with schooling is negative and statistically significant.

Table 6.2 Consumption Poverty Incidence By Household Characteristics
[Percentage of Poor Rural Households, 2010-11]

		Pakistan	Punjab	Sindh	Khyber Pakhtunkhwa	Balochistan
Overall	**Rural Poor Households**	**34.14**	**30.06**	**37.79**	**37.59**	**42.30**
Family Size	< 5	18.86	18.63	26.54	11.70	15.84
	6-9	43.10	43.86	50.44	34.12	39.01
	> 9 Members	47.13	43.82	55.36	47.32	42.27
Dependency Ratio	<50%	9.66	5.38	18.48	19.91	15.07
	50%-100%	35.94	35.64	44.57	28.83	32.75
	More than 100%	46.99	46.78	49.93	46.19	42.59
Headship	Male Headship	35.25	34.08	42.65	31.71	32.51
	Female Headship					
	- No Remittance	41.62	43.20	45.56	34.58	42.40
	- Domestic Remittance	24.01	24.58	56.15	20.53	.
	- Overseas Remittance	8.46	6.80	67.99	8.46	.
Age of Head	< 25	27.21	27.22	36.64	14.93	22.52
	25-45	35.83	35.53	41.81	31.16	30.44
	46-65	34.39	32.29	45.58	31.68	35.96
	Above 65 Years	28.32	28.93	37.91	19.23	32.50
Schooling of Head	Illiterate	41.67	42.14	51.49	32.67	36.46
	1-5	34.33	32.29	44.73	25.58	34.61
	6-10	25.01	22.63	34.62	28.60	19.97
	11-12	13.03	8.15	17.88	16.56	22.46
	>12 Years	8.16	2.12	13.01	17.05	6.49
Schooling of Spouse	Illiterate	36.86	36.47	45.12	30.93	33.05
	1-5	24.09	24.09	29.56	15.46	12.08
	6-10	16.43	15.32	22.65	19.24	.
	>10 Years	3.36	2.02	7.46	8.74	.
Household Type	Land Ownership	21.12	21.49	18.44	21.41	20.66
	Share Cropper (Hari)	33.59	28.10	45.62	39.43	40.67
	Non-Farm	42.26	42.39	50.65	34.34	34.47
Farm Size	Landless	41.57	41.14	50.25	34.74	34.58
	Small Farm (<13 Acres)	22.38	22.61	20.90	22.18	23.13
	Large Farm (>13 Acres)	8.70	8.31	9.22	9.14	9.82
Livestock	No Livestock	38.79	37.96	50.99	31.64	34.34
	Livestock Ownership	29.61	28.62	35.46	27.60	25.89
Remittances	No Remittances	37.09	35.83	42.65	36.33	32.48
	Domestic Remittances	26.78	28.51	50.99	19.23	16.10
	Overseas Remittances	10.82	7.85	48.76	13.03	29.09

Source: Estimated from household level data of HIES, 2010-11

Table 6.3 Results of Logistic Regression
[Dependent Variable Poor = 1, Non-Poor = 0]

	Estimated Coefficients	Level of Significance
Family Size	.319	.000
Dependency Ratio	-.012	.000
Head – Unemployed	.536	.095
Head – Wage Employed	.324	.000
Nonfarm Household	.514	.000
Number of Earners	-.213	.000
Age of Head	.005	.036
Education Level of Head	-.044	.000
Education Level of Spouse	-.030	.029
Large Farm Households [More than 13 Acres]	.181	.612
Agriculture Land [Acres]	-.056	.000
Household Asset Score	-.279	.000
Ownership of Non-Residential Building	-.179	.250
Livestock Ownership	-.708	.000
Household Structure – Pucca	-.110	.271
Landline phone [PTCL]	-.138	.032
Sindh Province	.610	.000
Khyber Pakhtunkhwa Province	.661	.000
Balochistan Province	1.344	.000
Intercept [Constant]	-1.853	.000

Note: The signs of all coefficients are according to a priory expectation. Except spouse education, unemployed head, large farm households and ownership of non-residential building, all coefficients are statistically significant at least at 5 percent level.

Model Summary:	
-2 Log likelihood	9215
Cox & Snell R-Square	0.29
Nagelkerke R-Square	0.40
Percentage of Correct Prediction:	
Non-Poor	86.5
Poor	59.2
Overall	77.0

Source: Estimated from household level data of HIES, 2010-11

Ownership of land, livestock and non-residential property are all negatively correlated with poverty incidence. Further, medium and large farmers (ownership of land greater than 13 acres) play a dominant role in distinguishing non-poor from poor households. Poverty incidences for landless households, small farmers and large farm households are estimated at 42, 22 and 7 percent respectively. With respect to type of rural households, highest incidence is observed for nonfarm households, while about 34 and 21 percent share-cropper and landowner households respectively are designated poor.

Table 6.2 also reveals that remittances, especially from overseas, are instrumental in improving the standard of living of recipient households. It is evident from the table that poverty incidence is only 11 for those rural households which receive overseas remittances as against 37 percent households which do not receive such remittances.

Nonetheless, the remittance variable did not work in the logistic regression model and appeared statistically insignificant with wrong sign, perhaps due to the multicollinearity[1] problem.

An important determinant of poverty status is the stock of household assets. This variable is constructed by assigning equal weight[5] to each of the twenty assets[6] listed in the HIES questionnaire. In the logistic regression 'asset-score" appears highly correlated with poverty status of households. The coefficient associated with "asset score" is negative and highly significant.

Consumption Poverty and Micronutrient Deprivation

Consumption poverty is based on the premise of food inadequacy in terms of minimum calorie (energy) requirements. To estimate the consumption poverty line or poverty cutoff point, average dietary pattern is translated into calories and statistically correlated with household consumption. Nonetheless, the impact of other micronutrient deprivations on health, and especially on labour productivity, cannot be overlooked. Moreover, micronutrient deficiency is an important factor which contributes to the poverty trap, besides other factors such as no access to credit, environmental degradation, bad governance, poor education system, inadequate infrastructure and lack of public health care. Below is an average picture of malnourishment in rural households, portrayed by highlighting the extent of deficiency with respect to protein, vitamin A, iron, iodine and zinc. The intakes of these micronutrients are derived from the dietary pattern of rural households as evident from HIES 2010-11 data on food consumption.

Table 6.4 compares the average nutrient intake with the recommended daily allowance. The calorie intake in rural Pakistan is higher than the recommended requirement (2625 Kcl versus 2550 Kcl) in all provinces except in Sindh. Due to the differences in climatic, work and living environment, it is not surprising that average calorie intake is the highest in Khyber Pakhtunkhwa province. On the average, no significant protein intake deficiency is observed in rural population except for Sind province. However, an unpleasant picture emerges with respect to other micronutrient intakes. Average daily intakes of vitamin A, Iron, Iodine and Zinc are far off the mark as compared to the recommended daily allowance.

Table 6.4 Average Nutrient Intake in Rural Pakistan –2011
[Per Adult Nutrient Equivalent Unit]

	Calorie [Kcal]	Protein [g]	Vitamin-A [RE]	Iron [mg]	Iodine [ppm]	Zinc [mg]
Punjab	2636	59	558	16	52	10
Sindh	2490	51	338	14	50	9
Khyber Pakhtunkhwa	2703	55	426	17	47	10
Balochistan	2700	57	332	17	68	11
Overall	**2625**	**57**	**487**	**16**	**52**	**10**
Recommended Daily Allowance	**2550**	**57**	**750**	**20**	**150**	**15**

Source: Estimated from household level data of HIES, 2010-11.

Note:Nutrient values of various food items and Recommended Daily Allowance are taken from "Food Consumption Tables for Pakistan" (GoP, 2001).

Table 6.5 Extent of Nutrient Intake Deficiency in Rural Households –2011
[Percentage of Household Reported Nutrient Consumption Below the Recommended Allowance]

All Households	Calorie [Kcal]	Protein [g]	Vitamin-A [RE]	Iron [mg]	Iodine [ppm]	Zinc [mg]
All Households						
Punjab	52.41	49.00	76.72	84.93	98.01	92.74
Sindh	57.99	60.43	95.22	92.02	99.44	97.24
Khyber Pakhtunkhwa	50.74	54.43	87.48	78.92	98.41	91.81
Balochistan	48.47	50.28	92.64	75.29	96.67	88.53
Overall	52.89	51.88	82.46	84.67	98.24	93.14
Poor Households						
Punjab	90.34	82.92	92.70	97.95	99.78	99.14
Sindh	93.16	90.51	99.58	99.91	99.76	100.00
Khyber Pakhtunkhwa	89.09	88.67	97.06	97.48	100.00	99.31
Balochistan	85.71	82.46	99.50	97.54	100.00	99.10
Overall	90.53	85.31	95.12	98.28	99.82	99.35
Non-Poor Households						
Punjab	33.68	32.25	68.84	78.51	97.13	89.58
Sindh	31.84	38.05	91.98	86.15	99.20	95.18
Khyber Pakhtunkhwa	34.63	40.04	83.45	71.12	97.74	88.67
Balochistan	30.84	35.04	89.40	64.76	95.10	83.53
Overall	33.40	34.58	75.91	77.63	97.43	89.92

Source: Estimated from household level data of HIES, 2010-11.

To further elaborate the phenomenon of severe deprivations of micronutrient intakes, Table 6.5 has been developed. The table reports the extent of nutrient intake deficiency with respect to recommended daily allowance in rural households. It is evident from the table that in more than 80 percent rural households, daily consumptions of vitamin A, Iron, Iodine and Zinc are below the recommended daily allowance. According to the disaggregated information with respect to household consumption poverty status, almost more than 95 percent poor households are deprived in terms of the above micronutrients. The phenomenon of severe deprivations of micronutrient intakes clearly necessitates direct nutritional intervention schemes for the poor to escape from the poverty trap. Simultaneously, the dietary trend in non-poor households calls for enhancing the level of awareness regarding knowledge as well as sources of micronutrients.

Although the above exercise of determining household status in terms of deprivation in micronutrient intake is useful[7], the formulation of policy for nutritional interventions requires estimates of anthropometric measurement and clinical and core biochemical assessment of micronutrients, especially for target groups (children and women). Specialised nutrition surveys are useful tools that provide estimates of severity and geographical extent of malnutrition in terms of all important nutritional status indicators. These surveys assess the nutritional status of the individual or a representative sample of individuals within a population by measuring anthropometric, biochemical or physiological (functional) characteristics to determine the individual status in terms of nourishment.

Table 6.6 Incidence of Malnutrition – Rural Pakistan

			2011	2001
Protein/Energy Malnutrition: [Anthropometric Measurement]				
Children Under Five	Underweight	[Weight-for-Age]	33.1	42.3
	Stunted	[Height-for-Age]	45.9	32.5
	Wasted	[Weight-for-Height]	18.0	11.2
Women	Normal BMI		56.6	56.2
Nutritional Deficiencies: [Clinical and Bio-Chemical Assessment of Micronutrients]				
Mothers	Iron Deficiency		26.6	38.9
	Iron Deficiency Anaemia		20.5	28.6
	Zinc Deficiency		43.2	44.9
	Iodine Deficiency (Goitre Visible)		3.4	11.8
Children Under Five	Iron Deficiency Anaemia		33.0	36.8
	Zinc Deficiency		36.4	40.2
Children - School Age	Iodine Deficiency		35.9	64.0

Source: National Nutrient Surveys, 2002 and 2011

The latest National Nutrition Survey (NNS) was conducted in 2011 by the Aga Khan University in association with the Pakistan Medical Research Council, Nutrition Wing-Cabinet Division (Government of Pakistan) and UNICEF (Pakistan). Table 6.6 furnishes the prevalence of malnutrition among children and women from the findings of NNS 2011 which have been made public[8] recently. To compare the inter-temporal changes, the incidences of malnutrition are also collated from the previous National Nutrition Survey of 2001-2002 (GoP, 2004).

According to the table, nearly 33 percent of children under five are underweight, 46 percent stunted, 18 percent wasted, 33 percent have iron deficiency anaemia and 36 percent have zinc deficiency in rural Pakistan during the survey year 2011. About 3 percent of the mothers had iodine deficiency with visible signs of goitre, while almost 21 percent mothers have iron deficiency anaemia. Moreover, about 36 percent school-going children still have iodine deficiency albeit significant improvement has been noted since 2002.

The NNS 2011 concludes that “very little has changed over the last decade in terms of core maternal and childhood nutrition indicators. The survey does point towards gains in iodine status nationally following the implementation of a universal salt iodization and promotion strategy, but is counterbalanced by substantial deterioration in vitamin A status and little to no gains in other areas of micronutrient deficiencies”.

MULTIDIMENSIONAL POVERTY

The traditional uni-dimensional approach, which considers only one variable such as income or consumption, is popularly used due to its practicality. Nonetheless, it is extensively criticised in the literature of welfare and well-being. Critics argue that to understand the complex phenomenon of poverty or to evaluate household or individual well-being holistically, a multidimensional exercise is imperative.

Although there has been progress in defining and measuring the multidimensional nature of poverty, and ample literature is now available on the conceptual and measurement issues, the "…challenges remain quite serious if the objective is to reach a degree of operationality (for multidimensional paradigm) comparable to that enjoyed by the income poverty paradigm" (Bourguignon, 2003).

Despite difficulties and arbitrariness in the measurement and aggregation of household multiple deprivations, a multidimensional approach to define poverty has been adopted in many developed and developing countries. The United Nations Development Programme (UNDP) has since 1990 challenged the primacy of GDP per capita as the measure of progress by proposing the Human Development Index (HDI), which combines income with life expectancy and educational achievement. Recently a global exercise was carried out by the Oxford Poverty and Human Development Initiative (OPHI) to develop Multidimensional Poverty Index (MPI) for more than 100 countries with the help of 10 non-income deprivation indicators of education, health and standard of living[9]. The results in terms of countries' ranking and magnitude of poverty have been published in UNDP Human Development Report 2011. However, there are some concerns regarding the subjectivity in selecting cut-off points for individual indicators as well as for overall index. Moreover, weights to indicators and sectors are also arbitrarily assigned for developing a composite index.

Due to these shortcomings and subjectivity, the Poverty Research Unit of SPDC adopts a somewhat different methodology for estimating multidimensional poverty. Non-income deprivation indicators are combined through Categorical Principal Component Analysis (CATPCA) multivariate statistical technique. Consequently, this research follows the methodology[10] adopted in Jamal (2012b) to estimate rural multidimensional poverty aggregates. These estimates are derived from PSLM survey data enumerated during 2010-11, 2008-09 and 2004-05.

Components of Multidimensional Poverty

The selection of dimensions or components to derive multidimensional poverty is purely based on the appropriate data available in the household surveys. Table 6.7 provides a schematic view of the dimensions and component variables integrated for the estimation of indices of multidimensional poverty. All these variables are binary. A value of 1 is assigned to poor households and 2 to non-poor households.

The extent of human poverty in the household is represented by current and future levels of education deprivations. Two measures, illiteracy (head of household and spouse) and children out of school are included in this dimension[11]. Children between the ages of 5 to 9, who are not attending school, are taken to compute out-of-school children at the primary level. Moreover, another indicator of education deprivation is included. Households in which no household member has completed five years of schooling are considered poor.

Table 6.7 Variables Used to Assess Multi-Dimensional Poverty

Dimensions	Variables
Human Poverty	
	Illiterate Head of Household
	Illiterate Spouse
	No child of primary age (5-9 cohort) is in school
	No household member has completed five years of schooling
Poor Housing	
	Congested Household (Households with only one room)
	Congested Household (Person per room greater 2)
	Household with Inadequate Roof Structure
	Household with Inadequate Wall Structure
	Households with no electricity
	Households using unsafe (not covered) water
	Households with no telephone connection (landline or mobile)
	Households using inadequate fuel for cooking (wood, coal, etc.)
	Households without latrine facility
Economic and household Assets Poverty	
	Households with no home ownership
	Households with no physical household assets
	Unemployed Head of Household

No information regarding infant or child mortality and malnourishment is available in PSLM surveys. The dimension of health deprivation is therefore missing from the multidimensional poverty analysis due to absence of required information.

The housing quality dimension identifies people living in unsatisfactory and inadequate housing structures. It is represented by a series of variables. The housing structure is treated as inadequate if un-baked bricks, earth bound materials, wood or bamboo are used in the construction of a wall or the roof. Housing congestion is represented by households with only one room and if the number of persons per room is greater than 2. Access to basic utilities is an important aspect of everyday lives of people. Deprivation in this respect includes households with no electricity, households using wood or kerosene oil as cooking fuel, households with no safe drinking water availability and households with no landline or mobile telephone facility. Households which are lacking essential facilities such as kitchens, bathrooms and toilets are also seen as an important poverty dimension. Due to data constraints, only households lacking a toilet facility are included in the 'poor housing' dimension of multidimensional poverty.

To capture the poverty in endowments, non-ownership of house and non-ownership of essential household assets[12] are added to the list of variables used to assess the household multidimensional poverty. Further, category of households with unemployed head is also treated as poor and included in this dimension.

Box 6.3 Methodology for Measuring Multidimensional Poverty

The multidimensional nature of poverty refers to the situation when an individual or household experiences a number of cumulative deprivations. These multiple deprivations represent different dimensions (economic well-being, education, health, social exclusion etc.) of human life. To develop a composite indicator or index from the selected deprivation dimensions or variables, two important decisions have to be made. The first decision concerns the weights of the indicators in the composite index, and the second concerns defining the threshold value of the composite indicator used to distinguish between poor and non-poor households.

The weighting problem can be approached in a number of different ways. Besides equal weighting or subjective judgment of experts regarding the importance of each variable, the weights may be computed using different multivariate statistical techniques. Use of Principal Components Analysis (PCA) for indexing multidimensional phenomena has been well established. Principal component analysis is simply a variable reduction procedure that (typically) results in a relatively small number of components that account for most of the variance in a set of observed variables. However, traditional PCA is best for continuous and normally distributed data as the technique assumes linear relationship between numeric variables. For category indicator variables, a team of Leiden University has developed Categorical Principal Components Analysis (CATPCA). This technique is now available in SPSS and is applied for this study for developing a composite index of multidimensional poverty.

Having a representation of the data in the component form, every household is ascribed a 'score' on each derived principal component/object using factor loading (variance in the individual attribute) as a weight and then multiplying this score with the standardised value of variables. The 'factor score' (FS) of the first component, which explains the maximum amount of variation in the data, is preferred for assessing household multidimensional poverty.

Once the composite indicator in terms of factor score is obtained for each household, one still has to define a procedure to identify the poor. To determine threshold or poverty cut-off point, another multivariate statistical technique is used. Cluster Analysis allows the classification of similar objects into groups, or more precisely, the partitioning of an original population into subsets (clusters) according to some defined distance measure. On this basis, the score of two clusters representing household status (poor and non-poor) is developed. It is found that households are grouped around positive and negative values of the factor score. Therefore, mean value of the distribution of the composite index is chosen as the cut-off point, or as a poverty threshold.

After having a poverty threshold and the household status in terms of score with respect to multiple deprivations, three aggregate indices (see Box 6.1) are estimated to give a picture of the extent and severity of multidimensional poverty in rural Pakistan.

Estimates of Multidimensional Poverty

Table 6.8 presents national and provincial estimates of multidimensional poverty for the year 2010-11. Multidimensional poverty is estimated with the help of component/object scores. These scores are derived after adjusting with mean and standard deviation (standardising). Thus, the estimates reflect relative poverty (or inequality) with reference to mean, and should not be interpreted as an absolute poverty.

According to the table, 44 percent of rural people of Pakistan were in a state of multiple deprivations in the year 2010-11 and living in desperate condition, and eventually being socially excluded. As expected, highest incidence is observed in Balochistan province, where about 75 percent rural population is multi-dimensionally poor, followed by rural Sindh with an estimate of 57 percent. It is however important to

Table 6.8 Multi-Dimensional Rural Poverty Trends
[Percentage of Multi-Dimensionally Rural Poor Population]

	Head Count Index [Incidence]	Poverty Gap Index [Depth]	FGT2 Index [Severity]
Pakistan	43.97	11.72	4.89
Punjab	36.77	9.82	4.23
Sindh	57.07	15.32	6.14
Khyber Pakhtunkhwa	44.05	9.59	3.28
Balochistan	75.17	26.04	12.61

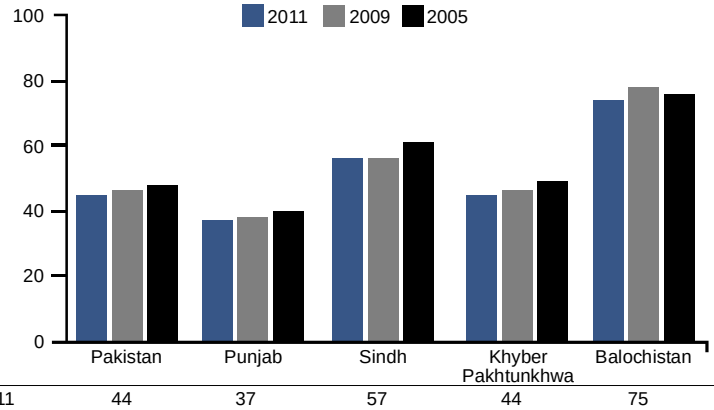
Source: SPDC Estimates based on household level data of PSLM (2010-11)

reiterate the phenomenon which is also observed in the case of consumption poverty. The table reveals that the level of multidimensional poverty of rural Sindh is significantly higher than the poverty estimated for rural Khyber Pakhtunkhwa province.

Chart 6.5 shows inter-temporal changes in the incidence of multidimensional poverty. The estimates show a slight decline (3 percentage points) in rural multidimensional poverty during 2005-2011 periods. Somewhat similar trends are evident in other provinces. The highest (6 percentage points) drop in rural multi-dimensional poverty is observed in Khyber Pakhtunkhwa province.

For policy perspectives, it is worth highlighting that consumption or income poverty measure only advocates the case for transfer policies and social safety-nets that alleviate poverty in the short-run, whereas multidimensional deprivation measures (literacy, enrolment, household wealth, housing conditions, child mortality etc.) remain stagnant in the short-run, and document the recommendation of structural socio-economic policies that could alleviate the intergenerational poverty in the long-term. Therefore, consumption poverty and multidimensional poverty are not a substitute for each other for policy formulation. Both provide different information in differing contexts.

Chart 6.5 Multi-Dimensional Rural Poverty Trends
[Percentage of Multi-Dimensionally Rural Poor Population]



	Pakistan	Punjab	Sindh	Khyber Pakhtunkhwa	Balochistan
2011	44	37	57	44	75
2009	46	39	57	49	79
2005	47	40	61	50	78

Source: SPDC estimates based on household level data of PSLM (2010-11 and 2004-05)

GEOGRAPHICAL INDICES OF MULTIPLE DEPRIVATIONS

One of the approaches[13] of studying social exclusion is through the construction of deprivation indicators, often with the purpose of informing and guiding resource allocation among regions, or of supporting a case for resource targeting in a particular region. In the context of Pakistan empirics on poverty, an additional tool referred to as Index of Multiple Deprivations (IMD) is used for mapping spatial or geographical deprivations. Unlike multidimensional or consumption poverty indices which first determine household status in terms of poverty before developing aggregate measures, the IMD is estimated by aggregating indicators at a particular geographical level. For instance, to arrive at the tehsil, district or provincial estimate of deprived or socially excluded population in terms of any specific indicator, both numerator and denominator are correspondingly aggregated at tehsil, district or provincial levels. Moreover, multidimensional poverty described above provides an estimate of relative poverty[14] and deprivations, whereas IMD provides the extent of absolute level of multiple deprivations. In developing or underdeveloped countries, where both absolute and relative poverty (inequality) are prevalent, it is the absolute level of welfare which is preferred by development planners and policy makers because of urgency associated with starvation, malnutrition, social exclusion and other afflictions.

Components of IMD

IMDs are made up of separate types or sectors of deprivation, each of which contains various indicators in order to give a broad measure of that type of deprivation. This exercise is based on the Pakistan Social and Living Standard Measurement (PSLM) survey datasets. Depending on the data availability in PSLM, the attempt is to choose indicators that reflect the poorest segment of society; thus, the IMD measures the extent of socially excluded population.

The selected sectors and indicators in constructing indices of multiple deprivations are schematised in Table 6.9, while a brief methodology for developing the composite index is furnished in Box 6.4. Following Jamal (2012a), this study considers 17 indicators to cover a range of social, housing and economic deprivations.

Estimated Indices of Multiple Deprivations

According to Chart 6.6 which displays the extent of rural deprivations, overall 38 percent population of rural Pakistan is deprived or multi-dimensionally poor in terms of selected indicators and dimensions (education, health, housing quality, housing services and economic). The provincial phenomenon is very much similar to the trends observed in consumption and multidimensional poverty. About 33 percent rural population of Punjab is deprived, followed by Khyber Pakhtunkhwa where the level of deprivation is 36 percent. The highest 54 percent deprived population is estimated for Balochistan Province.

Table 6.9 Indicators used to represent Sectoral Deprivations

Dimensions	Variables
Education:	Illiteracy Rate (10 years and above) – Female
	Illiteracy Rate (10 years and above) – Male
	Out of School Children (5-9 Years) – Female
	Out of School Children (5-9 Years) – Male
Health:	Lack of Immunization
	No Prenatal Health Care
	No Postnatal Health Care
	Did not Receive Tetanus Toxoid Injection
Housing Quality:	Household with Inadequate Roof Structure
	Household with Inadequate Wall Structure
	Congested Household (Households with only one room)
	Households without latrine facility
Housing Services:	Households with no electricity
	Households using unsafe (not covered) water
	Households with no telephone connection (landline or mobile)
	Households using inadequate fuel for cooking (wood, coal, etc.)
Economic Deprivation:	Below Average Household Assets Score

Box 6.4 Method for Composite Indexing

Composite indices represent the aggregate measure of a combination of complex development phenomena, and summarise multidimensional issues to support policy decisions. One of the issues in the context of composite indexing is the substitutability among component indicators. High deprivation, for instance in one sector, may be fully compensated for or counterweighted with the low deprivation in the other sector. This situation is not suitable in most cases where a minimum of all components are required for a combined index. The issue of substitutability may be resolved to some extent by taking the geometric mean of deprivation indicators instead of combining indicators using simple average. Following the UNDP methodology for combining HDI components and also for simplicity, geometric mean is preferred to develop composite index of multiple deprivation

Thus variables in each sector/domain are combined first, using the formulae of geometric mean which is simply the nth root of the product of n numbers. More generally, if the numbers are $x_1, ..., x_n$, the geometric mean G satisfies

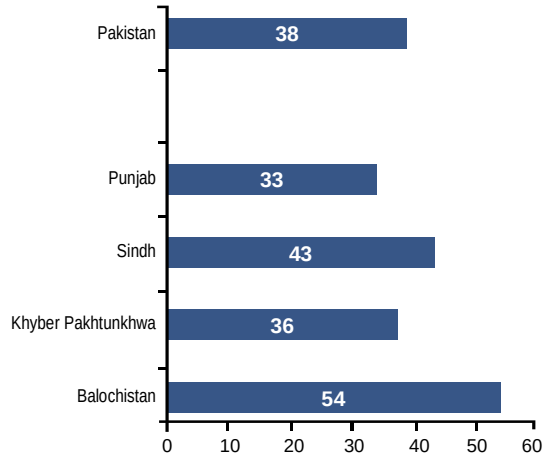
$$G = \sqrt[n]{x_1 x_2 ... x_n}$$

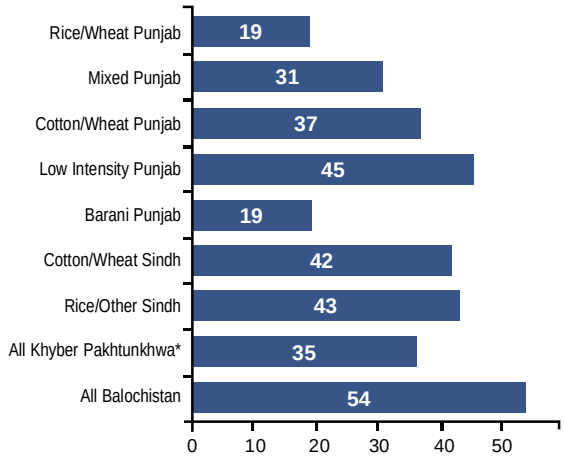
All variables are simple rates (percentage of the population affected by the type of deprivation) and may easily be combined. At the second stage, the overall index of multiple deprivations is developed by combining sectoral indices, developed at stage 1. Again for the sake of simplicity and keeping uniformity with the UNDP-HDI methodology, geometric mean is preferred to combine the various sectors. Thus overall IMD in this study is the geometric mean of five sectors/domains.

Chart 6.6 Rural Indices of Multiple Deprivations [2010-11]

Chart 6.7 Indices of Multiple Deprivations by Agro-Climatic Zones [2010-11]

[Percentage of Rural Population Deprived in terms of Selected Indicators]





Source: SPDC estimates based on household level data of PSLM (2010-11)

The extent of rural deprivation across agro-climatic zones is displayed in Chart 6.7. Similar to multidimensional poverty, the lowest deprivation is estimated for rain-fed (Barani) Punjab. Across agro-climatic zones of Punjab, the highest magnitude of IMD is observed in 'low-intensity', followed by 'cotton/wheat' Punjab. Major parts of both zones consist of districts of south Punjab. Almost equivalent magnitude (42-43 percent) is estimated for two agro zones of Sindh. The phenomenon indicates that cropping patterns and other agricultural practices in different zones do not impact the standard of living in Sindh province. Again, the level of multiple deprivations in Khyber Pakhtunkhwa is less than the levels of deprivation observed in Sindh and Balochistan provinces.

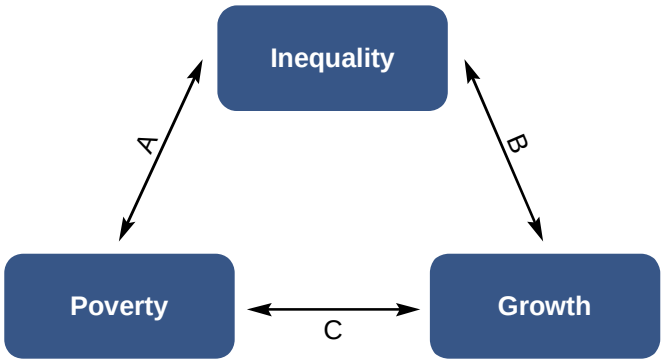
Indices of Multiple Deprivations are also derived from PSLM datasets for the year 2009 and 2005. Table 6.10 furnishes the estimated IMDs for these years. A declining trend is evident throughout the period in the table. It is also evident that the inter-provincial gap in terms of rural IMDs has declined somewhat, mainly due to the fact that the rate of decline in Punjab IMDs is lower than that of other provinces, especially in the period 2009-2011.

Table 6.10 Inter-Temporal Trends in Rural Deprivations

	2011	2009	2005
Pakistan	37.7	39.3	48.2
Punjab	32.7	33.5	40.8
Sindh	42.6	46.6	57.7
Khyber Pakhtunkhwa	35.9	38.3	48.4
Balochistan	53.6	56.6	67.6

Source: SPDC estimates based on household level data of PSLM (various issues)

Chart 6.8 Relationship between Inequality, Poverty and Growth



Source: Reproduced from Naschold Flex (2002)

INCOME INEQUALITY

Income inequality and poverty affect each other directly and indirectly through their link with economic growth. These interact with one another through a set of two-way links (see Chart 6.8). Some of these links can be explored separately, but often one influences another causing indirect effects. For instance inequality can indirectly influence poverty, as inequality affects growth, and growth in turn influences poverty.

Small changes in income distribution can have a large effect on poverty. A simple arithmetic example can help visualise this. Imagine that the share of national income that goes to the poorest 20 percent of Pakistan's population increases from 7 percent to 7.25 percent. A change in income distribution of one quarter of one percent would barely affect the Gini coefficient, but for the poor this represents about 4 percent increase in their total income. Such a small redistribution would have the same effect on poverty as doubling the annual growth (distribution neutral) of national income from 4 percent to 8 percent.

Various summary measures of inequality are furnished in Table 6.11 in order to describe the extent and nature of inequality in rural Pakistan. The Gini concentration ratio is the most widely used measure of inequality. The *Gini* provides an estimate of resource inequality within a population. It is the most popular and well-known measure of inequality, and summarises the extent to which actual distribution of resource differs from a hypothetical distribution, in which each person/unit receives an identical share. *Gini* is a dimensionless index scaled to vary from a minimum of zero to a maximum of one; zero representing no inequality and one representing the maximum possible degree of inequality.

The Gini coefficient for rural Pakistan is 0.37 for the year 2010-11, indicating a high level of income inequality. Provincially, Punjab has the most unequal distribution of rural income, followed by Khyber Pakhtunkhwa. Interestingly, Balochistan – the province with the lowest income level in the country–has comparatively the most equal income distribution.

Table 6.11 Per Capita Income Inequality in Rural Pakistan
[Gini Coefficients and Income Shares]

	2011	2009	2005
Gini Coefficients			
Pakistan	0.357	0.347	0.373
Punjab	0.365	0.373	0.403
Sindh	0.325	0.284	0.278
Khyber Pakhtunkhwa	0.349	0.300	0.347
Balochistan	0.295	0.287	0.230
Income Share of the Lowest 20% of the Population			
Pakistan	8.0	8.5	8.1
Punjab	7.2	7.5	7.2
Sindh	8.9	9.3	10.1
Khyber Pakhtunkhwa	8.1	9.0	8.1
Balochistan	9.4	9.5	10.3
Income of the Highest 20% of the Population			
Pakistan	43.2	43.4	45.8
Punjab	44.5	45.4	48.3
Sindh	41.9	38.0	38.5
Khyber Pakhtunkhwa	44.1	39.4	43.6
Balochistan	38.8	38.8	34.3
Ratio of the Highest to the Lowest			
Pakistan	5.5	5.2	5.7
Punjab	6.2	6.1	6.7
Sindh	4.7	4.1	3.8
Khyber Pakhtunkhwa	5.5	4.4	5.4
Balochistan	4.1	4.1	3.3

Source: Estimated from unit record household level data of HIES, various issues

The high level of income inequality in Punjab is apparently a consequence of regional contrasts within the province. Middle Punjab has long been regarded as the first region to have adopted agricultural innovations, and was the site of the beginnings of the 1960s green revolution in Pakistan. It is, however, also a region characterised by high population density and declining land-labour ratios. It has the lowest proportion of the workforce involved in agriculture, with relatively high landlessness; the workforce is primarily absorbed in the industrial sector (both large- and small-scale). Lower Punjab is mainly agricultural, however unlike middle Punjab, there continues to be a presence of powerful landlords with high unequal distribution of land. Land distribution patterns and non-agricultural development in lower (south) Punjab are similar to that of rural Sindh.

Between 2002 and 2005, the *Gini* coefficient for rural Pakistan shows no change in rural income inequality. However, a significant deterioration in rural income inequality is observed during the period 2005-2011. The rural *Gini* coefficient for per capita income has increased approximately 10 percent from 0.35 to 0.37. It is worth noting that consumption poverty has also significantly increased during this period. The provincial trend is somewhat different. Barring Punjab provinces, a downward trend in income inequality is observed during the period 2002-2005. For the period 2005-2011, the *Gini* shows an upward trend in Punjab and Khyber Pakhtunkhwa provinces, while slight decline is observed in Sindh and Balochistan Provinces.

A limitation of the *Gini* coefficient as a measure of inequality is that it is most sensitive to the middle part of income distribution, rather than to that of extremes, because it depends on the rank order weights of income recipients and on the number of recipients within a given range. Thus, to capture small changes in extreme parts of income distribution, the lowest and highest quintile income shares are also computed to supplement the estimates of the *Gini* coefficient.

Table 6.11 also provides information regarding the share of income accruing to the lowest 20 percent (i.e. the lowest quintile) and to the highest 20 percent (i.e. the highest quintile) of the population. Statistics with respect to income shares show that in 2004-05, the lowest quintile obtained just about 8.5 percent of the national income while the highest quintile obtained 43.4 percent of the income. By 2010-11, the share of the lowest quintile had declined to 8.1 percent and that of the highest quintile increased to 45.8 percent. As a result, the ratio of the highest to the lowest quintile has increased from 5.2 to 5.7. Like the *Gini*, the increase in the ratio of highest to lowest overall rural income share clearly indicates deterioration in the rural income distribution during the period 2005-11.

Table 6.12 Distribution of Rural Households Across Primary Activity Groups

	Pakistan	Punjab	Sindh	Khyber Pakhtunkhwa	Balochistan
Non-Agriculture	49	50	54	39	23
Agriculture	51	50	46	61	77
Livestock	17	14	26	11	24
Farm	34	36	20	50	53

Source: SPDC estimates based on Agriculture Census 2010 (from Table 8.1)

Income Inequality across Farm and Nonfarm Households

Rural households are generally distinguished in accordance with their access to agricultural land. According to the latest Pakistan Agriculture Census 2010, only 34 percent of rural households are engaged in the crop sector. However, this percentage is somewhat higher in Khyber Pakhtunkhwa and Balochistan provinces; the lowest proportion is observed in Sindh province (Table 6.12). Thus it is worth estimating separate levels of income inequality across farm and nonfarm households. The inequality coefficients for diverse sources of income associated with the nature of primary activities will provide some clue regarding the sources of overall income inequality in rural Pakistan.

Table 6.12 furnishes per capita income inequality in terms of Gini coefficients for farm and nonfarm rural households. Interesting observations emerge from the table. High magnitudes of Gini are observed in farm households except in Khyber Pakhtunkhwa province. The difference in the level of inequality is quite significant in Punjab and Sindh provinces – the agriculture heartland of the country. In contrast, insignificant differences with respect to Gini coefficients are observed in the provinces which have a tiny share in national agriculture value added.

Table 6.13 Per Capita Income Inequality Across Farm versus Nonfarm Households [Gini Coefficients for 2010-11]

	Farm Household	Non-farm Households
Pakistan	0.419	0.313
Punjab	0.451	0.319
Sindh	0.315	0.247
Khyber Pakhtunkhwa	0.326	0.363
Balochistan	0.244	0.224

Source: SPDC estimates based on household level data of HIES (2010-11)

The significant disparities in the magnitude of income inequality, as evident in Table 6.13 clearly indicate the necessity for formulating a different set of policies for farm and nonfarm households to alleviate poverty as well as to improve income distribution.

Land Distribution Profile

Among the various sources and determinants, skewed land distribution is a major constituent part of rural income inequality. According to Adams and He (1995), "agricultural income makes the largest contribution to overall inequality. Depending on the year, agricultural income accounts for between 35 and 45 percent of overall income inequality. This is largely because agricultural income is strongly correlated with landownership, which is distributed quite unevenly both in the area of the report and in rural Pakistan as a whole". Their study was based on a rich panel of data of rural households of four districts of Pakistan. Naschold (2009), who

Table 6.14 Land Ownership – Percent of Farms and Area

	Less Than 5 Acres		50 Acreas and More	
	Farms	Area	Farms	Area
Pakistan				
1990	54	13	2	28
2000	62	17	2	23
2010	68	21	1	21
Punjab				
1990	53	14	2	27
2000	62	19	1	15
2010	68	27	1	8
Sindh				
1990	36	8	5	41
2000	43	10	4	29
2010	51	12	3	23
Khyber Pakhtunkhwa				
1990	72	25	1	16
2000	81	33	1	17
2010	83	37	1	11
Balochistan				
1990	26	3	10	57
2000	30	4	8	49
2010	40	4	7	63

Sources: Agricultural Censuses (1990, 2000 and 2010)

also worked on the above panel dataset, concluded that "land ownership is a key to explaining the level of inequality, but not its (inter-temporal) changes". Therefore to observe the level as well as changes in the pattern of distribution of land ownership in rural Pakistan, Tables 6.14 and 6.14 have been developed from agriculture census data.

Table 6.14 which furnishes the size analysis of farm holdings on top and bottom tails of land distribution, points towards the highly unequal distribution of land. On the lower tail, 68 percent of farms are holdings of less than five acres and the total area under such farms comprises 21 percent of total farm area. In comparison, only one percent farms have 50 acres or more: they hold 21 percent of total farm area. The land distribution in Punjab province seems relatively better than that of Sind Province, as one percent farms with 50 acres or more hold only 8 percent of total farm areas of the province. As expected, the distribution is quite different in Khyber Pakhtunkhwa and Balochistan provinces which possess more or less a phenomenon of subsistence agriculture. The Khyber Pakhtunkhwa province has the highest percentage (83 percent) of farm holdings of less than 5 acres, while in Balochistan only 7 percent farms hold 63 percent of total farm area of the province.

Although the size analysis of farm holdings presented in Table 6.14 gives useful insights, a summary measure of inequality in land ownership facilitates a quick comparison of distribution across regions and over time. The famous and widely used Gini coefficient of inequality[15] is applied to the data on proportion of farms and land area owned. The estimated magnitudes of Gini are furnished in Table 6.15. Although the estimated Gini for Pakistan is stagnant at the level of 0.63 since 1990, significant variations across provinces are evident. The table also reveals a decreasing trend in Punjab and increasing trends in Sindh and Khyber Pakhtunkhwa provinces. The highest inequality in land ownership in terms of Gini coefficient is observed in Balochistan province.

Table 6.15 Trend in Land Ownership Inequality – Gini Coefficients

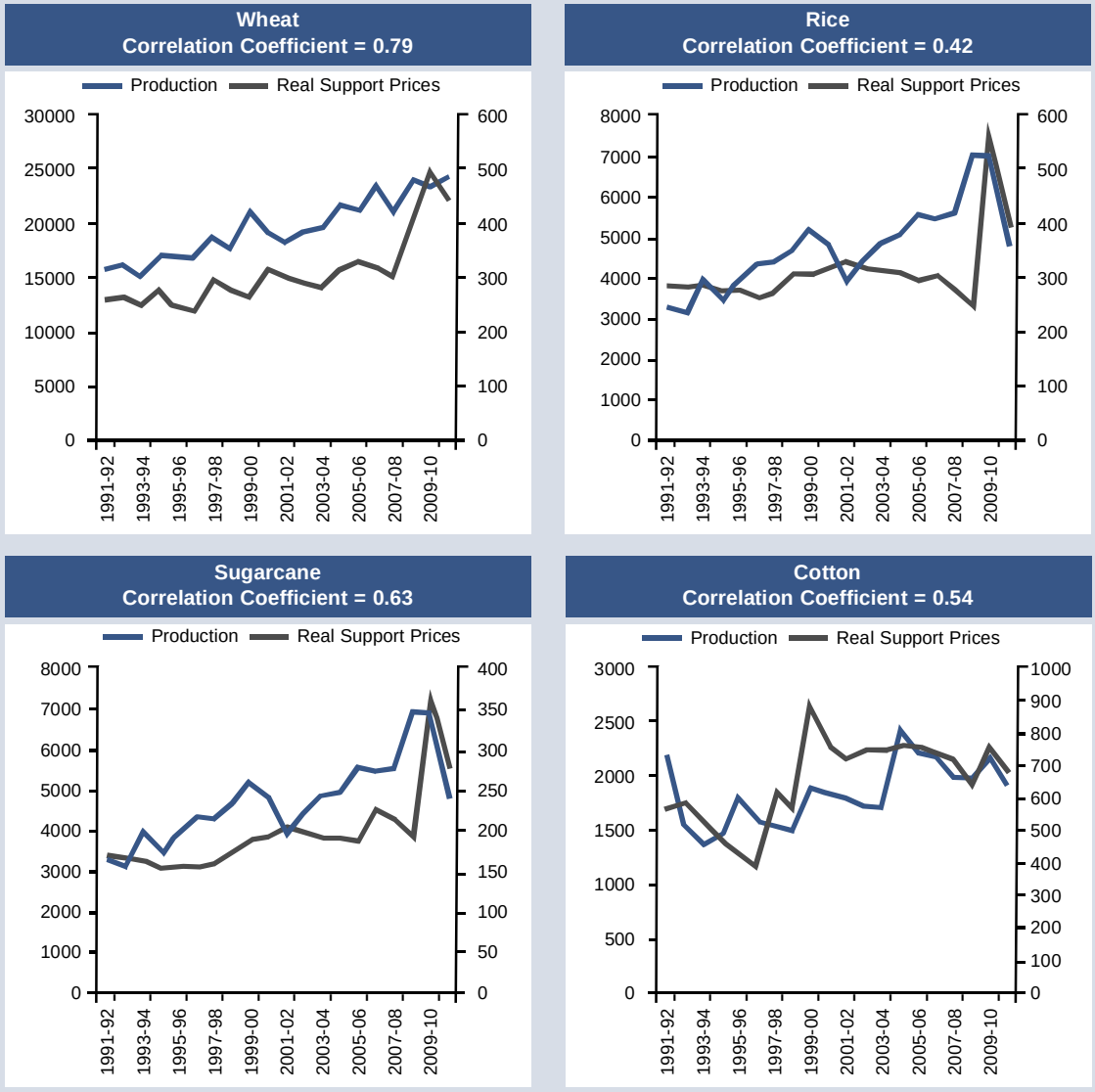
	Pakistan	Punjab	Sindh	Khyber Pakhtunkhwa	Balochistan
1990	0.63	0.59	0.57	0.61	0.66
2000	0.63	0.58	0.59	0.63	0.65
2010	0.63	0.55	0.60	0.62	0.75

Sources: Agricultural Censuses (1990, 2000 and 2010)

Impact of Agriculture Prices on Income Distribution

Although Government involvement in the market for important food and cash crops has changed substantially over time, it still intervenes to stabilise prices of major crops and agriculture inputs. Recently, during the last five years a spike in the commodity prices, especially cotton and rice has been observed with the government claiming that it will not only boost production but will also improve the income of growers. It is also argued that subsequently the increase in rural income will not only support the industrial and service sectors through higher consumption, but will also benefit the poor through trickle-down phenomenon.

Box 6.5 Crop Production and Real Procurement/Support Prices (One period Lagged)



Source: SPDC estimates based on Statistical Appendix, Pakistan Economic Survey (2010-11)

The higher commodity prices provide incentive to growers to bring more acreage under cultivation; generally there exists a direct and positive correlation between procurement, support or expected crop prices and the supply. A rough picture[16] of the relationship between support/procurement prices and crop production is portrayed in Box 6.5 by plotting crop production and one year lagged real support prices. The correlation coefficients are also computed to provide a summary of the statistical relationship. The highest price responsiveness with the correlation coefficient of 0.79 is observed in case of wheat crop, while the lowest (0.42) is estimated for rice crop.

Nonetheless, the pertinent concern here is to explore how benefits of rising crop prices are distributed among rural households. Due to the paucity of relevant panel micro-level farm data, no systematic study is available to verify the general perception that the policy of support price deteriorates rural income distribution; eventually income disparity in rural areas has widened as a result of rising crop prices. It is argued that:

- Incomes from the crop sector are roughly proportional to the distribution of land which is quite skewed and as such any favour or bias towards the crop sector would help large landlords more than small farmers.
- Only 34 per cent of the rural population is engaged in the crop sector, and a vast majority of them are small landholders. This means that only a small proportion of population in the rural areas stands to gain from increasing crop prices.
- The transfer of additional cash has widened income disparity in rural society even if many small farmers have also benefited from the soaring crop prices because the "trickle-down" has been uneven and limited.

In case of wheat crop the contention of 'marketable surplus' is often cited to strengthen the argument of worsening rural income distribution due to rising prices. Pakistan Agricultural Prices Commission (APCOM) has conducted a survey in the major wheat surplus districts in Sindh in 1997 and in Punjab in 1998. According to this study (Dorosh and Salam 2006), only 8 and 11 percent share in total sale of wheat crop goes to small farmers (< 12.5 Acres) in Sindh and Punjab provinces respectively. Table 6.15 highlights the share in sale of wheat across farm size. Dorosh and Salam (2006) did not disaggregate the share of farmers with land up to 5 acres, which is in fact the target group for poverty reduction strategies.

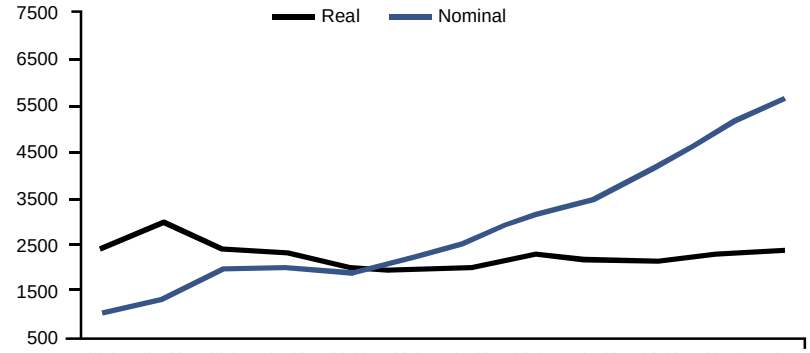
Table 6.16 Sale of Wheat by Farm Size

	Sindh	Punjab
< 12.5 Acres	8	11
12 to 25 Acres	11	22
25 to 50 Acres	16	23
More than 50 Acres	65	44

Source: Dorosh and Salam (2006).
They calculated these estimates using APCOM survey data from Salam, et al (2002)

An attempt is also made to explore the trickle down phenomenon in terms of rural wages. Pakistan Labour Force Surveys (LFS) report wages in overall agriculture (Agriculture, Livestock, Hunting, Forestry, Logging and Fishing) sector as well as wages of market oriented skilled and subsistence agricultural and fishery workers. To monitor the trend in rural wages since 1991, LFS data is used for plotting monthly nominal and real (adjusted with CPI) wages. Charts 6.9 and 6.10 furnish the trend for overall agriculture sector and for skilled workers respectively.

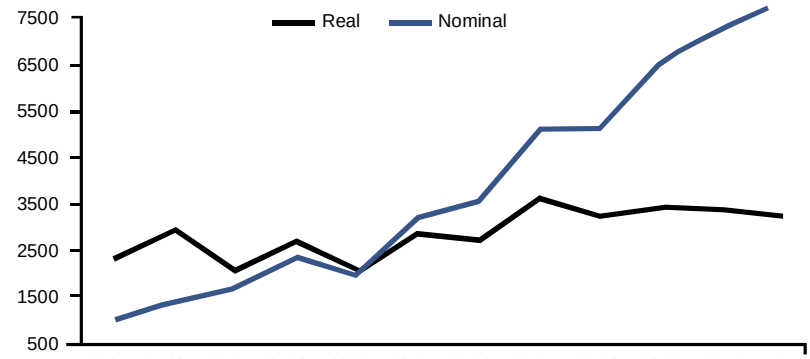
Chart 6.9 Monthly Rural Wages – Agriculture Sector



	90-91	91-92	96-97	97-98	99-00	03-04	05-06	06-07	07-08	08-09	09-10	10-11
Real	2427	2936	2392	2322	1962	1971	1988	2237	2202	2186	2317	2331
Nominal	1048	1392	1941	2030	1880	2201	2616	3174	3499	4194	4968	5649

Source: Pakistan Labour Force Survey (various issues)

Chart 6.10 Monthly Rural Wages – Skilled Agriculture Labour



	90-91	91-92	96-97	97-98	99-00	03-04	05-06	06-07	07-08	08-09	09-10	10-11
Real	2305	2909	2048	2690	2064	28722	2680	3564	3210	3413	3367	3220
Nominal	996	1379	1661	2353	1977	3206	3528	5057	5101	6550	7220	7804

Source: Pakistan Labour Force Survey (various issues)

According to these charts, real wages for overall agriculture sector have declined in the 90s and since then are almost stagnant. However, an upward trend is observed in case of skilled agriculture workers in the first half decade of 2000s, while in the later half a slight declining trend is evident. Thus the initial analysis of trends in rural wages apparently does not indicate the existence of the trickle down phenomenon.

Notes:

1. The justifications of taking these minimum requirements are described in Jamal (2002). The paper also provides other technical details in term of methodological choices and options available to estimate consumption poverty line.
2. A summary of these studies is provided in Malik (2005).
3. For technical details and poverty estimates at the sub-national levels, see Jamal (2007) and Jamal (2013).
4. Box 6.2 provides details in terms of boundaries and districts for each agro-climatic zone.
5. A constant 1 is assigned to each of the assets owned by the household, and the assets score is obtained by summing up across all assets at the household level. Of course uniform allocation of score irrespective of the asset characteristics tends to smooth out the distribution of assets across households. To the extent that these assets have different values and all exhibit different rates of depreciation, uniform allocation might even increase the distortion in the distribution of household assets. But, what actually matters in this construction is the ownership of assets by a household and not so much the values of the asset which are difficult to estimate accurately from surveys. The maximum asset score is 20 and the minimum is 0 for poorest households which possess none of the assets listed.
6. These assets are; iron, fans, sewing machine, video/cassette player, tables/chairs, clocks, TV, VCR/VCP,VCD, refrigerator, air-conditioner, air cooler, computer, bicycle, motor cycle, car, tractor, mobile, Cooking Range, Stove/Burner and Washing machine.
7. According to UNICEF (1998), "there are two possible ways to assess the adequacy of food and nutrition and to detect the presence of inadequacy in food intake among individuals or population groups: the first measures nutritional intake and the second assess nutritional status"
8. Humanitarian Response, Pakistan (http://www.pakresponse.info) http://pakresponse.info/LinkClick.aspx?fileticket=scqw_AUZ5Dw%3D&tabid=117&mid=752
9. For detail see Alkire and Santos (2010) and Alkire and Foster (2007).
10. The methodology is very briefly described in Box 6.3. For detailed methodology, see Jamal (2012b)
11. Literacy is defined as the "ability of a person to read and write in any language with understanding"
12. These assets are Iron, Fan, Sewing Machine, Radio, TV, Chair/Table and Watch/Clock.
13. Social exclusion is generally studied from one of three contrasting perspectives: a predominantly structuralist approach; an experiential approach informed particularly by cultural geography; and a more instrumental approach based on statistical indicators.
14. A measure of relative poverty defines "poverty" as being below some relative poverty threshold. For example, the statement that "households with an accumulated income less than 50% of the median income are living in poverty" uses a relative measure to define income poverty.
15. *Gini* coefficients for this exercise are computed from the grouped data of Agricultural Censuses and hence the magnitudes of coefficients might be different if compared with the *Gini* computed from individual farm-level data. Due to aggregation bias, the estimates from grouped data, in general are higher. The standard formula for computing *Gini* for grouped data is furnished below.

$$\textbf{\textit{Gini}} = \left| 1 - \sum_{i=1}^{N} (\sigma Y_{i-1} + \sigma Y_i)(\sigma X_{i-1} + \sigma X_i) \right|$$

where;

N	=	Number of Categories
σ	=	Cumulative Distribution of Values
Y, X	=	Proportion of farms and land area owned respectively

16 Usually, an econometric model of price responsiveness is estimated to determine the supply elasticity. However, it is beyond the scope of this study. In the context of Pakistan, the short-run supply elasticities with respect to prices were estimated at 0.228, 0.715, 0.407 and 0.524 for wheat, cotton, rice and sugarcane respectively by employing traditional econometric technique. However, the study is quite outdated and has used the relevant data up to 1986 (See Mubarik, 1988).

1. Multicollinearity is a statistical phenomenon in which two or more predictor variables in a multiple regression model are highly correlated, meaning that one can be linearly predicted from the others with a non-trivial degree of accuracy.

Social Protection for the Rural Population

7

7 Social Protection for the Rural Population

The rural poor are not a homogeneous group and are generally distinguished according to their access to agricultural land: cultivators have access to land as small landowners and tenants, and non-cultivators who are landless and unskilled workers. Thus, besides the standard household risks of sickness, mortality, fire, theft, and unemployment, rural households, most of which derive their livelihoods from the land, face the additional risks of droughts, floods, pests and diseases affecting their crops and livestock A summary of variety of risks is furnished below (Box 7.1) to comprehend the source, nature and vulnerability of the rural population. Nonetheless, rural dwellers regularly face multiple risks; a very large proportion of the rural population in developing countries, including Pakistan, still does not enjoy social protection.

Social protection initiatives, which generally transfer income or assets to the poor, are designed to protect vulnerable people against livelihood risks, and seek to enhance the social status and rights of the marginalised. Effectively administered and carefully targeted social protection policies and measures increase employment, reduce loss of human capital, and prevent people from falling into poverty as a result of financial or economic shocks. Proficient protection measures form a key component of social policy and promote social cohesion. According to Barrientos (2010), the broader developmental role of social protection in developing countries involves three main functions: (i) to help protect basic levels of consumption among those in poverty or in danger of falling into poverty; (ii) to facilitate investment in human and other productive assets which alone can provide escape routes from persistent and intergenerational poverty; and (iii) to strengthen the agency of those in poverty so that they can overcome their predicament.

Unfortunately, in the context of Pakistan there is no clearly articulated government social protection framework. Various social security schemes and cash assistance programmes are developed largely as a series of ad-hoc responses to problems raised by particular circumstances or recommended by international donor agencies (Jamal, 2010). The Poverty Reduction Strategy Paper (PRSP) also highlights the fact that the “social protection framework contains duplication and overlapping programmes and recommends working towards an overall integrated and efficient social protection strategy”.

An effort was made to draft a comprehensive social protection strategy by the Planning Commission. Consequently, the National Social Protection Strategy (NSPS) was made public in 2008 (GoP, 2008). It was the first comprehensive official statement with respect to social protection, and was based on detailed review of existing programmes and Government interventions. Most of the programmes included in the NSPS were federal government programmes. Although the NSPS was formally

Box 7.1 Risks Facing the Rural Poor

Nature of Risks	People at Risk
Crop production risks (drought etc.)	● Smallholders with little income diversification and limited access to improved technology (HYVs) ● Landless farm laborers
Agricultural trade risks (disruption of exports or imports)	● Smallholders who specialize in an export crop ● Small-scale pastoralists ● Poor Households that depend on imported foods
Food price risks (sudden price rises)	● Poor, net food-purchasing households, including deficit food producers in rural area
Employment risks	● Wage-earning households and informal sector employees (in peri-urban areas and, when there is a sudden crop production failure, in rural areas)
Health risks (infectious diseases resulting in labour-productivity decline)	● Entire communities, but especially households that cannot afford preventive or curative care, and vulnerable members of these households
Political and policy failure risks	● Households in war zones and areas of civil unrest ● Households in low-potential areas not connected to growth centres via infrastructures
Demographical risks (individual risks affecting large groups)	● Women, especially those without education ● Female-headed households ● Children at weaning age ● The aged

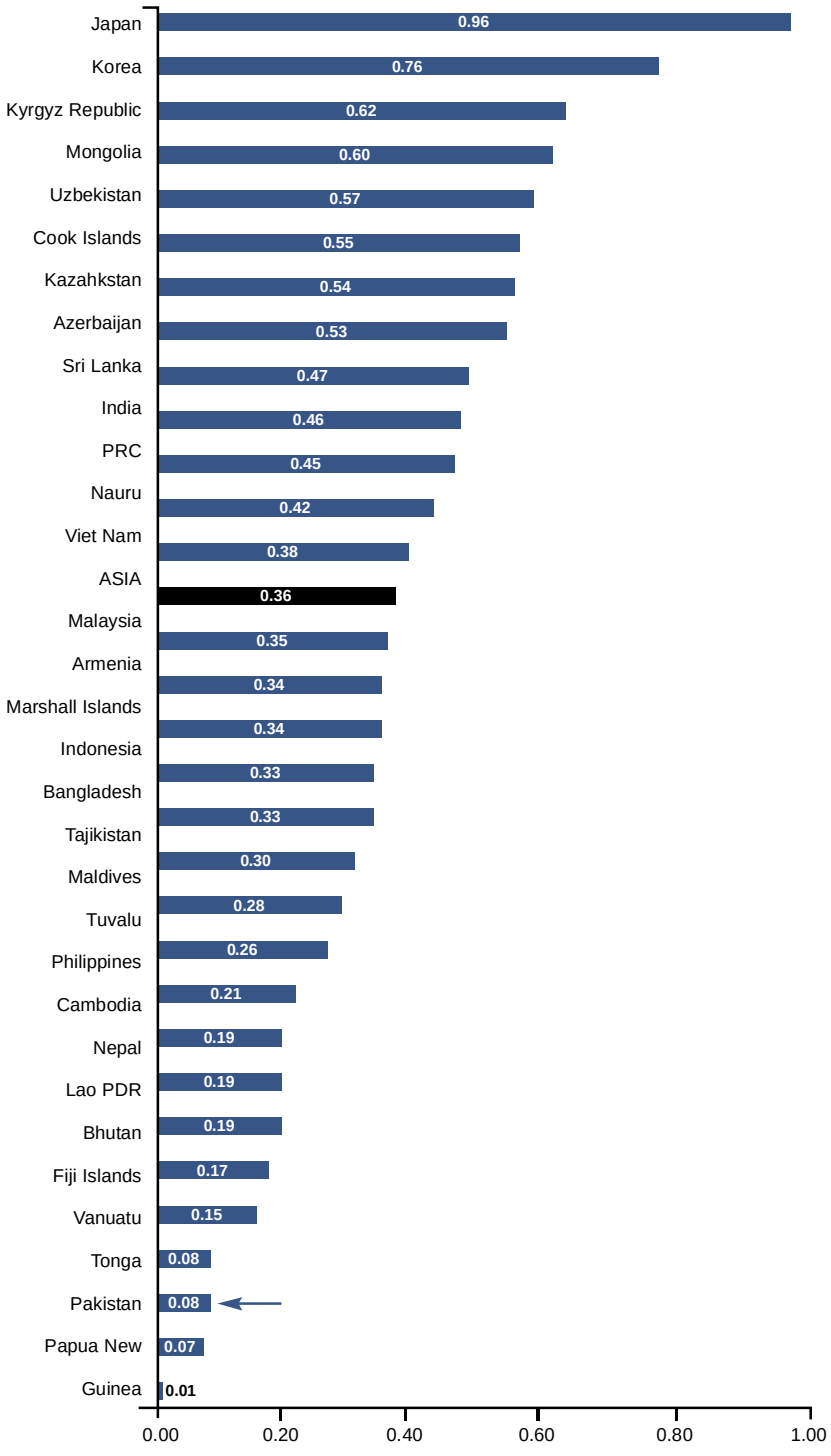
Source: Reproduced from Wermer (2008)

adopted by the Government, no progress was made towards its implementation. Apparently it is discarded due to the economic downturn and the new seventh National Financial Award. Besides design failure and lack of consistency and coherency in various social protection programmes, the current coverage is also fairly low.

The Asian Development Bank (ADB) has developed a Social Protection Index (SPI) for Asian countries. The index is a composite measure of four summary social protection indicators (cost, coverage, distribution, Impact) and ranges from zero to one. According to ADB (2008), the overall range of SPI values is from .01 (Papua New Guinea) to 0.96 (Japan) with an average of 0.36 during 2007. Not surprisingly, Pakistan stands at the lowest second position with a value of 0.07, just above the Papua New Guinea (see Chart 7.1) and far below the values for India and even Bangladesh. However, as pointed out by Gazdar (2011) Pakistan's social protection system has expanded quite dramatically since 2008; it may be possible that the magnitude of index would be different now. Conversely, it is a reality that poverty incidence has also increased since the publication of the ADB report.

The coverage of public transfers and the extent of private philanthropy may also be ascertained from household data. Thus, the size of public transfers and philanthropy is estimated from the latest available Household Integrated Economic Survey (HIES, 2010-11). The estimates show that overall 1.2 percent households are receiving social assistance from public and private sources. Although the rural share is relatively large (0.4 urban and 1.6 rural), a minute percentage reveals extremely trivial access of poor households to the social assistance intervention.

Chart 7.1 Social Protection Index for Asian Countries
[Reproduced from ADB 2008]



PRC = People's Republic of China, Lao PDR = Lao People's Democratic Republic

Table 7.1 Estimates of Public Transfers and Private Philanthropy Rural Pakistan [2010-11]

	Percentage of Rural Household who Confirmed Receipt of Transfer Payment		Payment Received [Average Rupees per annum per Household]	
	Public Transfers	Private Philanthropy	Public Transfers	Private Philanthropy
Punjab	1.3	0.4	18027	11413
Sindh	0.2	0.0	21185	0.0
Khyber Pakhtunkhwa	0.5	2.3	14850	9730
Balochistan	0.0	1.8		9634
Total	0.8	0.7	17834	10438

Note:
Public Transfers = Receipt from public sector (Federal/Provincial/District/Semi Governments)
Private Philanthropy = Receipt from private sector (Relatives/Non-relatives/NGOs/trust etc.)

Source: SPDC estimates based on household level data of HIES (2010-11)

According to Table 7.1, about 0.8 and 0.7 percent rural households affirmed the receipt from government institutions and from private sources respectively. The table also highlights the role of NGOs in Khyber Pakhtunkhwa and Balochistan provinces. About two percent households confirmed the receipt of private philanthropy including from NGOs, against 0 and 0.4 percent in Sindh and Punjab provinces respectively. With respect to public transfers, Punjab's share is the largest (1.3 percent), while no household reported public transfers in Balochistan province. On average, rural households reported the receipt of Rs. 18,000/- and Rs. 10,000/- per annum from public transfers and private philanthropy respectively.

Box 7.2 which is reproduced from Jamal (2007) furnishes the inventory of programmes and instruments of social protection in Pakistan, while the salient features of broad categories are described below:

SOCIAL SECURITY INSTRUMENTS

All existing social security schemes are in the formal sector of the economy and designed for the employed labour force and retirees. These schemes generally provide benefits regarding contingencies of sickness, invalidity, maternity, old age, and work related injury. The programmes in this category include Government Servants Pension Fund, Provincial Employees Social Security Scheme or Employees Social Security Institutions, Public Sector Benevolent Funds, Workers Welfare Funds, Workers' Children Education Ordinance and Employees Old Age Benefits Institutions.

The major shortcoming of all social security schemes is that a sizable majority of workers remain uncovered through these programmes. The uncovered segment include workers from the agriculture sector, from the informal sector, and those in the formal sector who are either employed temporarily through contractors or working in establishments with less than ten workers. The agriculture sector which constitutes about 61 percent of the labour force, is not only excluded

Box 7.2 A Schematic View of Social Protection Instruments in Pakistan

Category/Instruments	Benefits	Financing
1. Social Security		
Government Servants Pension Fund *[for Government Employees]*	• Provident Fund • Old Age Pension	• Employees contribution • Budgetary Expenditure
Employees Social Security Institutions *[for Private Formal Sector Employees]*	• Health Services • Cash Support	• Employees contribution
Public Sector Benevolent Funds and Group Insurance *[for Public Sector Employees]*	• Benevolent Fund • Group Insurance	• Employees contribution
Workers Welfare Funds *[for workers of registered establishment]*	• Cash Support • In-Kind Support • Housing facilities	• Employees contribution • Employers' contribution
Workers' Children Education Ordinance *[for workers of registered establishment]*	• Free education of children	• Employers' contribution
Employees Old-Age Benefits Institutions *[for workers of registered establishments]*	• Old age pension • Invalidity pension • Survivor's pension • Old age cash grant	• Employers' contribution • Budgetary Expenditure
2. Social Assistance		
Zakat *[for poor, needy and destitute population]*	• Cash Support	• Private contribution
Pakistan Bait-ul-Mal *[for poor, needy and destitute population]*	• Cash Support • In-Kind Support	• Federal Budget • Private contribution
Benazir Income Support Program *[for poor, needy and destitute population]*	• Cash Support	• Federal Budget
3. Labor Market Programs		
Peoples Works Program *[for unemployed labor, especially rural labor]*	• Wages	• Federal Budget
People's Rozgar Program *[for unemployed population, especially youth]*	• Credit with subsidized interest rate	• Federal Budget • National Bank
4. Micro and area-based safeguards		
Micro-Finance *[for poor]*	• Small Loans	• Credit line by donors • NGOs and private sector
5. Child Protection		
Food Support Programme of Bait-ul-Mal *[for children in poorest households]*	• Conditonal Cash grant	• Federal Budget

from the social security net, but is virtually exempt from existing laws pertaining to protection of workers in terms of working conditions, conditions of employment, health, and safety at workplace. Similarly other sectors which are pre-dominantly informal in character such as construction, transport, wholesale and retail trade sectors have no coverage in social security schemes. According to Bari et al (2005), it is estimated that less than 4 percent of the non-agriculture labour force actually benefits from the entitlement built into these programmes.

Thus the rural poor who comprise the majority of the poor population are not entitled to get protection against various risks through the social security instruments. The phenomenon clearly indicates a serious flaw in the design of social security schemes, and necessitates developing special schemes for the rural poor like social insurance, old age benefits and agriculture insurance[1] along with risk management and disaster risk reduction measures.

Box 7.3 Overview of National Crop Loan Insurance Scheme

Agricultural insurance is relatively undeveloped in Pakistan. Livestock insurance which includes livestock: cattle, buffalo, small ruminants and poultry insurance was first introduced on a pilot basis in 1983 and is now available on a limited scale. Crop insurance is new and was introduced in 2008 under a public private partnership for a National Crop Loan Insurance Scheme. Since rabi season 2008/09 a group of ten insurance companies in conjunction with 20 commercial banks have been involved in the implementation of the national crop loan insurance scheme. Salient features of Pakistan's mandatory crop loan insurance scheme are as under:

Participation	All commercial & private banks and Insurers registered with SECP.
Eligibility	All borrowers receiving agricultural loans from banks. Cover is mandatory for loanees.
Crops Covered	All field crops (wheat, rice, maize, cotton, sugar cane, sunflower).
Period of Insurance	From time of sowing or transplanting till harvesting.
Insured Perils	A. National calamities: excessive rain, hail, frost, flood, drought B. Crop related diseases such as viral and bacterial attacks or damage by locusts.
Sum Insured	Sum insured is based on the per acre borrowing limtis prescribed by the State Bank subject to a maximum of Rs 2,00,000 per farmer per crop season.
Premium	Maximum 2 percent of amount insured per crop per season plus applicable levies. Bank will be responsible for collection and payment of premium to the Insurer.
Basis of Indemnity	Claims for damage directly caused by the Insured Risks to be based on declaration of Calamity by the competent authority (Provincial or Federal) in the area where the insured risk is located and such declaration is notified in the Gazette AND the final yield of the subject risk is less than 50% of the reference of that area. Indemnity is also subject to the name of farmer/borrower and the insured crop has been earlier declared.
Reference Yield	Three year average yield of the particular area. The three years will be from the five preceding years discounting the best and worst years.
Claims Payment	Claims shall be payable to the banks by the insurers for credit to the insured borrower loan account. The maximum amount payable is the outstanding loan or the assessed amount, whichever is the lesser amount.
Special Conditions Aggregate Limit of Liability	The maximum annual aggregate limit of liability of the scheme would be limited to 300 percent of the total premium.
Exclusions	War, Civil war, Strikes, Riots, Terrorism etc. Non-utilization or wrong utilization of loan. Earthquake or Volcanic eruption Loss before risk declaration or after harvesting

Source: SBP, 2008, SBP task force report oon crop loan insurance framework. Agricultural Credit Department, State Bank of Pakistan.

INITIATIVES OF SOCIAL ASSISTANCE

Social assistance schemes of cash or in-kind transfers are especially aimed at those who are outside the ambit of the formal labour market, and are considered poor or destitute. Unlike Social Security Schemes, programmes of Social Assistance fairly provide relief to the rural poor. The Benazir Income Support Programme (BISP), Zakat and Pakistan Bait-ul-Mal (PBM) are three institutions which provide unconditional financial cash or in-kind assistance to the poor and also assist in rehabilitation of needy and destitute individuals. Although the *Zakat*, PBM and BISP share a similar objective of providing basic support to the poorest households, they have different histories, target groups and financing mechanisms. A brief introduction of these programmes is given below.

The Benazir Income Support Programme

The BISP was launched in late 2008 as the government's flagship social safety net programme with the immediate objective of mitigating the impact of the food, fuel and financial crisis of early 2008. According to the BISP website, "In the year 2007-08, the sharp rise in oil prices and primary products in the international as well as domestic market resulted in double digit inflation, which almost halved the purchasing power of the people. Hence, there was an urgent need for direct and speedy relief to the underprivileged sections of society. Benazir Income Support Programme (BISP) is the Government of Pakistan's response to the said compulsions". Funded through the federal budget, the BISP has been initiated with an initial allocation of Rs.34 billion for the year 2008-09 which is 0.3 percent of the GDP for the year 2008-09, to cover 3.5 million families. The selected families (women) are paid cash assistance of Rs.1000 per month on quarterly basis. BISP is the only cash transfer programme in any developing country that identifies women as its primary beneficiaries.

BISP has evolved over the past few years into the country's main social safety net. The allocation for the financial year 2012-13 is Rs. 70 billion to provide cash assistance to 5.5 million families, which constitutes almost 18 percent of the entire population. Thus the Programme aims at covering almost 40 percent of the population below the poverty line (http://www.bisp.gov.pk/). Apart from cash assistance, BISP has taken special initiatives and provides long term interest free returnable financial assistance *(Waseela-e-Haq),* vocational and technical training *(Waseela-e-Rozgar),* health insurance coverage *(Waseela-e-Sehet)* and support to primary education *(Waseela-e-Taleem).* The coverage and scope of these initiatives are however limited.

An important feature of BISP is the targeting mechanism for identifying poor households. According to the BISP institution, attempts are made to minimise inclusion and exclusion errors; underprivileged households are identified through a transparent, impartial and objective mechanism which gives equal chance to each one for applying to the Programme for enrolment for cash and various other benefits. For this purpose, a survey has been conducted, initially in 16 poor districts of

Pakistan to assign a welfare score to each household. On the basis of a cut-off point, household status is determined in terms of poverty. Nonetheless, there are a number of criticisms on the methodology, design and content of the poverty score card, which makes the exercise doubtful. Moreover, a unique poverty score card and poverty cut-off point is used for both urban and rural areas which may enhance the chances of inclusion or exclusion errors.

Although the BISP has received unprecedented support and assistance from multilateral and bilateral donor agencies, financial sustainability and political preference is a major concern. BISP has been criticised for its close association with a particular political party (with the name of Benazir Bhutto) and critics discount the initiative claiming it as a means of attracting votes for PPP rather than alleviating poverty. Thus the future of the BISP initiative in coming years is uncertain due to change of political regime as well as worsening macroeconomic and growth outlook.

Zakat

The institution of *Zakat* is a well established form of cash transfer in Pakistan. The programme, which was introduced in 1980, is entirely based on private contributions and administered by the government. Under the Central *Zakat* Council, there are provincial councils and further councils at each level of government. The lowest level, which also decides eligibility, is the Local *Zakat* Committee (LZSc). About 25 percent of the *Zakat* budget is distributed through institutions while the remaining 75 percent is disbursed to individuals through LZCs. However after devolution of the subject of Zakat, the Provinces are directly managing the distribution of Zakat and the beneficiaries. *Zakat* is disbursed under different programmes, such as: financial assistance (*Guzara* Allowance), educational stipends, healthcare, *Eid* grants, assistance to leprosy patients, national level health institutions, and marriage assistance.

Unlike the BISP initiative, Zakat distribution does not have any transparent and accountable method of targeting. It is aimed at targeting the 'deserving needy', but no objective targeting tool (e.g. proxy means testing) is used. According to the World Bank (2007), "around 27 percent of monthly cash (Guzara) allowance beneficiaries and 37 percent of those receiving rehabilitation grants are not poor, accounting for 32 and 45 percent of the resources distributed under each modality". The document also reports evidence of both corruption and patronage in the Zakat distribution system. Eligibility criteria or the process of selecting beneficiaries is not transparent and often, provision seems based on access to influential patrons or willingness to pay a bribe. Decisions regarding who receives benefits are mostly guided by local power relationships. Sayeed (2004) also emphasised that there is no documented, institutionalised mechanism for the distribution of Zakat funds. To identify the beneficiaries in villages and neighborhoods, the Local Zakat Councils rely on individuals known to them, who are better off, more articulate members of the community. Usually the beneficiaries are those who are already involved in patronage relationships with the committee members.

Besides poor targeting, other major issues of social assistance through *Zakat* are the inadequacy of payment and low coverage. The adequacy of support can be further affected by administrative problems resulting in late release of funds. Bari et al (2005) argue that the programmes currently in operation have had only a marginal impact in alleviating the poverty of households living below subsistence level. The coverage and size of grants disbursed as individual transfers inadequately addresses the needs of the poorest households.

Pakistan Bait-ul-Mal (PBM)

PBM was established as an autonomous body in 1992 with the objective of providing assistance to those groups of people that for certain reasons have been excluded or are not eligible to receive *Zakat*. This includes the minorities and certain sects of Muslims (Sayeed, 2004). The programme is financed from the grants of the federal government. However, it also receives small grants from the central *Zakat* fund, provincial government, national organisations, NGOs, international agencies and voluntary private donations. The PBM disburses to the poor under a wide variety of programmes that encompass Food Support Programmes, Individual Financial Assistance, Child support through the National Centre for Rehabilitation, and used for orphans support, rehabilitation through vocational training, education stipends, out-reach programmes for poor patients, Dowry (*Jahez)* package for orphan girls and supply of wheel chairs, hearing aids, white canes, and artificial limbs to needy persons. PBM also provided ration bags to those affected by natural disasters such as the floods of Sindh and Khyber Pakhtunkhwa. Like Zakat, there is no specific criterion with regard to targeting for the programmes of the Bait-ul-Mal.

Labour Market Intervention

The Public Works Programme (PWP) is an important intervention for labourers of rural and semi-urban areas. Currently known as the Peoples Works Programme, it was termed the *Khushal* Pakistan Programme (KPP) and *Tameer-e-Watan* Programme in the tenures of the Pervez Musharraf and PML governments respectively. Peoples Works Programme consists of the welfare programmes comprising small development schemes for provision of electricity, gas, farm to market roads, telephone, education, health, water supply, and sanitation facilities to the rural poor.

Microfinance

Although micro-credit or microfinance provides financial services to the poor to allow them to become economically active, it is often criticised, in that although it has investment and income enhancing impacts, is not a good mechanism for ensuring insurance against adverse shocks; and a viable microcredit programme cannot give guaranteed access to poor and vulnerable clients (Barrientos, 2006). Further, credit is not advanced

at concessionary rates of interest and there is no element of explicit or implicit subsidy. Nonetheless, the Government of Pakistan in its PRSP-II document considers it an important intervention for poverty reduction.

Currently, microfinance services in Pakistan are being provided by Microfinance Banks (MFBs); Commercial Banks; Rural Support programmes (RSPs) and Non-Governmental Organisations (NGOs) with the Pakistan Poverty Alleviation Fund (PPAF) being wholesale provider of credit to NGOs. The finance is provided for microenterprises, agricultural inputs and livestock. About 56 percent of microfinance clients reside in rural areas.

The Pakistan Microfinance Network (PMN) is a network for organisations engaged in microfinance and is dedicated to improving the outreach and sustainability of microfinance in the country. It also aims to establish performance measures, enhance the capacity of retail microfinance institutions through specialised training, and promoting the financial transparency of such institutions. The PMN is well positioned with 95 percent of the total microfinance coverage and with the 20 leading microfinance institutions and banks as its members. According to PMN website, the sector has 2.4 million borrowers with gross loan portfolio of rupees 38 billion as of December 2012.

The Government of Pakistan sponsors microcredit schemes through three different institutions – the national and provincial Rural Support Programmes (RSPs), the Pakistan Poverty Alleviation Fund (PPAF) and the Microcredit Banks. RSPs are running microfinance operation as part of multi-dimensional rural development programme.

The National Rural Support Programme (NRSP) is Pakistan's largest multi-sectoral rural development programme, established in 1991 by the Government of Pakistan. NRSP is also the largest Rural Support Programme in the country in terms of outreach, staff and development activities. At present, it is operational in 54 districts of all the four provinces of Pakistan and Azad Jammu and Kashmir through Regional Offices. Programme districts are selected according to district poverty ranking from data available from national level surveys conducted by government and international organisations, and distributed among other Rural Support Programmes. A summary of coverage and outreach of Rural Support Programmes is furnished in Box 7.4.

The majority of the NRSP loans are used for agriculture and livestock purposes, with 60 percent of the loans for agriculture purposes, 19 percent for livestock and 21 percent for entrepreneur development. More than 50 percent of the NRSP programmes area comprises arid zones and rain fed areas of the country, taking in view the main mandate of the organisation to eradicate poverty. NRSP manages one of Pakistan's biggest microcredit portfolios, with 333,511 active loans as of December 2012 with gross loan portfolio of rupees 4.2 billion. As part of its holistic approach, NRSP also provides various financial services to the members of Community Organisations (Cos) in rural areas to help them implement their Micro Investment Plans (MIPs).

Box 7.4 Coverage and Outreach of Rural Support Programs

The National Rural Support Programme (NRSP) was established in 1991. It is the largest Rural Support Programme in the country in terms of outreach, staff and development activities. NRSP's mandate is to alleviate poverty by harnessing people's potential and by undertaking development activities in Pakistan. It has a presence in 54 districts of all the four provinces and Azad Jammu and Kashmir through Regional Offices. As of June 2012, it has **333,511** active borrowers with gross loan portfolio of Rs. **4.2 billion**.

The Punjab Rural Support Programme was incorporated in 1997. It is currently operating in 28 districts of the Punjab and through other interventions in partnership with government and donors. It aims to alleviate poverty and enhance income, empowerment of women and general improvement in the quality of life of the poor in rural areas of Punjab. As of June 2012, it has **73,944** active borrowers with gross loan portfolio of Rs. **896.9 million**.

The Sarhad Rural Support Programme (SRSP) was established in 1989. It is working in Khyber Pakhtunkhwa and parts of FATA. At the heart of the SRSP approach is the belief that marginalised communities and disadvantaged people have within them the capacity for self-help. In recent years because of its vast outreach in the communities, SRSP has had to play a prominent role in disasters that have hit Khyber Pakhtunkhwa, and as a result of humanitarian work along with development, it has become a core competency of the organisation. As of June 2012, it has **3,121** active borrowers with gross loan portfolio of rupees Rs. **22.9 million**.

The Sindh Rural Support Organisation (SRSO) was established in 2003. It is the major Rural Support Programme in northern Sindh. SRSO is present in 9 districts of Sindh which include some of the remote and impoverished areas. The mandate of SRSO is to alleviate poverty by harnessing the people's potential, and to undertake development activities in Sindh. As of June 2012, it has **63,340** active borrowers with gross loan portfolio of Rs. **985 million**.

Thardeep Rural Development Programme (TRDP) was established in 1998. It is a non-profit organisation working in the rural areas of Tharparkar, Mirpurkhas, Dadu and Khairpur districts of Sindh. The programme is aimed at facilitating the rural communities in a way that they can be empowered to secure their rights with command over resources and capabilities to manage the process of sustainable development. As of June 2012, it has **55,404** active borrowers with gross loan portfolio of Rs. **547.4 million**.

Source: http://www.microfinanceconnect.info/index.php

NOTES:

1. The role of crop insurance in Pakistan is very limited. Insurance cover is provided to only those farmers who take bank loans for their crops or livestock. Higher than normal interest rates are charged to cover premium. Thus the current role of agriculture or crop insurance is not conducive to avert humanitarian disaster, as it fails to protect very poor populations. Moreover, there is much evidence that traditional crop loan insurance cannot provide solutions for subsistence farmers. Box 7.3 briefly describes the features of agriculture insurance in Pakistan.

2. To address urban poverty, People's *Rozgar* Programme (formally known as President's *Rozgar* Scheme) was initiated as an instrument of social protection. The programme provides access to credit with subsidised interest rates to enable unemployed persons to start a small business. Under the scheme, National Bank of Pakistan offers Community Transport, Community Utility Stores, Community Mobile Utility Stores, and PCO/Tele-Centers, Commercial Vehicle Financing, Shopkeeper Financing and Primary Healthcare Equipment to Medical Graduates.

Sustainable Rural Development

8

8 Sustainable Rural Development

The UN Declaration on Sustainable Development, concluded in 1992, called upon the world leaders to ensure that all environmental resources should be protected for equitable use of current and future generations, and that development should be a fully participatory process. Over two decades later, much more knowledge exists about how and to what extent the world resources have been plundered in the name of development. Issues of food insecurity, mass migration and conflict, poverty, inequity and insecurity; incidence of natural disasters has multiplied as a consequence of climate change. This chapter highlights some key issues and challenges related to sustainable development in rural Pakistan.

SOME CONCERNS

In Pakistan rural development is used synonymously with agriculture development. Out of the 60 percent of Pakistan's population that live in rural areas, only 40 percent is engaged in the agricultural sector. Though agriculture continues to be an important production sector, its contribution to the GDP has reduced from about 30 percent in 1981 to 21 percent in 2013.

Despite government claims to focus on agriculture and poverty reduction, the general level of quality of life, especially in rural areas, has been deteriorating. The neglect has caused intense poverty and development challenges, which have serious consequences for the social and economic wellbeing of the rural population. Since the 1970s, the worldview about agriculture development has changed but the government is yet to move beyond the traditional approaches of providing seeds, fertilizer and subsidies towards holistic management of agricultural resources such as soil, water, technology and rural development.

Rural areas are not only engines of economic growth, their populace is also custodian of natural resources such as water bodies, forests and other biodiversity. Investment in rural development minimizes haphazard rural to urban migration by providing opportunities for people to live and work in their villages with some degree of satisfaction.

Development in urban areas, especially in Pakistan, is often carried out at the cost of rural resources. Income from agriculture is drawn away to the cities where the rich landowners and their children live and study; the local environment is degraded and health of rural workers put to risk through brick kilns, marble quarries, gems and other stone works that require excessive amounts of water; farmers are forced, through policies geared towards the urban markets, to grow cash crops that tend to

reduce soil nutrients and fertility. Water bodies and the coast are used as dumping grounds for both industrial and domestic waste.

Over sixty years of battering natural resources have brought the country to a point where drinking water is a scarce commodity and ground water has depleted to frighteningly low levels. The forest cover is one of the lowest in the world and soil and coastal areas have been eroded, exposing them to devastating impacts of natural disasters. Several species of plants, birds and animals have been lost and have become extinct. Soils and waters have become so polluted that neither fish nor horticulture can be exported in the quantities they are grown because of presence of large amounts of harmful chemicals. Environmental degradation has been both direct and indirect cause of rise in poverty and deprivation, and people are more insecure and vulnerable now due to detrimental impacts of poor resource management.

SUSTAINABLE DEVELOPMENT: KEY ISSUES AND CHALLENGES

The Environmental Performance Index (EPI) developed by the Yale University ranks 163 countries on 25 indicators that cover ecosystem productivity and environmental public health. Here it has been used to compute percentiles on environmental performance. A lower percentile indicates that a country is performing poorly on the chosen indicator. A cross-country comparison with a set of comparable countries in South and East Asia demonstrates Pakistan's performance compared to the rest of the region. Table 8.1 provides a summary of the indicators and the environmental performance of each country.

Table 8.1 EPI indicators for a Sample of Countries (Percentile)*

	Pakistan	India	Sri Lanka	Bangladesh	Malaysia	Indonesia
Environmental Burden of disease	33	29	31	30	64	34
Access to sanitation	31	9	55	17	66	28
Access to water	44	42	31	26	71	27
Water quality index	57	70	91	85	50	55
Water stress index	10	10	30	44	67	69
Water scarcity index	5	60	24	94	49	59
Indoor air pollution	14	18	12	4	74	20
Outdoor air pollution	3	33	13	-	71	12
Sulphur dioxide emissions per populated land area	36	25	36	49	43	43
Nitrogen oxides emissions per populated land area	70	-	35	47	36	44
Ecosystem zone	25	11	70	21	47	20
Greenhouse gas emissions per capita	86	91	83	99	20	35
Industrial greenhouse gas emissions intensity	23	13	79	48	49	55
CO2 emissions per electricity generation	56	-	61	27	32	23
Biome protection	61	26	63	9	84	88
Marine protection	63	50	35	25	69	68
Trawling and dredging intensity	37	42	63	-	2	17
Annual change in forest cover	2	100	9	32	24	4
Growing stock rate	1	76	2	23	65	100
Agricultural water intensity	3	10	12	95	55	61
Pesticide regulation	15	17	47	6	62	64
Agriculture subsides	54	14	45	94	30	22

* The higher the percentile, the better the performance.

Source: Yale University 2011.

Pakistan's performance is relatively good or satisfactory in some indicators such as greenhouse gas emissions per capita (including land use emissions), CO_2 emission per electricity generation and marine protection. On the other hand, the country ranks poorly with regard to most of the indicators related to water, pollution, forestation, agricultural water intensity and pesticide protection.

The pressure on the water resources of the country is assessed through the water stress index and water scarcity index. The *water stress index* indicates the percentage of the country's territory that has been affected by over exploitation of water resources. The *water scarcity index* shows the fraction of water overuse, weighted by alternative renewable water resources. Pakistan shows the poorest performance against both the water stress index and the water scarcity index among the six countries.

Pollution harms the health of individuals and the level of pollution is assessed through indoor and outdoor air pollution. *Indoor air pollution* refers to pollution within households from burning fuels such as wood, charcoal, crops and other agricultural waste, dung, shrubs and coal. It leads to an increase in respiratory diseases and higher mortality from pulmonary disease and lung cancer. *Outdoor air pollution* refers to particles suspended in outdoor air, which lead to an increase in diseases. According to the EPI analysis, Pakistan does poorly against the pollution indicators.

Deforestation is assessed through the annual change in forest cover and regeneration rate. The *annual change in forest cover* refers to the annual percent change in forest cover between 2000 and 2025. Pakistan lies at the bottom (2nd percentile) showing an extremely high rate of deforestation. *Growing stock rate* is used to compute the standing tree volume of the forest resources. At the 1st percentile, Pakistan's performance is the poorest in the world.

Agricultural water intensity indicates the pressure on renewable water resources caused by irrigation and livestock. Pakistan lies in the 3rd percentile in this category, showing an extremely poor performance.

Pesticide regulation analyses the extent to which countries have legislated on agreements related to pesticide usage. Pesticides are a significant source of pollution in the environment and affect both human beings and the ecosystem. Pakistan lies in the 15th percentile in this indicator, better only than Bangladesh.

Shortage and Poor Quality of Water

Water availability on a per capita basis has been declining in Pakistan at an alarming rate. It has decreased from about 5,000 cubic metres per capita in 1951 to about 1,100 cubic metres currently, which is just above the internationally recognized scarcity rate. It is projected that water availability will be less than 700 cubic metres per capita by 2025 (WB, 2006).

Multiple factors are contributing to stress on water resources, which include rapid urbanization, increased industrial activity and dependence

of the agricultural sector on chemicals and fertilizers. Contamination of water has resulted in increased water borne diseases and negative impacts on human health (WWF, 2007).

Water supply is primarily fed by the river flows, followed by rainfall. The river flows are largely fed by glacial and snow-melt from the mountain ranges. The country's water security is considered to be under serious threat as both the country's glaciers as well as rainfall supplies are highly sensitive to any changes in climate.

Irrigation accounts for most of the water consumption (70 percent) in Pakistan. The rest is used for supplies to urban and rural populations and industry. According to GoP (2005), per capita availability of water in the country has declined from 2700 cubic metre (m^3) in 1971 to 1200 m^3 in 2000. It is estimated to be 850 m^3 in 2013 putting Pakistan in the category of water stressed countries. Table 8.2 highlights the different sources of water. As can be seen from the table, the total availability of water has been decreasing. Between 2008-09 and 2009-10, it has declined by six per cent. Over-exploitation of ground water is another important problem which has been aggravated by the subsidy on electricity use of tube wells.

Table 8.2 Sources of Water in Pakistan
(Million Acre-Feet)

	Surface Water	Ground Water			Total
	At Farm Gate	Public Tubelwells	Private Tubewells	Scarp Tubewells	Water Availability
2000-01	84.2	1.9	39.4	9.3	134.8
2004-05	85.7	1.9	40.1	8.0	135.7
2008-09	94.2	1.7	39.9	7.0	142.9
2009-10	83.5	1.9	40.5	7.0	133.7

Source: Pakistan Statistical Yearbook 2011, Pakistan Bureau of Statistics, GoP.

Wastage of Water

A large number of irrigation canals are losing surface water rapidly. Water logging and salinity has emerged as a consequence of the mismanagement of irrigated agriculture, flat topography, seepage from unlined earthen canals, inadequate provision of drainage and the use of poor quality drainage-effluent. The situation is becoming serious due to the problem of disposal of drainage effluent **(**Kahlown and Majeed, 2004). The seepage of water in such large quantities is due to lack of maintenance of the canals. The exact amount of wastage has not yet been determined but studies suggest that almost one half of the water entering the system is wasted (Easter and Linn, 2005). Moreover, the pricing policies of water services are inadequate and rely on the antiquated system of *abiana*. Area and crop based flat rates have not encouraged efficient use of water because neither is related to actual water usage.

The Water Polluters

Industrial Sector: Lack of understanding of, and attention to, environmental considerations in management of industrial processes have greatly increased water pollution in the country. According GoP (2005), only five percent of industries conduct environmental assessments which are mandatory by law. Compliance to the national quality standards that specify permissible limits of wastewater is also poor.

The sugarcane industry is largely rural based, employing over nine million of the rural population. It produces several hundred thousand cubic metres of wastewater per day, often discharged directly into the drains or rivers without any prior treatment. Leather tanneries and textile industries are also major polluters of water resources. There are no incentives for polluters to treat their effluents; nor are there any penalties for polluters who continue to discharge hazardous chemicals into the ground and water bodies.

Municipal Sector: Municipal sources of pollution are equally dangerous sources of water pollution as are industries. WB (2006) estimates that around 2,000 million gallons of sewage is being discharged to surface water bodies every day. Domestic waste containing household effluent and human waste is discharged directly to a sewer system, a natural drain or water body, a nearby field or an internal septic tank. It is estimated that only 8 percent of urban wastewater is treated in municipal treatment plants. Domestic waste in rural areas goes completely untreated and with the still prevalent practice of open defecation, rural areas and fields are major health hazards (Murtaza, 2010).

The treated wastewater in urban areas generally flows into open drains, and despite scarcity of water, is not reused (WB, 2005). The heavily contaminated industrial effluents are not separated from the treated municipal water and both flow in a combined stream into nearby water bodies which are often used as sources of drinking water for humans and cattle. The same water also seeps into the soil and contaminates agricultural land and wells as well as canals. The country has no standards of surface water quality, nor is there any monitoring of drinking water quality. A national water quality study conducted by the Pakistan Council for Research in Water Resources (PCRWR) identifies the presence of lead, chromium and cyanide in groundwater samples from industrial areas of Karachi, and the Malir and Lyari rivers. A separate study reported that in Sindh almost 95 per cent of shallow groundwater supplies are contaminated with bacteria (WB, 2006).

Agricultural Sector: The agricultural drainage system of Pakistan shows high percentage of pollutants according to several studies by the PCRWR and WAPDA. However, compared with the levels of pollution caused by industries and domestic waste, this is relatively small (GoP, 2005).

Land Degradation

According to the WB (2006), seventy percent of Pakistan's total area of 79.6 million hectares is arid or semi arid, and therefore highly vulnerable

to desertification. Pakistan's agricultural production is least sustainable in South Asia, with 80 percent of its crop land being irrigated, but nearly half of this is water logged, and 14 percent is saline. Rangelands are productive to only one third of their potential. Forest destruction rate is one of the highest in the world.

Only twenty seven percent of the land is under cultivation and this has been made possible despite low and erratic rainfall by the country's huge irrigation system. Agricultural growth, considered to be equivalent to development of rural areas, was first given an impetus through introduction of high yielding varieties and technology during the 60s, and then injected by fertilizer and pesticides. The first benefitted mainly large landholders and the second has polluted the soils extensively and made pests even more resistant.

Since independence, the area of land under cultivation has increased by approximately 40 percent. This was made possible through intensification, introduction of technology, fertilizer and pesticides. Today, however, agricultural production seems to have become stagnant. According to Mustafa et al (2007), less than 20 percent of land retains the potential for intensive agricultural use, while 62 percent is classified as having low potential for crops, livestock, and forestry production. Overall, land categorized as cultivable represents less than one quarter of the country's total area.

The problem of salinity too has been compounded by consistent mismanagement of irrigation and human induced soil erosion. Official statistics indicate that over 25 percent of irrigated land suffers from various levels of salinity, with over 1.4 million hectares being rendered uncultivable due to excessive salinity levels. The total probable cost of salinity is estimated at a mean cost of Rs 55 billion, or 0.9 percent of GDP in 2004 (WB, 2006).

Deforestation, clearing of natural vegetation (for infrastructure development, agricultural expansion, home construction or other human activities), over grazing and lack of protection from water flows has caused much of the land to be eroded, such that degraded land comprised 18 million hectares in total in 2003. Most affected by soil erosion during this period are Sindh and Balochistan.

Forests occupy around 4.6 million hectares of the total land area of Pakistan. Most of the country's forests are located in the northern part of the country; 40 per cent in Khyber Pakhtoonkhwa, 15.7 per cent in the Gilgit-Baltistan, and 6.5 per cent in Azad Jammu and Kashmir. A number of factors have contributed to rapid deforestation. The most often-cited are practices by the local communities who supposedly over exploit its resources due to lack of awareness and for meeting their fuel and fodder requirements. However, the fact is that the local population only uses a minor part of the forest for their survival. The depletion of forests is more a consequence of inefficient forest management strategies, corruption and poor governance by the provincial forest departments who allow the smuggling of timber for furniture and construction activities.

A Word on Corporate Farming

In 2001, the government passed a Corporate Agricultural Farming (CAF) Ordinance under which local and foreign companies were allowed to buy or lease state land in Pakistan for farming purposes. The investment policy was extremely liberal, and included 100 per cent foreign equity, remittance of 100 per cent capital, profits, dividends, no upper ceiling on land holdings, separate credit share earmarked by all banks and financial institutions, and fiscal incentives such as exemption from custom duty and sales tax on import of agricultural machinery, exemption from duty of transfer of land and no tax on dividends. Moreover, labour laws may not be presently applicable to corporate agriculture companies. The policy was not debated in parliament and no national consensus was developed.

While it has been argued that CAF would bring in huge amounts of foreign exchange and open up avenues for employment, Hasnain (2009) asserts the CAF Ordinance in its current form would be disastrous for the people of Pakistan. The following concerns have been raised:

- Pakistan is already water stressed and corporate farming will put more pressure on the meagre water resources, depriving small farmers of irrigation water.
- The landless and farmers with small land holdings will be at a huge disadvantage compared with the corporate giants and will be forced to sell out.
- Unemployment and rural poverty are already very high and the CAF is likely to increase this further and create more rural unemployment.
- Mono cropping has already caused considerable damage to the soils, and as CAF means concentrating on the same on larger scale, it may further deteriorate the productivity and food security situation in the country.
- Rural populations and indigenous communities who have been living in these areas for many years may be displaced as land is purchased by large multinationals.
- CAF would pose additional adverse environmental impacts and will add to climate change.

Some of the recommendations made are as follows:

- CAF ordinance should be brought in the parliament for thorough discussion.
- Agrarian reforms should be introduced in the country and state land be distributed among landless peasants.
- Policy on sustainable and organic agriculture should be followed to ensure food security.
- Minimum upper ceiling should be fixed and CAF be brought under labour laws.
- For private investments, domestic or oversees Pakistani companies must be given priority.
- The government should ensure labour intensive and environment friendly initiatives under the CAF.
- Through legislation, it should be ensured that private investors may not grab already cultivated land from existing farmers.

FUTURE SCENARIOS

The above paints a bleak picture of Pakistan's natural resources as they stand today. During the 50s-70s, the country's planners could have claimed lack of knowledge and understanding of the inherent linkages between social and economic issues and the environment. But even then, there was no excuse for disregard of proper management of resources, reducing wastage, and putting into place systems of disposal of hazardous material. As early as the 80s, and then in the early 90s, Pakistan was one of the first countries to prepare and approve a National Conservation Strategy that not only identified all major issues in depth, but also posed several recommendations for sustainable development. Since then, a number of strategies and plans have been produced, but economic, agricultural and social policies have continued to be made and implemented for short term gains and with total disregard of the further environmental degradation that these will cause.

There are, thus, only two scenarios that may be considered. One is business as usual, that will lead Pakistan on the same trajectory it has followed for the past decades. It is an unsustainable path that leaves little for our future generations. The second scenario is one which is also within our reach, albeit with difficulty. It is a departure from the past, and it is as much to do with attitudes and behaviours, as with different paradigms of planning and implementation.

Our recommendations can be defined best by a five point process: **halt degradation, reverse losses, regenerate, grow sustainably (adopt sustainable agricultural practices) and inclusively, and adopt green policies.** The first three are specific to adopting measures to clean up existing pollution of water, land and soil, reduce soil erosion and water logging, halt forest destruction, control use of pesticides, treat existing heaps of solid waste and polluted water bodies, and take steps to regenerate at least a part of the water, forests and vegetation that has been lost.

Given the threats to water security, it is important that water resources should be conserved. Water conservation measures are the best option for the control and management of subsurface drainage water, which involve reducing the drainage of water and using the already existing resources effectively and efficiently.

Sustainable growth requires a base of good growth policies that create a good business environment, promote investment, and remove harmful subsidies; it is conducive to small entrepreneurs and its benefits are both designed and monitored to reach the poorest. They are premised in, and are supported by, strong human resource development systems, both with educational and skill development, and are geared towards self-sufficiency in food and essential items, with value added export regimes. The inclusiveness of sustainable growth requires that poor, marginalized and remotely situated groups must be particularly catered to. For sustainable growth to be implemented, environmental issues must be thoroughly integrated within economic policies and institutional reforms.

Rural Urban Divide in Public Expenditure on Social Services

9

9 Rural Urban Divide in Public Expenditure on Social Services

Public expenditure on social services such as education and health contributes to human capital formation and the enhancement of human capabilities. It is, therefore, considered to be an important ingredient of inclusive growth. Historically, socio-economic indicators of Pakistan reveal that the country has performed inconsistently both in social and economic development with persistent regional inequalities and lack of inclusiveness. Public expenditure priorities of respective governments are generally blamed for this state of affairs. Pakistan spends a very low share of its GDP on the social sectors. Since the responsibility of social service delivery lies mainly with provincial governments, one explanation for the low level of spending was the weak fiscal position of provinces due to their low share in divisible pool taxes. This situation has been rectified by the 7th National Finance Commission (NFC) Award of 2010 that not only substantially enhanced the share of provinces in the divisible pool of taxes but also devolved General Sales Tax (GST) on services which is a very broad based and buoyant source of tax generation for the provinces. This provided fiscal space to the provinces to focus more on social sectors, particularly, after the 18th Amendment to the Constitution that further enhanced the responsibility of provincial governments to deliver social services.

This chapter aims to analyse the distribution of public expenditure in rural and urban areas both at national and provincial levels to help understand whether public expenditure on social sectors is perpetuating or eliminating urban-rural disparity. It examines the changes in the level as well as the urban-rural distribution of public spending on education and health after the 7th NFC Award. It also attempts to analyse the efficiency and effectiveness of spending, particularly in rural areas.

PUBLIC SPENDING ON EDUCATION

Education is among the essential social services provided mainly by provincial governments in Pakistan. However, details of input and output on amount allocated to achieve various targets are not available in budget documents. The scrutiny of all available budget documents indicates that institution-wise data related to expenditure are available but their urban-rural disaggregation is missing. As such, public finance data do not shed any light on perpetuating or reducing regional differences that exist in various socio-economic indicators including education. One of the possible explanations for this situation is the largely incremental process of budget formulation and implementation. Therefore, linkages of public spending with the quality of services and outputs are weak. Subsequently, the literature on urban-rural distribution of public

Box 9.1 Sources of Data

Education

The budget documents of provincial and federal governments generally report four broad categories of education: primary; secondary; general colleges and universities; and technical and professional institutes, colleges and universities. For the analysis of the incidence of public spending presented in this chapter, the four categories are grouped into three categories namely primary, secondary and tertiary (covering both general colleges/schools for higher secondary education and general universities). Since reliable data on enrolment at polytechnic institutes/colleges and professional technical universities are not available, the analysis does not cover public expenditure related to these institutions.

Data on enrolment in public institutions, number of teachers in public institutions and the number of public institutions at both national and provincial levels by urban-rural decomposition were obtained from Pakistan Education Statistics for 2004-05, 2008-09 and 2011-12 published by the National Education Management Information System (NEMIS), Academy of Educational Planning and Management, Government of Pakistan. Data related to public expenditure on various levels of education were collected from PRSP reports 2004-05, 2008-09 and 2011-12. Since, Pakistan Education Statistics 2004-05 was limited to data for higher secondary schools and did not cover other categories of tertiary education an analysis of public expenditure on tertiary education was not carried out for 2004-05.

Health

The data on public spending on health is taken from the Poverty Reduction Strategy Paper (PRSP) annual progress report for the year 2004-05, 2008-09 and 2012-13. Population estimates are taken from the Pakistan Economic Survey 2013-14 and province-wise rural-urban distribution of population is taken from the respective Labour force survey (LFS). The ratio of General Government Services at current prices and constant prices of 2005-06 is also taken from the Pakistan Economic Survey 2013-14.

The information on province and locality wise proportion of sick in total population, proportion of sick consulted by any health service provider, and proportion of consulted sick visited any public health facility taken from the Pakistan Social Living-Standard Measurement (PSLM) Survey 2004-05, 2008-09 and 2012-13. Similarly, the share of children aged 12 months to 23 months immunized in urban and rural areas is also taken from PSLM surveys. For analysis distribution of public spending 2004-05 is taken as base year. In 2004-05, the government of Pakistan initiated a new series of surveys called Pakistan Social and Living Standard Measurement Survey (PSLMS). The survey followed the Core Welfare Indicators Questionnaire (CWIQ) approach with the aim of providing data for rapid assessment in the overall context of attempting to attain the MDGs. The PSLMS data provides information on the income and expenditures of households and sex disaggregated usage of health services for both public and private health facilities. This offers an opportunity to estimate the distribution of government spending on health in rural urban and areas at provincial level.

expenditure on education or urban-rural differences in unit cost of education is scarce in the public domain, despite the importance attached to urban-rural differences in access to public services.

An attempt is made here to fill this gap by systematically computing urban-rural differences in unit cost of education provision. For this, a five-step methodology has been developed, which is described below while sources of data are presented in Box 9.1.

1. Collection of data on enrolment, number of teachers and schools from published sources.
2. Computation of inverse of pupil-teacher ratio and pupil-school ratio for both rural and urban areas.

3. Computation of relative rural and urban costs by giving 80 percent weight to the number of teachers and 20 percent weight to the number of schools. These weights are based on shares of salary and non-salary in total expenditure.
5. Computation of weighted cost shares by using relative cost and number of enrolment in public sectors.
6. Computation of rural and urban distribution of public expenditure on education based on these shares.

The Education System

According to the Constitution of Pakistan, education used to be the part of the Concurrent Legislative List where both the federal and provincial governments had a role in its delivery. However, with the promulgation of the 18th Constitutional Amendment in 2010 the responsibility for educational services has been devolved to the provincial level.

The education system in Pakistan consists of three major levels – primary, secondary and tertiary while pre-primary public schooling called *Katchi Pehli* is optional for children of age 3 to 5 years. Primary education spreads over a period of 5 years (grades 1-5), where the official age of entry is 5. The next is secondary level education spanning over a period of 5 years (grades 6-10), which starts from age 10 and ends ideally at 14 years.

At the tertiary level, two options are available to students. They may either choose polytechnic institutes/colleges for technical education or general colleges/schools for higher secondary education, which is also called intermediate level. After successful completion of two-year intermediate program, the education system encompasses three lines of study: technological/engineering colleges and universities; medical colleges and universities; and general colleges and universities.

Trends in Public Expenditure and Unit Costs in Education

Pakistan

Table 9.1 presents the nominal expenditure on education by levels of education for years 2004-05, 2008-09 and 2011-12 at the aggregate national level. It reveals that public expenditure has grown tremendously since 2004-05 both at primary and secondary levels. As expected, the pace of growth in education expenditure is relatively higher after the 7th NFC Award. The fiscal space provided by the Award was used by the provincial governments to focus more on social sectors, particularly education. Although a substantial increase in nominal expenditures is observed at all levels, growth in secondary education is higher than that in primary and tertiary education.

Table 9.1 also reveals urban-rural differential in public expenditure on education that vary with the level of education. It shows that both the federal and provincial governments spent a sizeable amount of the education budget on rural areas compared to urban areas, except tertiary education. For instance, the share of rural areas in primary education

expenditure was slightly over 79 percent in 2004-05, which further increased to over 80 percent in 2008-09 and reached almost 82 percent in 2011-12. The share of rural areas in the expenditure on secondary education went up marginally from 68.8 percent in 2004-05 to 69.2 percent in later years. In contrast, the rural share in expenditure on tertiary education declined from 41 percent in 2008-09 to 39 percent in 2011-12. This shows that both the federal and provincial governments are focusing more on primary and secondary education in rural areas and on tertiary education in urban areas.

Another set of interesting statistics related to the unit cost of public schooling is observed. The unit cost of public schooling increased sharply after 2008-09 (post-NFC period) particularly in primary education. Interestingly, during 2004-05 to 2008-09 (pre-NFC period) growth in the unit cost of primary education was high in urban areas as compared to rural areas while the trend reversed during the post-NFC period. A look at enrolment data reveals that enrolment in public primary schools declined in absolute terms during both periods in urban areas but the decline was relatively sharper in the second period. However, in rural areas, there is a sharp increase in enrolment during the pre-NFC period. This trend was reverted after 2008-09 and enrolment in rural areas declined by nearly 500,000 during three years. This huge decline in enrolment combined with higher growth in public expenditure led to a sharp increase in the unit cost of primary education.

In contrast to the primary level, enrolment at the secondary level increased in rural and urban areas during both periods. However, the increase in enrolment is much sharper in rural areas compared to urban areas and during the pre-NFC period compared to the post-NFC period. Consequently, growth in the unit cost of secondary education is less than the growth in public expenditure on secondary education and it is higher for urban areas compared with rural areas. In addition, the unit cost of all three levels of education is higher in rural areas compared to urban areas. Finally, the trend in per capita expenditure shows that public spending on primary and secondary education is higher for rural areas compared to urban areas indicating a positive bias towards rural areas.

Table 9.1 also gives a similar set of statistics in real terms (at constant prices of 2005-06) for a meaningful comparison. The Index of General Government Services was used to convert nominal expenditure into real expenditure. It indicates that public expenditures on primary education in real terms was almost constant in urban areas during the pre-NFC period while the unit cost of public schooling increased marginally due to the decline in enrolment. In contrast, in the same period public expenditure on primary education in rural areas increased in real terms whereas the unit cost of primary education declined due to the increase in enrolment. However, public expenditure, unit cost of public schooling and per capita expenditure on both primary and secondary levels showed positive growth in real terms during the post-NFC period.

Table 9.1 **Public Expenditure on Education by Locality: Pakistan**

	Primary Education			Secondary Education			Tertiary Education		
	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
Nominal Expenditure									
Public Expenditures on Education (Rs in Millions)									
2004-05	10,135	39,162	49,297	8,566	18,848	27,414			
2008-09	15,362	62,520	77,882	18,248	41,078	59,326	27,173	19,228	46,401
2011-12	24,371	107,779	132,150	33,373	75,275	108,648	42,319	27,134	69,453
Average Cumulative Growth Rate (%)									
2004-05 to 2008-09	*11*	*12.4*	*12.1*	*20.8*	*21.5*	*21.3*			
2008-09 to 2011-12	*16.6*	*19.9*	*19.3*	*22.3*	*22.4*	*22.3*	*15.9*	*12.2*	*14.4*
Cost of Public Schooling per student (Rs)									
2004-05	4,446	4,655	4,610	4,433	7,086	5,970			
2008-09	6,884	6,541	6,606	8,802	12,813	11,238	30,665	78,463	41,020
2011-12	11,582	11,887	11,830	15,918	21,277	19,283	40,968	54,600	45,396
Average Cumulative Growth Rate (%)									
2004-05 to 2008-09	*11.5*	*8.9*	*9.4*	*18.7*	*16*	*17.1*			
2008-09 to 2011-12	*18.9*	*22*	*21.4*	*21.8*	*18.4*	*19.7*	*10.1*	*-11.4*	*3.4*
Per Capita Public Expenditure on Education (Rs)									
2004-05	1,409	2,211	1,978	1,295	1,393	1,362			
2008-09	2,097	3,428	3,047	2,515	2,683	2,629	2,055	880	1,323
2011-12	3,219	5,691	4,981	4,387	4,861	4,701	3,065	1,158	1,865
Average Cumulative Growth Rate (%)									
2004-05 to 2008-09	*10.5*	*11.6*	*11.4*	*18.1*	*17.8*	*17.9*			
2008-09 to 2011-12	*15.3*	*18.4*	*17.8*	*20.4*	*21.9*	*21.4*	*14.3*	*9.6*	*12.1*
Real Expenditure at Constant Prices of 2005-06									
Public Expenditures on Education (Rs in Millions)									
2004-05	10,848	41,921	52,769	9,170	20,175	29,345			
2008-09	10,854	44,175	55,028	12,893	29,024	41,917	19,200	13,586	32,785
2011-12	12,377	54,737	67,114	16,949	38,229	55,178	21,492	13,781	35,273
Average Cumulative Growth Rate (%)									
2004-05 to 2008-09	*0*	*1.3*	*1.1*	*8.9*	*9.5*	*9.3*			
2008-09 to 2011-12	*4.5*	*7.4*	*6.8*	*9.5*	*9.6*	*9.6*	*3.8*	*0.5*	*2.5*
Cost of Public Schooling per students (Rs)									
2004-05	4,759	4,983	4,935	4,746	7,585	6,390			
2008-09	4,864	4,622	4,668	6,219	9,053	7,940	21,667	55,439	28,983
2011-12	5,882	6,037	6,008	8,084	10,806	9,793	20,806	27,729	23,055
Average Cumulative Growth Rate (%)									
2004-05 to 2008-09	*0.5*	*-1.9*	*-1.4*	*7*	*4.5*	*5.6*			
2008-09 to 2011-12	*6.5*	*9.3*	*8.8*	*9.1*	*6.1*	*7.2*	*-1.3*	*-20.6*	*-7.3*
Per Capita Public Expenditure on Education (Rs)									
2004-05	1,508	2,367	2,118	1,386	1,491	1,458			
2008-09	1,482	2,422	2,153	1,777	1,895	1,857	1,452	622	935
2011-12	1,635	2,890	2,530	2,228	2,469	2,387	1,557	588	947
Average Cumulative Growth Rate (%)									
2004-05 to 2008-09	-0.4	0.6	0.4	6.4	6.2	6.2			
2008-09 to 2011-12	3.3	6.1	5.5	7.8	9.2	8.7	2.3	-1.9	0.4

Punjab

Table 9.2 presents a comparable set of statistics for Punjab. It reveals that while primary education is the top priority within the education budget, growth in nominal public expenditure on secondary education was remarkably higher than that in primary education during both periods. However, the pace of growth in expenditure on primary education increased substantially after the 7th NFC Award. Expenditure on tertiary education did not show any dynamism as they increased only by one percent in 2011-12 compared to 2008-09.

Table 9.2 also reveals that urban-rural differentials in public expenditure on education vary with the levels of education. The Government of Punjab spent a sizeable amount of the education budget in rural areas compared to urban areas. For instance, the share of rural areas in total expenditure on primary education was almost 85 percent in 2004-05, which declined slightly in 2008-09 but bounced back in 2011-12. Further, the rural share in total expenditure on secondary education remained up to 68 percent in each year. Tertiary education is the only level in which the share of urban areas is higher (more than 64 percent in each year). This shows that the provincial government focussed more on primary and secondary education in rural areas and tertiary education in urban areas.

As shown in Table 9.2, the unit cost of public schooling increased sharply after 2008-09 particularly in primary education. Interestingly, growth in the unit cost, largely in the case of primary education, was less than that in public expenditure indicating efficiency gains in both rural and urban areas during the pre-NFC period. Afterwards annual average cumulative growth in the unit cost is higher than that in expenditure indicating a decline in efficiency in primary education. This decline is more pronounced in rural areas compared to urban areas. It is important to mention that enrolment in public primary schools declined in absolute terms during both periods in urban areas where the decline was relatively sharper in the second period. However, in rural areas, there was a sharp increase in enrolment during the pre-NFC period. This trend was reverted in the post-NFC period and enrolment in rural areas declined by more than 500,000. Thus, a huge decline in enrolment combined with higher growth in public expenditure led to a sharp increase in the unit cost of primary education.

In contrast to primary education, enrolment at the secondary level increased both in rural and urban areas during both periods. However, the increase in enrolment was much sharper in rural areas compared to urban areas during the pre-NFC period. Consequently, growth in the unit cost of secondary education is less than the growth in public expenditure on secondary education and higher for urban areas as compared to rural areas. In addition, the unit cost of all three levels of education is higher in rural areas compared to urban areas. Finally, the trend in per capita expenditure shows that public spending on primary and secondary education is higher for rural areas as compared to urban areas. At the tertiary level, the unit cost declined in 2011-12 compared to 2008-09,

Table 9.2 **Public Expenditure on Education by Locality: Punjab**

	Primary Education			Secondary Education			Tertiary Education		
	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
Nominal Expenditure									
Public Expenditures on Education (Rs in Millions)									
2004-05	4,431	24,706	29,137	3,229	7,676	10,905			
2008-09	6,088	33,049	39,137	7,634	17,542	25,176	17,862	10,523	28,385
2011-12	10,285	56,539	66,824	16,340	35,616	51,956	18,836	10,433	29,269
Average Cumulative Growth Rate (%)									
2004-05 to 2008-09	*8.3*	*7.5*	*7.7*	*24*	*23*	*23.3*			
2008-09 to 2011-12	*19.1*	*19.6*	*19.5*	*28.9*	*26.6*	*27.3*	*1.8*	*-0.3*	*1*
Cost of Public Schooling per student (Rs)									
2004-05	4,317	5,761	5,482	2,919	5,169	4,208			
2008-09	5,970	7,026	6,837	6,084	10,045	8,389	35,604	113,804	47,774
2011-12	10,462	13,746	13,112	12,944	19,224	16,679	33,577	80,675	42,399
Average Cumulative Growth Rate (%)									
2004-05 to 2008-09	*8.4*	*5.1*	*5.7*	*20.2*	*18.1*	*18.8*			
2008-09 to 2011-12	*20.6*	*25.1*	*24.2*	*28.6*	*24.2*	*25.7*	*-1.9*	*-10.8*	*-3.9*
Per Capita Public Expenditure on Education (Rs)									
2004-05	1,212	2,604	2,217	916	1,014	983			
2008-09	1,679	3,437	2,956	2,122	2,171	2,154	2,502	822	1,423
2011-12	2,651	5,792	4,895	4,234	4,372	4,324	2,542	765	1,391
Average Cumulative Growth Rate (%)									
2004-05 to 2008-09	*8.5*	*7.2*	*7.5*	*23.4*	*21*	*21.7*			
2008-09 to 2011-12	*16.4*	*19*	*18.3*	*25.9*	*26.3*	*26.1*	*0.5*	*-2.3*	*-0.8*
Real Expenditure at Constant Prices of 2005-06									
Public Expenditures on Education (Rs in Millions)									
2004-05	4,743	26,446	31,189	3,457	8,216	11,673			
2008-09	4,301	23,351	27,653	5,394	12,395	17,788	12,621	7,435	20,056
2011-12	5,223	28,714	33,937	8,298	18,088	26,387	9,566	5,298	14,865
Average Cumulative Growth Rate (%)									
2004-05 to 2008-09	*-2.4*	*-3.1*	*-3*	*11.8*	*10.8*	*11.1*			
2008-09 to 2011-12	*6.7*	*7.1*	*7.1*	*15.4*	*13.4*	*14*	*-8.8*	*-10.7*	*-9.5*
Cost of Public Schooling per student (Rs)									
2004-05	4,622	6,167	5,869	3,124	5,533	4,505			
2008-09	4,218	4,964	4,831	4,299	7,097	5,927	25,156	80,410	33,755
2011-12	5,313	6,981	6,659	6,574	9,763	8,471	17,052	40,972	21,533
Average Cumulative Growth Rate (%)									
2004-05 to 2008-09	*-2.3*	*-5.3*	*-4.7*	*8.3*	*6.4*	*7.1*			
2008-09 to 2011-12	*8*	*12*	*11.3*	*15.2*	*11.2*	*12.6*	*-12.2*	*-20.1*	*-13.9*
Per Capita Public Expenditure on Education (Rs)									
2004-05	1,298	2,787	2,373	981	1,085	1,052			
2008-09	1,186	2,429	2,089	1,499	1,534	1,522	1,768	581	1,006
2011-12	1,347	2,941	2,486	2,150	2,220	2,196	1,291	389	706
Average Cumulative Growth Rate (%)									
2004-05 to 2008-09	*-2.2*	*-3.4*	*-3.1*	*11.2*	*9*	*9.7*			
2008-09 to 2011-12	*4.3*	*6.6*	*6*	*12.8*	*13.1*	*13*	*-9.9*	*-12.5*	*-11.1*

which is a reflection of stagnation in expenditures level and sharp increase in enrolment particularly in rural areas.

Table 9.2 also presents the trend in education expenditure in real terms in the province of Punjab. It indicates that the public expenditure on primary education declined in real terms in both urban and rural areas during the pre-NFC period. However, afterwards real expenditure increased in both areas. The trend is more or less similar in the unit cost of primary education and per capita primary expenditure. For secondary education, there is double digit growth in expenditure during both periods in real terms. During the post-NFC period, public expenditure, the unit cost of public schooling and per capita expenditure on both primary and secondary levels showed positive growth in real terms while the same indicators declined in the case of tertiary education.

Sindh

In Sindh, public expenditure on education grew tremendously during 2004-05 to 2008-09 both at primary and secondary levels (Table 9.3). Afterward that pace of expenditure growth declined both in primary and secondary education. In particular, expenditure on secondary education remained stagnant during post-NFC period. On the other hand, expenditure on tertiary education increased massively indicating that focus of government of Sindh is shifting towards tertiary education compared to both primary and secondary education.

Rural-urban comparison shows that disparities in public expenditure on education vary with the levels of education with provincial government's inclination towards spending a sizeable amount of budget on rural areas. For instance, share of rural areas in primary education expenditure increased from 68 percent in 2008-09 to 71 percent in 2011-12. Similarly, share of expenditure on secondary education in rural areas went up from 43 percent to 47 percent while the share of tertiary education increased marginally by one percentage point.

Unit cost of public schooling increased after 2008-09 in primary and tertiary education. Interestingly, growth in unit cost remained higher in urban areas compared to rural areas at each level of education in both the periods. In urban areas, higher growth in unit cost than in expenditures at primary level in both periods and at secondary level during the first period indicates a decline in enrolment. However, during the second period, growth in expenditures and unit cost at secondary and tertiary levels in urban areas remained almost same implying no change in enrolment. On the other hand, in rural areas, lower growth in unit cost than in expenditures at each level in both periods depicts an increase in enrolment. Finally, trend in per capita expenditure shows that public spending at primary and secondary levels was higher for rural areas compared to urban areas indicating a positive bias towards rural areas.

Real expenditures (at constant prices) on primary and tertiary education increased in post-NFC period while they decreased in the case of secondary education. The trend in unit cost in real terms is also similar to that in nominal terms.

Table 9.3 **Public Expenditure on Education by Locality: Sindh**

	Primary Education			Secondary Education			Tertiary Education		
	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
Nominal Expenditure									
Public Expenditures on Education (Rs in Millions)									
2004-05	3,215	5,643	8,858	4,238	2,658	6,896			
2008-09	6,438	13,459	19,897	8,092	6,200	14,292	6,314	2,225	8,539
2011-12	8,642	21,080	29,722	7,581	6,723	14,304	13,455	5,074	18,529
Average Cumulative Growth Rate (%)									
2004-05 to 2008-09	*19*	*24.3*	*22.4*	*17.6*	*23.6*	*20*			
2008-09 to 2011-12	*10.3*	*16.1*	*14.3*	*-2.2*	*2.7*	*0*	*28.7*	*31.6*	*29.5*
Cost of Public Schooling per student (Rs)									
2004-05	3,869	3,272	3,466	8,753	9,812	9,133			
2008-09	8,345	6,782	7,220	17,666	14,515	16,146	22,626	32,842	24,622
2011-12	13,086	10,570	11,196	16,652	12,829	14,606	48,018	32,234	42,340
Average Cumulative Growth Rate (%)									
2004-05 to 2008-09	*21.2*	*20*	*20.1*	*19.2*	*10.3*	*15.3*			
2008-09 to 2011-12	*16.2*	*15.9*	*15.7*	*-2*	*-4*	*-3.3*	*28.5*	*-0.6*	*19.8*
Per Capita Public Expenditure on Education (Rs)									
2004-05	1,261	1,659	1,489	1,891	1,115	1,491			
2008-09	2,447	3,690	3,169	3,029	2,030	2,496	1,389	597	1,033
2011-12	3,345	5,150	4,454	2,794	2,183	2,469	2,854	1,231	2,097
Average Cumulative Growth Rate (%)									
2004-05 to 2008-09	*18*	*22.1*	*20.8*	*12.5*	*16.2*	*13.7*			
2008-09 to 2011-12	*11*	*11.8*	*12*	*-2.6*	*2.5*	*-0.4*	*27.1*	*27.3*	*26.6*
Real Expenditure at Constant Prices of 2005-06									
Public Expenditures on Education (Rs in Millions)									
2004-05	3,442	6,040	9,482	4,536	2,846	7,382			
2008-09	4,549	9,509	14,058	5,718	4,380	10,098	4,461	1,572	6,033
2011-12	4,389	10,706	15,095	3,850	3,414	7,264	6,833	2,577	9,410
Average Cumulative Growth Rate (%)									
2004-05 to 2008-09	*7.2*	*12*	*10.3*	*6*	*11.4*	*8.1*			
2008-09 to 2011-12	*-1.2*	*4*	*2.4*	*-12.3*	*-8*	*-10.4*	*15.3*	*17.9*	*16*
Cost of Public Schooling per student (Rs)									
2004-05	4,141	3,502	3,710	9,370	10,504	9,777			
2008-09	5,896	4,792	5,101	12,482	10,256	11,408	15,987	23,205	17,397
2011-12	6,646	5,368	5,686	8,457	6,516	7,418	24,387	16,370	21,503
Average Cumulative Growth Rate (%)									
2004-05 to 2008-09	*9.2*	*8.2*	*8.3*	*7.4*	*-0.6*	*3.9*			
2008-09 to 2011-12	*4.1*	*3.9*	*3.7*	*-12.2*	*-14*	*-13.4*	*15.1*	*-11*	*7.3*
Per Capita Public Expenditure on Education (Rs)									
2004-05	1,350	1,776	1,593	2,024	1,194	1,596			
2008-09	1,729	2,607	2,239	2,140	1,434	1,763	981	422	730
2011-12	1,699	2,615	2,262	1,419	1,109	1,254	1,449	625	1,065
Average Cumulative Growth Rate (%)									
2004-05 to 2008-09	*6.4*	*10.1*	*8.9*	*1.4*	*4.7*	*2.5*			
2008-09 to 2011-12	*-0.6*	*0.1*	*0.3*	*-12.8*	*-8.2*	*-10.7*	*13.9*	*14*	*13.4*

Khyber Pakhtunkhwa

There has been tremendous increase in nominal public expenditure at each level of education in Khyber Pakhtunkhwa during since 2004-05. However, growth in post-NFC period is more prominent. This is in line with the expectation that provincial governments would use the fiscal space attained in the 7th NFC Award to focus more on social sectors where education sector is one of the main beneficiaries. Growth in expenditures on secondary education is relatively higher than that in primary and tertiary education (Table 9.4).

As far as urban-rural differences are concerned, the government spent a sizeable amount of the education budget on rural areas compared to urban areas. For instance, the share of rural areas in primary and secondary education expenditure remained 88 percent and 84 percent respectively. In contrast, the share of rural areas in expenditure on tertiary education declined from 66 percent in 2008-09 to 62 percent in 2011-12. This shows that government has been focusing more on primary and secondary education in rural areas and on tertiary education in urban areas. As shown in Table 9.4, the unit cost of public schooling increased sharply after 2008-09 particularly in primary education. Interestingly, during the pre-NFC period growth in unit cost was high in urban areas compared to rural areas whereas during the post-NFC period growth in rural areas was high.

Higher growth in expenditures than that in unit cost at primary level in both periods indicates an increase in enrolment in both rural and urban areas. Similar trend is observed in the enrolment at secondary level. Finally, trend in per capita expenditure shows that public spending at primary and secondary levels was higher for rural areas compared to urban areas indicating a positive biased towards rural areas.

Expenditures on education also increased in real terms at each level of education. The comparison of the two periods shows that growth in expenditures remained higher during the post-NFC period. However, the unit cost grew sharply in real terms at the primary level in rural areas.

Balochistan

In Balochistan, there has been phenomenal growth in public expenditure on education at all levels and in both localities during the post-NFC period (Table 9.5). However, within the various levels of education, higher annual growth of 43 percent and 38 percent is observed in the secondary and tertiary levels respectively. Growth rates of expenditure in urban and rural areas are almost the same within the respective levels.

Urban-rural disparity prevails in public expenditure on education at the primary and secondary levels where a sizeable amount has been allocated to rural areas. For instance, the share of rural areas in primary education expenditure remained over 80 percent in each year. In contrast, the urban share in expenditure on tertiary education remained over 75 percent in each year. This shows the government's preference for primary and secondary education in rural areas and tertiary education in urban areas.

Table 9.4 Public Expenditure on Education by Locality: Khyber Pakhtunkhwa

	Primary Education			Secondary Education			Tertiary Education		
	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
Nominal Expenditure									
Public Expenditures on Education (Rs in Millions)									
2004-05	786	5,814	6,600	971	4,975	5,946			
2008-09	1,544	11,243	12,787	2,162	10,916	13,078	2,013	3,839	5,852
2011-12	2,782	21,302	24,084	4,281	22,346	26,627	4,307	7,082	11,389
Average Cumulative Growth Rate (%)									
2004-05 to 2008-09	*18.4*	*17.9*	*18*	*22.2*	*21.7*	*21.8*			
2008-09 to 2011-12	*21.7*	*23.7*	*23.5*	*25.6*	*27*	*26.7*	*28.9*	*22.6*	*24.9*
Cost of Public Schooling per student (Rs)									
2004-05	3,673	3,849	3,827	5,128	8,259	7,510			
2008-09	6,771	6,039	6,119	11,017	15,525	14,541	34,144	69,993	51,422
2011-12	11,719	11,047	11,121	21,151	28,253	26,806	38,207	46,854	43,160
Average Cumulative Growth Rate (%)									
2004-05 to 2008-09	*16.5*	*11.9*	*12.4*	*21.1*	*17.1*	*18*			
2008-09 to 2011-12	*20.1*	*22.3*	*22*	*24.3*	*22.1*	*22.6*	*3.8*	*-12.5*	*-5.7*
Per Capita Public Expenditure on Education (Rs)									
2004-05	1,644	1,836	1,811	2,324	2,066	2,104			
2008-09	2,823	3,435	3,347	4,415	4,000	4,063	2,350	1,033	1,280
2011-12	5,025	6,524	6,307	8,357	7,990	8,047	4,706	1,756	2,301
Average Cumulative Growth Rate (%)									
2004-05 to 2008-09	*14.5*	*17*	*16.6*	*17.4*	*18*	*17.9*			
2008-09 to 2011-12	*21.2*	*23.8*	*23.5*	*23.7*	*25.9*	*25.6*	*26*	*19.3*	*21.6*
Real Expenditure at Constant Prices of 2005-06									
Public Expenditures on Education (Rs in Millions)									
2004-05	842	6,223	7,065	1,039	5,326	6,365			
2008-09	1,091	7,944	9,035	1,528	7,713	9,240	1,422	2,713	4,135
2011-12	1,413	10,819	12,231	2,174	11,349	13,523	2,187	3,597	5,784
Average Cumulative Growth Rate (%)									
2004-05 to 2008-09	*6.7*	*6.3*	*6.3*	*10.1*	*9.7*	*9.8*			
2008-09 to 2011-12	*9*	*10.8*	*10.6*	*12.5*	*13.7*	*13.5*	*15.4*	*9.9*	*11.8*
Cost of Public Schooling per student (Rs)									
2004-05	3,932	4,121	4,097	5,490	8,840	8,039			
2008-09	4,784	4,267	4,323	7,784	10,969	10,274	24,125	49,454	36,333
2011-12	5,951	5,611	5,648	10,742	14,348	13,614	19,404	23,795	21,919
Average Cumulative Growth Rate (%)									
2004-05 to 2008-09	*5*	*0.9*	*1.4*	*9.1*	*5.5*	*6.3*			
2008-09 to 2011-12	*7.5*	*9.6*	*9.3*	*11.3*	*9.4*	*9.8*	*-7*	*-21.6*	*-15.5*
Per Capita Public Expenditure on Education (Rs)									
2004-05	1,760	1,965	1,938	2,488	2,211	2,252			
2008-09	1,995	2,427	2,365	3,119	2,826	2,871	1,661	730	904
2011-12	2,552	3,313	3,203	4,244	4,058	4,087	2,390	892	1,168
Average Cumulative Growth Rate (%)									
2004-05 to 2008-09	*3.2*	*5.4*	*5.1*	*5.8*	*6.3*	*6.3*			
2008-09 to 2011-12	*8.6*	*10.9*	*10.6*	*10.8*	*12.8*	*12.5*	*12.9*	*6.9*	*8.9*

Table 9.5 **Public Expenditure on Education by Locality: Balochistan**

	Primary Education			Secondary Education			Tertiary Education		
	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
Nominal Expenditure									
Public Expenditures on Education (Rs in Millions)									
2004-05	321	1,470	1,791	600	828	1,428			
2008-09	563	2,744	3,307	1,190	1,808	2,998	2,051	661	2,712
2011-12	1,094	5,396	6,490	3,423	5,321	8,744	5,386	1,794	7,180
Average Cumulative Growth Rate (%)									
2004-05 to 2008-09	*15*	*16.9*	*16.6*	*18.7*	*21.6*	*20.4*			
2008-09 to 2011-12	*24.8*	*25.3*	*25.2*	*42.2*	*43.3*	*42.9*	*38*	*39.5*	*38.3*
Cost of Public Schooling per student (Rs)									
2004-05	2,234	5,074	4,132	6,931	15,105	10,101			
2008-09	3,693	7,411	6,328	12,004	26,052	17,790	269,291	391,782	291,488
2011-12	6,874	12,954	11,274	33,206	66,015	47,603	269,009	264,160	267,781
Average Cumulative Growth Rate (%)									
2004-05 to 2008-09	*13.4*	*9.9*	*11.2*	*14.7*	*14.6*	*15.2*			
2008-09 to 2011-12	*23*	*20.5*	*21.2*	*40.4*	*36.3*	*38.8*	*0*	*-12.3*	*-2.8*
Per Capita Public Expenditure on Education (Rs)									
2004-05	947	1,202	1,147	2,236	994	1,297			
2008-09	1,564	2,203	2,060	3,622	1,687	2,142	5,381	641	1,920
2011-12	2,882	3,984	3,741	9,812	4,893	6,088	12,299	1,664	4,733
Average Cumulative Growth Rate (%)									
2004-05 to 2008-09	*13.4*	*16.4*	*15.8*	*12.8*	*14.1*	*13.4*			
2008-09 to 2011-12	*22.6*	*21.8*	*22*	*39.4*	*42.6*	*41.6*	*31.7*	*37.4*	*35.1*
Real Expenditure at Constant Prices of 2005-06									
Public Expenditures on Education (Rs in Millions)									
2004-05	344	1,573	1,917	642	887	1,529			
2008-09	397	1,939	2,337	841	1,278	2,118	1,449	467	1,916
2011-12	555	2,741	3,296	1,738	2,702	4,441	2,735	911	3,646
Average Cumulative Growth Rate (%)									
2004-05 to 2008-09	*3.7*	*5.4*	*5.1*	*7*	*9.6*	*8.5*			
2008-09 to 2011-12	*11.8*	*12.2*	*12.2*	*27.4*	*28.4*	*28*	*23.6*	*25*	*23.9*
Cost of Public Schooling per student (Rs)									
2004-05	2,392	5,431	4,423	7,419	16,169	10,813			
2008-09	2,610	5,237	4,471	8,481	18,408	12,570	190,270	276,818	205,954
2011-12	3,491	6,579	5,725	16,864	33,527	24,176	136,619	134,157	135,996
Average Cumulative Growth Rate (%)									
2004-05 to 2008-09	*2.2*	*-0.9*	*0.3*	*3.4*	*3.3*	*3.8*			
2008-09 to 2011-12	*10.2*	*7.9*	*8.6*	*25.7*	*22.1*	*24.4*	*-10.5*	*-21.5*	*-12.9*
Per Capita Public Expenditure on Education (Rs)									
2004-05	1,014	1,287	1,228	2,393	1,064	1,388			
2008-09	1,105	1,557	1,456	2,559	1,192	1,514	3,802	453	1,357
2011-12	1,464	2,023	1,900	4,983	2,485	3,092	6,246	845	2,404
Average Cumulative Growth Rate (%)									
2004-05 to 2008-09	*2.2*	*4.9*	*4.4*	*1.7*	*2.9*	*2.2*			
2008-09 to 2011-12	*9.8*	*9.1*	*9.3*	*24.9*	*27.7*	*26.9*	*18*	*23.1*	*21*

The unit cost of public schooling increased sharply at the primary and secondary levels while it declined at the tertiary level after 2008-09. Growth in unit cost remained higher in urban areas compared to rural areas in both the periods at the primary and secondary levels. At the tertiary level, the unit cost in urban areas remained almost the same in 2011-12 compared to that in 2008-09 while it declined in rural areas.

Growth in expenditure remained higher than that in unit cost at each level of education in both rural and urban areas and in both periods implying an increase in enrolment. Finally, the trend in per capita expenditure shows that public spending at the primary level was higher for rural areas compared to urban areas. In contrast, per capita expenditure remained fairly high in urban areas at the secondary and tertiary level of education.

In real terms, public expenditure increased at a higher rate during the post-NFC period as compared to the post-NFC period at each level of education and in both rural and urban areas.

PUBLIC SPENDING ON HEALTH

In order to provide affordable and quality healthcare services to the people both developed and developing countries spend a sizeable share of their budget on health. However, the health sector in Pakistan has been neglected by consecutive governments and policy-makers and it has remained in critical crises due to low public investment. Pakistan's health budget being less than 0.5 percent of GDP is the lowest in the region. Moreover, rural-urban disparities are also evident in provision of health facilities.

As per the Constitution of Pakistan, health was part of the Concurrent Legislative list. Thus, both the federal and provincial governments had a role in delivery of health services. However, after the 18th Constitutional Amendment in April 2010 the responsibility for health services was devolved to the provinces. Hence, the provincial governments are now entrusted with the responsibility of planning and delivering primary health services to the people.

Public Health System in Pakistan

Even before the 18th Constitutional Amendment, the provincial governments were primarily responsible for health service provision. The role of the federal government was regulatory as well as supplementary service provision. First, the federal government was responsible for designing a National Health Policy that would provide necessary parameters to maintain a uniform standard of health status in line with international standards. Second, there were a number of tertiary care facilities run by the federal health ministry under public sector "curative care" such as the Jinnah Postgraduate Medical Centre (JPMC). Third, there were several vertical programmes initiated for the prevention and control of communicable diseases. These include the Programme for Family Planning and Primary Health Care (commonly known as Lady

Health Workers Programme), Expanded Programme for Immunization (EPI) and other programmes for the control of communicable diseases such as malaria, TB, HIV/AIDS, hepatitis, etc. The federal ministry through the national and provincial programme managers in coordination with district focal persons had been managing these programmes throughout the country.

After the promulgation of the 18th Constitutional Amendment, most of the tertiary care facilities were transferred to provincial governments. Moreover, the role of the federal government in implementation of vertical programmes is now limited only to their financing till the currency of 7th NFC Award. There is a vast network of health care facilities under the control of provincial health departments including hospitals, dispensaries, Basic Health Units (BHUs) and Sub-Health Centers, Mother and Child Health Centers, Rural Health Centers (RHCs) and TB Centers.

From the perspective of public finance there are four broad categories of health services that are generally reported in PRSP annual progress reports. These are: (1) general hospitals and clinics; (2) mother and child health; (3) other health facilities; and (4) preventive measures and others. However, this chapter focuses only on two categories for the analysis of rural-urban distribution of public spending in health namely general hospitals and clinics (including BHUs RHCs) and preventive measures and others. The reason for focusing on these two categories is that the Pakistan Social and Living Standards Measurement Survey (PSLM), which is one of the major data sources for this analysis, does not cover the other categories reported in budget documents effectively. Moreover, general hospital and clinics alone account for more than 80 percent of the total spending on public health care. Methodology of the expenditure analysis is presented in Box 9.2 while the sources of data are described in Box 9.1.

Unit Subsidies in Curative Health

Table 9.6 presents the result of province-wise estimates of unit cost in curative health. It reveals that the unit cost varies significantly among the provinces. The amount of per patient unit cost was highest in Punjab, followed by Sindh, Khyber Paktunkhwa and Balochistan in 2004-05. However, in 2008-09 per patient cost in Sindh exceeded from rest of the provinces. In Sindh, the average annual growth in per patient cost was more than 53 percent during the pre-NFC period, which declined to 15.6 percent during the post-NFC period. In fact, the growth in per patient expenditure is well above the salary increase in public sector during these periods. This huge increase in unit cost can be attributed to both high growth in public spending on health and decline in the number of patients visiting government health facilities. In the other provinces as well, per patient cost grew in both nominal and real terms. However, the growth rate remained higher during the first period except in Balochistan.

Table 9.6 Nominal and Real Cost per Patient Curative Health

(Rs)

	Per Patient Cost			Per Patient Cost at 2005-06 prices		
	2004-05	2008-09	2012-13	2004-05	2008-09	2012-13
Pakistan	9,182	29,650	48,515	9,829	20,950	22,973
Punjab	13,715	31,160	50,180	14,681	22,016	23,761
Sindh	6,929	38,262	68,249	7,417	27,034	32,318
Khyber Pakhtunkhwa	6,421	16,019	26,645	6,874	11,318	12,617
Balochistan	4,975	12,870	33,321	5,325	9,093	15,778
		Average Cumulated Growth Rate (%)				
Pakistan		34.1	13.1		20.8	2.3
Punjab		22.8	12.7		10.7	1.9
Sindh		53.3	15.6		38.2	4.6
Khyber Pakhtunkhwa		25.7	13.6		13.3	2.8
Balochistan		26.8	26.8		14.3	14.8

Box 9.2 Methodology for Health Sector Expenditure Analysis

The technique employed in this chapter to assess rural – urban differentials in public provision of curative care healthcare. It involves a three-step methodology.

First, estimates are obtained of usage of particular service by rural and urban areas in each province. These are usually based on officially conducted household surveys and population estimates. Mathematically

$$S_{itj} = pop_{ijt} \times sick_{ijt} \times cons_{ijt} \times public_{ijt} \quad \ldots\ldots\ldots\ldots\ldots\ldots [1]$$

Where;

S = number of sick persons consulted from public health facilities
pop = population
sick = proportion of sick in total population (pop)
cons = proportion of sick consulted by any health service provider
public = proportion of consulted sick visited any public health facility
i = 1,2,3,4 denotes province (Punjab, Sindh, Khyber Pakhtunkhwa and Balochistan)
j = 1,2, denotes the locality (urban and rural)
t = 1,2,3 denotes year (2004-05, 2008-09 and 2011-12)

Second, unit cost of providing health service is obtained by dividing province-wise expenditure with number of sick persons who consulted public health facilities in province i during time t. This is based on officially reported public spending on general hospitals and clinics including Basic Health Units and Rural Health Centres (Exp) divided by total number of beneficiaries (S_{it}).

$$U_{it} = \frac{Exp_{it}}{\sum_{j=1}^{2} S_{ijt}} \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots [2]$$

Finally, rural urban estimates of public expenditure are obtained by multiplying number of beneficiaries in rural and urban areas by unit cost of service.

$$Exp_{ijt} = U_{ij} \times S_{ijt} \quad \ldots\ldots\ldots\ldots\ldots\ldots [3]$$

A fourth step is performed to convert nominal expenditures into real expenditures by dividing nominal expenditures (Expijt) with Index of General Government Services (IGGS), which is simply the ratio of General Government Services at current prices and constant prices of 2005-06.

$$RExp_{it} = \frac{Exp_{ijt}}{IGGS_t} \quad \ldots\ldots\ldots\ldots\ldots\ldots [4]$$

The estimation of rural – urban differentials in preventive health is a challenging task given the inappropriate coverage in PSLM surveys. In order to get some handle on it we used immunization as a proxy for preventive health utilization. Therefore, based on share of immunized children aged 12 to 23 months, and population estimates number of immunized children both in rural and urban areas were estimated. Afterwards to accommodate rural urban differences in unit cost different weights were assigned to rural and urban immunized children. Finally, based on weighted cost, distribution of rural and urban expenditure is estimated.

Table 9.7 Public Spending on Curative Health, by Locality and Province

(Million Rs)

	Expenditure on Health			Average Cumulated Growth Rate	
	2004-05	2008-09	2012-13	2004-05 to 2008-09	2008-09 to 2012-13
Pakistan	**21,917**	**61,755**	**131,868**	**29.6**	**20.9**
Urban	6,908	20,133	43,519	30.7	21.3
Rural	15,009	41,622	88,349	29.0	20.7
Punjab	**10,837**	**30,542**	**65,055**	**29.6**	**20.8**
Urban	3,618	11,302	25,628	32.9	22.7
Rural	7,219	19,240	39,427	27.8	19.6
Sindh	**3,958**	**15,883**	**34,620**	**41.5**	**21.5**
Urban	1,962	6,838	13,384	36.6	18.3
Rural	1,996	9,045	21,236	45.9	23.8
Khyber Pakhtunkhwa	**2,870**	**8,175**	**16,997**	**29.9**	**20.1**
Urban	526	1,592	3,824	31.9	24.5
Rural	2,344	6,583	13,173	29.5	18.9
Balochistan	**1,044**	**1,580**	**7,422**	**10.9**	**47.2**
Urban	247	427	1,467	14.6	36.2
Rural	797	1,153	5,955	9.7	50.7

Public Spending on Curative Health

Table 9.7 presents nominal expenditures on curative health in 2004-05, 2008-09 and 2012-13 both at aggregate national level and province-wise with urban-rural break-up. It reveals that public expenditure experienced tremendous growth since 2004-05. The pace of growth is relatively higher during the first period. For instance, aggregated health expenditure grew by 30 percent during pre-NFC period while the growth declined to 21 during post-NFC period. A comparison among the provinces indicates that the pre-NFC growth was the highest in Sindh (41.5 percent annually) and the lowest in Balochistan (around 11 percent annually). However, during the post-NFC period, growth in health expenditure was highest (47 percent) in Balochistan while in other provinces it remained around 20-21 percent.

The urban-rural disparities in public expenditure on health are also given in Table 9.7. It appears that both federal and provincial governments spent a sizeable amount of their health budget on the rural population compared to the urban population. At the aggregate level, 68 percent of total expenditure was spent on rural health in 2004-05 which declined slightly to 67 percent in 2012-13. However, there has been significant variation among the provinces. In 2004-05, the share of the health budget spent on the rural population was highest (82 percent) in Khyber Pakhtunkhwa and the lowest (50 percent) in Sindh. However, this has gradually changed since 2004-05 where the rural share in Sindh and Balochistan increased to 61 percent and 80 percent respectively in 2012-13. In contrast, it declined from 67 to 61 percent in Punjab and from 82 to 78 percent in Khyber Pakhtunkhwa during the same period.

Table 9.8 Public Spending on Curative Health, by Locality and Province at Constant prices of 2005-06
(Million Rs)

	Expenditure on Health			Average Cumulated Growth Rate	
	2004-05	2008-09	2012-13	2004-05 to 2008-05	2008-09 to 2012-13
Pakistan	**23,461**	**43,634**	**62,443**	**16.8**	**9.4**
Urban	7,395	14,225	20,607	17.8	9.7
Rural	16,066	29,409	41,836	16.3	9.2
Punjab	**11,600**	**21,580**	**30,805**	**16.8**	**9.3**
Urban	3,873	7,986	12,136	19.8	11.0
Rural	7,728	13,594	18,670	15.2	8.3
Sindh	**4,237**	**11,222**	**16,394**	**27.6**	**9.9**
Urban	2,100	4,832	6,338	23.2	7.0
Rural	2,137	6,391	10,056	31.5	12.0
Khyber Pakhtunkhwa	**3,072**	**5,776**	**8,049**	**17.1**	**8.6**
Urban	563	1,125	1,811	18.9	12.6
Rural	2,509	4,651	6,238	16.7	7.6
Balochistan	**1,118**	**1,116**	**3,515**	**0.0**	**33.2**
Urban	265	301	695	3.3	23.2
Rural	853	815	2,820	-1.1	36.4

Table 9.8 gives a similar set of statistics in real terms (at constant prices of 2005-06). Index of General Government Services was used to convert nominal expenditures into real expenditures. It indicates that the public expenditures on health in real terms have positive growth during both periods indicating that the increase in health expenditures is more than inflation in public services including salary increases. The growth in real expenditure is almost 17 percent during the pre-NFC period and 9.4 percent during the post-NFC period. This growth is disproportionately higher for urban areas in Punjab and Khyber Pakhtunkhwa and for rural areas in Sindh and Balochistan.

Per Capita Expenditures on Curative Health

The per capita estimates of public health expenditure generally present a better picture for a regional comparison than the simple percentage distribution. Table 9.9 presents the per capita expenditure on curative health by province and locality. It shows that at the aggregate level Pakistan spent Rs140 per capita on health in 2004-05 which gradually increased to Rs715 in 2012-13 indicating double digit growth in both periods. The rural population received Rs147 per capita while the urban population received Rs128 per capita during 2004-05. These amounts further increased to Rs780 for the rural population and Rs612 for the urban population. It shows that growth in per capita is relatively higher for rural areas compared to urban areas. The pace of growth is highest in Sindh where per capita expenditures are almost double for the rural population compared to the urban population. In 2012-13, per capita expenditure was higher in rural areas (as compared to urban areas) in the provinces Sindh and Balochistan while it was lower in Punjab and Khyber Pakhtunkhwa.

Table 9.9 Per Capita Public Spending on Curative Health, by Locality and Province
(Million Rs)

	Expenditure on Health			Average Cumulated Growth Rate	
	2004-05	2008-09	2012-13	2004-05 to 2008-09	2008-09 to 2012-13
Pakistan	**140**	**363**	**715**	**26.8**	**18.5**
Urban	128	325	612	26.2	17.1
Rural	147	385	780	27.2	19.3
Punjab	**125**	**324**	**640**	**27.0**	**18.5**
Urban	123	338	660	28.6	18.2
Rural	126	317	628	26.0	18.7
Sindh	**108**	**394**	**785**	**38.3**	**18.8**
Urban	102	312	543	32.2	14.9
Rural	114	493	1,092	44.2	22.0
Khyber Pakhtunkhwa	**137**	**359**	**686**	**27.1**	**17.6**
Urban	154	381	769	25.4	19.2
Rural	134	354	665	27.4	17.1
Balochistan	**133**	**183**	**782**	**8.3**	**43.8**
Urban	126	185	556	10.2	31.7
Rural	135	182	868	7.7	47.8

Public Spending on Preventive Health

Nominal and real expenditures on preventive health (with urban-rural break-up) at the aggregate national level are presented in Table 9.10. Public expenditure on preventive health experienced tremendous growth during the pre-NFC period. Moreover, rural areas receive the major share (more than 80 percent) of these expenditures. The growth in public spending on preventive health remained more than 20 percent during the pre-NFC period and it was relatively higher for rural areas. However, pace of expenditure growth almost collapsed during the post-NFC period, both in nominal and real terms. In fact, public spending on preventive health has declined in real terms since 2008-09.

One of the possible explanations of this collapse is the lack of ownership of preventive health programmes after the 18th Constitutional Amendment, which devolved health services to the provinces but the federal government did not provide a corresponding increase in the

Table 9.10 Public Expenditure on Preventive Health

	Expenditure on Preventive Health			Average Cumulated Growth Rate	
	2004-05	2008-09	2012-13	2004-05 to 2008-09	2008-09 to 2012-13
At Current Prices					
Pakistan	**5,536**	**12,881**	**14,450**	**23.5**	**2.9**
Urban	1,027	2,144	2,421	20.2	3.1
Rural	4,509	10,737	12,029	24.2	2.9
Expenditure on Preventive Health at Constant Prices of 2005-06					
Pakistan	**5,926**	**9,101**	**7,339**	**11.3**	**-5.2**
Urban	1,099	1,515	1,229	8.4	-5.1
Rural	4,827	7,586	6,109	12.0	-5.3

financial resources of provinces. As per the decision of the Council of Common Interests (CCI), the federal government will finance vertical programmes of health till the finalisation of the next NFC Award. Therefore, the federal government is financing these expenditures without much enthusiasm, which perhaps led to the collapse of the pace of growth in these expenditures. Given the resurgence of polio and the recent incidence of chicken pox this decline is really alarming.

EFFICIENCY IN THE DELIVERY OF EDUCATION SERVICES IN RURAL AREAS[1]

It is evident from analysis presented in the earlier sections that public spending on education increased substantially since 2004-05 and the 7th NFC Award played an instrumental role in this increase. Now the question arises whether this increase has attracted more students in public education institutions or whether the efficiency of public institutions increased/decreased or remained constant. Prior to addressing this question, it is important to briefly discuss the estimation of efficiency. In general measuring the efficiency of spending on education is a challenging task due to various technicalities [see Francesco Grigoli (2014)]. Complications arise due to two reasons (1) use of techniques and (2) definitions of input and output. There are a number of studies [Gupta, Honjo and Verhoeven (1997), Herrera and Pang (2005)] which used public spending of education as an input and gross enrolment rates as output.

In order to avoid technical complexities, analysis in this chapter relies on a simple method of estimation of efficiency in the education sector. Similar to other studies, public spending on education in real terms is used as input and gross enrolment rates as output. Afterwards, the average cumulative growth rate of both input and output is calculated. Finally, the difference in growth is computed for both the periods 2004-05 to 2008-09 and 2008-09 to 2011-12. This difference (which is the growth in unit cost) is used to analyse the efficiency in the education sector. For instance, an increase in the unit cost would indicate a decline in efficiency and vice versa.

The results of efficiency analysis are presented in Table 9.11. It shows that during the pre-NFC period public spending on primary education in rural areas grew by 1.3 percent in real terms and gross primary enrolment increased by 3.2 percent. Consequently, the unit cost at the primary level declined by almost 2 percentage points during this period, indicating an increase in the efficiency of public institutions in rural Pakistan. Afterwards, public spending on primary education grew by 7.4 percent while enrolment declined by almost 2 percent. Thus, it translated into a sharp increase of 9.3 percent in the unit cost at the primary level, corresponding to a sharp decline in efficiency.

Another alarming finding is the continuous decline in efficiency at the secondary level during both periods where the pace of decline is higher in the post-NFC period. While the growth in real expenditure on the secondary level is almost the same during both periods, growth in enrolment declined during the second period. In contrast, there is a sharp

Table 9.11	Efficiency in Public Spending on Education in Rural Pakistan	
	2004-05 to 2008-09	2008-09 to 2012-13
PRIMARY EDUCATION		
Growth in Real Expenditure	1.3	7.4
Growth in Enrollment	3.2	-1.9
Growth in Unit Cost	**-1.9**	**9.3**
SECONDARY EDUCATION		
Growth in Real Expenditure	9.5	9.6
Growth in Enrollment	5.0	3.5
Growth in Unit Cost	**4.5**	**6.1**
TERTIARY EDUCATION		
Growth in Real Expenditure		0.5
Growth in Enrollment		26.6
Growth in Unit Cost		**-26.1**

decline in the unit cost at the tertiary level due to very high growth in enrolment and stagnation in real expenditures.

This indicates that a sizeable amount of public resources was diverted to primary and secondary education in rural areas particularly after the 7th NFC Award; however, this did not correspond to an increase in enrolment rates. It is alarming to note that the enrolment in public institutions in rural areas declined in absolute numbers at the primary level during the post-NFC period which resulted in a sharp increase in unit cost.

Now, the important question is why enrolment declined in rural areas. There are two potential explanations for this phenomenon: (1) the substitution effect due to which parents even in rural areas preferred to send their children to private schools instead of public schools and (2) a decline in the demand for education in rural areas.

In order to probe this question, an analysis of public and private schools is performed. Table 9.12 shows the growth in enrolments at the primary, secondary and tertiary levels in both public and private institutions in the rural areas of Pakistan. It indicates that during the pre-NFC period enrolments in public schools grew by 3.2 percent per year on average. During this period, enrolment at private schools declined by 1.6 percent per year on average while the total enrolment grew by 2.3 percent annually

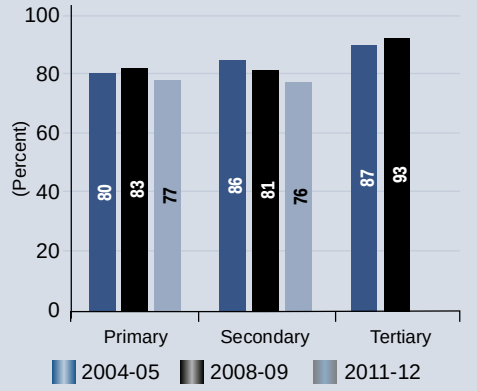
Table 9.12	Growth in Enrolments at Public and Private Institutions in in Rural Areas of Pakistan	
	2004-05 to 2008-09	2008-09 to 2012-13
GROWTH IN PRIMARY ENROLLMENT		
Public Institutions	3.2	-1.9
Private Institutions	-1.6	11.8
Both Public and Private	**2.3**	**0.8**
GROWTH IN SECONDARY ENROLLMENT		
Public Institutions	5.0	3.5
Private Institutions	15.5	13.2
Both Public and Private	**6.5**	**5.4**
GROWTH IN TERTIARY ENROLLMENT		
Public Institutions		26.6
Private Institutions		4.4
Both Public and Private		**24.2**

in rural areas. Afterwards, the situation appears to have changed substantially as enrolment in public primary schools started falling while enrolment at private schools experienced a double digit growth per annum during the post-NFC period. Despite double digit growth in private school enrolment, total enrolment grew less than one percent annually.

The analysis of enrolment at the secondary level does not portray a rosy picture either though it is relatively better as compared to the primary level. The overall growth in enrolment at the secondary level was 6.5 percent and 5.4 percent during the pre- and post-NFC periods respectively. The enrolment rate at the tertiary level increased by 24.2 percent annually mainly due to a very narrow base.

Chart 9.1 shows the share of enrolment in government institutions as a percentage of total enrolment. Three messages emerge from this chart: Firstly, the share of public institutions at the primary level first increased and then declined after 2008-09; second, the share of public intuitions in secondary enrolment has declined continuously since 2004-05; and, thirdly, the share of public institutions increased at the tertiary level.

Chart 9.1 Enrollment in Government Institutions as Percentage of Total Enrollment in Rural Areas (%)



KEY FINDINGS AND POLICY IMPLICATIONS

The analysis of public spending on education and health with urban-rural bifurcation revealed strong disparities in Pakistan. While national and provincial aggregates are limited and mask complex realities, disaggregated analysis provides greater insights. The key findings of the study are summarised below.

Education

Despite the high growth in public spending on education particularly during the post-NFC period Pakistan is likely to miss the MDG target of universal primary education. The analysis of public spending on education by locality reveals that the focus of government has shifted towards rural areas.

The analysis of urban-rural distribution of public spending on education also reveals that:

- A sizeable amount of public resources is diverted to social services particularly towards education since 2004-05.
- Within the education sector, the focus was on secondary and primary education which experienced a very healthy growth in public expenditure during the post-NFC period.

- The focus of public spending is towards rural areas reflected through higher growth in public spending on rural areas compared to urban areas.
- However, this increase in public spending did not correspond with an increase in enrolment both in rural and urban areas. This resulted in a sharp increase in per unit cost of primary and secondary education provision during the post-NFC period.
- During 2004-05, the public sector performed better than the private sector in attracting students at the primary level. Afterwards, the public sector failed to compete with private schools as reflected in the decline in enrolment at the primary level in absolute terms in public schools and the simultaneous increase in enrolment at private schools during the post-NFC period.
- During 2008-09 to 2011-12, the quantum of increase in the unit cost is more pronounced in primary education as compared to the other levels of education.
- There is a sharp decline in efficiency at the primary level during the post-NFC period.
- Only tertiary education has been successful in attracting more enrolment in public institutions reflected by a sharp increase in efficiency.
- There are wide disparities in public spending on education across provinces.

In a nutshell, the analysis indicates a shift in fiscal policy which is focusing more on the rural population compared to the urban population. There are some efficiency gains in primary education during the pre-NFC period. Subsequently, the unit cost of primary education grew more than growth in absolute spending indicating efficiency losses.

Health

Analysis of public spending on health is a challenging task due to various complexities. The analysis in this chapter tried to focus on both curative and preventive health expenditures with an urban-rural break-up. Key findings are as follows:

- Public expenditure on curative health grew by 30 percent during the pre-NFC period while the pace of growth declined to 21 percent during the post-NFC period.
- The major beneficiary (of more than two-thirds) of public expenditures on curative health was the rural population of Pakistan.
- Real expenditure on curative health exhibited double digit growth (17 percent) during the pre-NFC period while it grew at 9 percent during the post-NFC period.
- Per capita estimates of public spending on curative health indicate that the government spent Rs612 per person per year on the urban population and Rs780 per person per year on the rural population in 2012-13.

- An alarming finding is the greater focus of the government towards curative health at the cost of preventive health despite the resurgence of polio, the incidence of chicken pox and dengue.
- While the nominal expenditure on preventive health grew by more than 20 percent during 2004-05 to 2008-09, it increased marginally after 2008-09.
- In fact, public spending on preventive health declined in real terms by more than 5 percent per year during the post-NFC period. Since the main beneficiary of public spending on preventive health is rural population, this decline disproportionately affected the rural population of Pakistan.
- One possible explanation for the decline in preventive health expenditure is the lack of ownership of preventive health programmes after the 18th Constitutional Amendment. While these programmes are under provincial domain, the federal government will finance them till the next NFC Award.

Policy Implications

The insights provided by the locality-wise analysis of public spending on education and health services can be used to formulate region-specific policies. The following sub-sections provide policy implications based on the above findings.

Education

Despite growth in public spending on education, Pakistan spent 2 percent of its GDP on education. Compared to other developed and developing countries this proportion is still very low. While, there is a need to increase the quantum of public spending towards the social sector, it is important that the increased amount should correspond with quality of services.

One of the alarming findings is the decline in primary enrolment at the primary level which causes the increase in the cost of service provision. Various explanations can be offered for this phenomenon which have different policy implications.

- Low quality education at public schools along with the ghost teacher phenomenon may have contributed to the decline in the number students in public schools. There are arguments that public schooling in rural areas is ineffective in enhancing learning capabilities which makes public schooling less attractive. Therefore, the government should focus on the quality of education particularly in rural areas. It includes ensuring regular attendance of both teachers and enroled children. In addition regular trainings of teachers together with monitoring and evaluation can lead to an enhancement in the quality of education.
- The ongoing spell of low economic growth with natural and man-made catastrophes has led to a higher incidence of poverty which may have pushed more children to child labour instead of sending them to schools. In this regard, government needs to introduce incentives in existing social safety nets that should link to the regular attendance of

children from poor families. BISP and Waseela-e-taleem can be used as platforms to encourage children of poor families to enroll in public schools.

- Another argument which may be used to explain the decline in enrolment is the weak link between education and employment which has made education less attractive for parents and caused a decline in enrolment. Employment opportunities for the educated youth are likely to play an instrumental role in tackling this situation. Therefore, the labour policy needs to focus more on creating employment opportunities for the educated population.

Moreover, different strategies in rural and urban areas are needed to make public spending on education more efficient, effective and equitable. For instance, to attract poor children in urban areas public-private partnership may be used to ensure the availability of teachers. Similarly, a large network of private schools may be used to provide quality education to the urban poor through targeted subsidies.

Health

In light of the above findings, the following policy implications are proposed to advance equality of health services:

At present, public spending on health is biased towards curative health. Pakistan spent 29 percent of total health budget in 2008-09 on preventive health which declined to only 9 percent in 2012-13. This trend needs to be reversed and greater focus should be given to preventive health to avoid the growing incidence of polio, chicken pox, dengue and other infectious diseases. Since the main beneficiary of this spending is the rural population, this will also help in reducing the incidence of illness in rural areas.

Despite growth in public spending on health, Pakistan spends less than half percent of GDP on health. Compared to other developed and developing countries this proportion is very low. There is a need to increase the quantum of public spending towards health sector. It is equally important that the increased expenditure corresponds with the quality of services.

Different strategies are needed for the rural and urban population to make public spending on curative health more efficient, effective and equitable. For instance, micro insurance can be used to provide quality healthcare through a large network of private hospitals/clinics.

Public private partnership may be used to ensure availability of doctors at public hospitals, clinics, BHUs, RHCs and other public health facilities.

NOTE:

1. The analysis of efficiency has been conducted for education only. The nature of health services is rather complex as compared to education due to variation and difficulty in measuring output. For instance, each type disease would have different cost implications. Moreover, the data on various indicators (such as incidence of diseases) required for such analysis is not available since the coverage of PSLM is limited to basic health indicators.

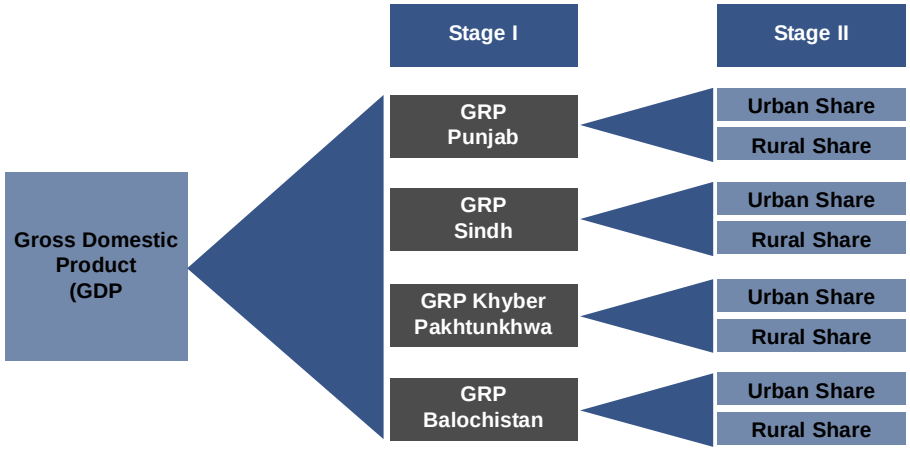
APPENDICES

A.1
RESEARCH METHODOLOGY AND DATA

The study estimates the share of Urban and Rural economy in each province of Pakistan. The methodology is divided into two parts Figure 1 shows the Research Design.

At first stage, I decompose the National GDP into Provincial GRP and estimate the share of each province in national GDP, at second stage we decompose the GRP of each province in Urban and Rural.

Figure 1 Research Design of the Study



Source: SPDC

In the study, we follow the methodology used by Pakistan Bureau of Statistics (PBS) where data is available in disaggregated form. In some sectors where same information is not available at provincial level, we use different "allocators" to decompose National Value Added. Different approaches are used based on the nature of sectors.Production approach used in sectors like Major Crops, Minor Crops, Fishing, Mining and Quarrying, Manufacturing Large Scale, Electricity, Gas Distribution and Water. Expenditure approach was used in Livestock, Forestry, Slaughtering and Ownership of Dwellings. Factor Income Approach was used in Small Scale Manufacturing, Construction, Public Administration & Defence, Community Services, Whole Sale & Retail Trade and Finance & Insurance.

Section I explains the methodology of decomposing National GDP into Provincial GRP and Section II presents the methodology used at provincial level to decompose provincial GRP into Urban and Rural.

DECOMPOSITION OF NATIONAL GDP INTO PROVINCIAL GRP

A number of regional allocators have been used to distribute the value added between Punjab, Sindh, K-PK and Balochistan (See Table A1.1). Most of the reliance has been placed on official data sources like Provincial Development Statistics and Pakistan Economic Survey. Fortunately, results of Household Income and Expenditure Survey 2010-11 and Labor Force Survey 2010-11have been released by the Pakistan Bureau of Statistics. These surveys facilitate us to determine the latest trends in income, consumption and employment at the national and provincial levels.

Table 1 Regional Allocations for Different Sectors / Sub-Sectors

Section / Sub-Sector	Allocator	Data Sources*
AGRICULTURE		
Major Crops	Share in Output of – crops	ASYB
Minor Crops	Share in Output of – crops	ASYB
Livestock	Share in Consumption Expenditure	HIES
Forestry	Share in Expenditure on Forest Products	HIES
Fishing	Share in Output	AYSB
INDUSTRY		
Mining and Quarrying	Share in Output of Crude Oil, Natural Gas Coal and other minerals	SYB
Large-Scale Manufacturing	Share in Output of – industries	PDS, PES[a]
Small-Scale Manufacturing	Share in Informal Sector Employment in Manufacturing	LFS
Slaughtering	Share in Consumption Expenditure on Livestock Products (excluding milk)	HIES
Electricity, Gas and Water	Shares in electricity generation, electricity consumption, gas consumption and canal water withdrawals	PDS, EYB, ASYB
Construction	Income-Adjusted Share in Employment	HIES, LFS
SERVICES		
Transport, Storage and Communications	Income-Adjusted Share in Employment	HIES, LFS
Wholesale and Retail Trade, Hotels and Restaurants	Income-Adjusted Share in Employment	HIES, LFS
Finance and Insurance	Income-Adjusted Share in Employment	HIES, LFS
Ownership of Dwellings	Share in actual and imputed rents	HIES
Public Administration and Defence	Income-adjusted share in employment	HIES, LFS
Community, Social and Personal Services	Income-adjusted share in employment	HIES, LFS

[a] data was only available for selected industries, for other industries data was obtained directly from the Provincial Bureaus of Statistics and Pakistan Bureau of Statistics

*PDS = Provincial Development Statistics, ASYB Agricultural Statistics Year Book,
HIES = Household Integrated Economic Survey, LFS = Labour Force Survey
SYB = Statistical Year Book

The methodology, we apply on each sector and sub sectors are described below.

Agriculture

Agriculture includes activities like Cropping (Major Crops and Minor Crops), Livestock, Fishery and Forestry. The methodology for each sector and sub sector Is given below.

Major Crops

There are twelve crops (Wheat, Rice, Cotton, Bajra, Gram, Barley, Maize, Tobacco, Sugarcane, Jawar, Rapeseed& Mustard, and Sesame) in the basket of major crops nationally. We also include these crops in the basket of major crops at regional level. Value added of major crops is estimated through production approach.

$$Q.I._{P.M} = \frac{\sum_{t=1}^{12} W_{i*} \left(\frac{X_{i.P.T}}{X_{i.P.O}} \right)}{\sum_{t=1}^{12} W_{i*}} * 100$$

$Q.I._{P.M}$ = *Quantum Index of Major Crops for a province*

$X_{i.P.T}$ = *Production of i^{th} crop in a province in a given year*

$X_{i.P.0.}$ = *Production of i^{th} crop in a province in a base year*

W_i = *Weights of i^{th} crop in major crops in a province*

Where i = 1,2,3,4,5,…,12. t = 0,1,2,….,11.

Weights of each crop for each province are taken from Rebasing Book[1]. We estimate the growth rates for each province and Pakistan separately and apply those growth rates on benchmark values[2], then we find the share of a province for every year and apply that share on National value added as reported in various Economic Surveys of Pakistan.

Minor Crop

The same methodology is applied on major crops. An index is constructed for minor crops for each province and Pakistan separately. Minor Crops include pulses, vegetables, fruits, condiments, fodder, oilseed, other crops, and flower and foliage. Since output of flower and foliage is not available at regional level and it is less than one percent to overall gross value of minor crops. So we drop that group and include rest of all groups in our index.

$$Q.I._{P.M} = \frac{\sum_{t=1}^{7} W_{i*} \left(\frac{X_{i.P.T}}{X_{i.P.O}} \right)}{\sum_{t=1}^{7} W_{i*}} * 100$$

$Q.I._{P.M}$ = *Quantum Index of Major Crops for a province*

$X_{i.P.T}$ = *Production of i^{th} crop in a province in a given year*

$X_{i.P.0.}$ = *Production of i^{th} crop in a province in a base year*

W_i = *Weights of i^{th} crop in major crops in a province*

Where i = 1,2,3,4,5,…,7. t = 0,1,2,….,11.

Weights for each category for each province and Pakistan are taken from Rebasing Book[3].

We estimate the growth rates for each province and Pakistan separately and apply those growth rates on benchmark values[4], and then we find the share of each province for every year and apply that share to National value added as reported in various Economic Surveys of Pakistan.

Livestock

Value added of each province in Livestock sector is estimated through consumption approach. Per capita consumption expenditure on Milk and Milk products, Meat (Mutton and Beef) and Poultry (Chicken meat and Eggs) is taken from Household Integrated Economic Survey (HIES) for each province separately. Since HIES is not published annually so we find missing values through standard interpolation techniques.

We then convert per capita monthly consumption into per capita annual consumption by multiplying it with corresponding year's population of each province. We then estimate the share of each province.

$$VA_{L.P.t} = VA_{L.N.t} * \left(\frac{MI_{C.P.t} + ME_{C.P.t} + CM_{C.P.t}}{MI_{C.N.t} + ME_{C.N.t} + CM_{C.N.t}} \right)$$

$$MI_{C.P.t} = (MI_{C.U.P.t} * N_{U.P.t}) + (MI_{C.R.P.t} * N_{U.P.t})$$

$$MI_{C.N.t} = (MI_{C.U.N.t} * N_{U.N.t}) + (MI_{C.R.N.t} * N_{U.N.t})$$

$$ME_{C.P.t} = (ME_{C.U.P.t} * N_{U.P.t}) + (ME_{C.R.P.t} * N_{U.P.t})$$

$$ME_{C.N.t} = (ME_{C.U.N.t} * N_{U.N.t}) + (ME_{C.R.N.t} * N_{U.N.t})$$

$$CM_{C.P.t} = (CM_{C.U.P.t} * N_{U.P.t}) + (CM_{C.R.P.t} * N_{U.P.t})$$

$$CM_{C.N.t} = (CM_{C.U.N.t} * N_{U.N.t}) + (CM_{C.R.N.t} * N_{U.N.t})$$

$VA_{L.N.t}$ = Value added in livestock nationally in a t year.
$VA_{L.P.t}$ = Value added in livestock in a province in a t year.
$MI_{C.P.t}$ = Consumption Expenditures on Milk in a province in year t.
$MI_{C.U.P.t}$ = Consumption Expenditures on Milk in Urban Areas of a province in year t.
$MI_{C.R.P.t}$ = Consumption Expenditures on Milk in Rural Areas of a province in year t
$MI_{C.N.t}$ = Consumption Expenditures on Milk in Pakistan in year t.
$MI_{C.U.N.t}$ = Consumption Expenditures on Milk in Urban Areas of Pakistan in year t.
$MI_{C.R.N.t}$ = Consumption Expenditures on Milk in Rural Areas of Pakistan in year t.
$ME_{C.P.t}$ = Consumption Expenditures on Meat in a province in year t.
$ME_{C.U.P.t}$ = Consumption Expenditures on Meat in Urban Areas of a province in year t.
$ME_{C.R.P.t}$ = Consumption Expenditures on Meat in Rural Areas of a province in year t.
$ME_{C.N.t}$ = Consumption Expenditures on Meat in Pakistan in year t.
$ME_{C.U.N.t}$ = Consumption Expenditures on Meat in Urban Areas of Pakistan in year t.
$ME_{C.R.N.t}$ = Consumption Expenditures on Meat in Rural Areas of Pakistan in year t.
$CM_{C.P.t}$ = Consumption Expenditures on Poultry in a province in year t.
$CM_{C.U.P.t}$ = Consumption Expenditures on Poultry in Urban Areas of a province in year t.
$CM_{C.R.P.t}$ = Consumption Expenditures on Poultry in Rural Areas of a province in year t.
$CM_{C.N.t}$ = Consumption Expenditures on Poultry in Pakistan in year t.
$CM_{C.U.N.t}$ = Consumption Expenditures on Poultry in Urban Areas of Pakistan in year t.
$CM_{C.R.N.t}$ = Consumption Expenditure on Poultry in Rural Areas of Pakistan in year t.
$N_{U.N.t}$ = Urban population of Pakistan in year t.
$N_{R.N.t}$ = Rural Population of Pakistan in Year t.
$N_{U.N.t}$ = Urban population of a province in year t.
$N_{R.N.t}$ = Rural Population of a province in Year t.

Fisheries

Fishing Activities include catching of fish from rivers, canals, farms, and oceans. Contribution of Fisheries in GRP is estimated through production approach by same methodology that is used at National level. Amount of Fish caught under inland and marine fishing is taken from various Agricultural Statistics of Pakistan.

$$GV_t = [\{34.75^* (2Q_{IL})\}^*0.84] + [\{16.43^*(2Q_M)^*0.935\} ^*0.64]$$

Q_{IL} = Quantity of inland fish caught in a t year

Q_M = Quantity of Marine fish caught in a t year

34.75 = Average Price of fish in a Base Year (1999-00)

16.43 = Average Price of Marine fish in a Base Year (1999-00)

2 = Double the amount of inland fishing due to under reporting.

To get the value added at constant factor cost of fisheries at provincial level, gross value of each year is reduced for input costs[5].

Forestry

At National Level Forestry's contribution in GDP at constant factor cost is estimated through consumption approach. We use consumption expenditure approach to estimate the share of each province in national value added.

Per capita consumption expenditure on Fire Wood for Pakistan and each province is taken separately from HIES, we then convert per capita monthly consumption expenditures into annually provincial and national consumption expenditures by the same methodology as used for livestock. Values for missing years are estimated through standard interpolation techniques.

$$VA_{P.t} = VA_{N.t} * \left(\frac{FW_{EX.P.t}}{MI_{EX.N.t}}\right)$$

$$FW_{EX.P.t} = (FW_{EX.U.P.t} * N_{U.P.t}) + (FW_{EX.R.P.t} * N_{R.P.t})$$

$$FW_{EX.N.t} = (FW_{EX.U.N.t} * N_{U.N.t}) + (FW_{EX.R.N.t} * N_{R.N.t})$$

$VA_{P.t}$ = Value Added of forestry in a province in year t.

$VA_{N.t}$ = Value Added of forestry in Pakistan in year t.

$FW_{EX.P.t}$ = Firewood Expenditures in a province in year t.

$FW_{EX.N.t}$ = Fire Wood Expenditures in Pakistan in Year t.

$FW_{EX.U.P.t}$ = Fire Wood Expenditures in Urban Areas of a province in Year t.

$FW_{EX.R.P.t}$ = Fire Wood Expenditures in Rural Areas of a province in Year t.

$FW_{EX.U.N.t}$ = Fire Wood Expenditures in Urban Areas of Pakistan in Year t.

$FW_{EX.R.N.t}$ = Fire Wood Expenditures in Rural Areas of Pakistan in Year t.

$N_{U.N.t}$ = Urban population of Pakistan in year t.

$N_{R.N.t}$ = Rural Population of Pakistan in Year t.

$N_{U.P.t}$ = Urban population of a province in year t.

$N_{R.P.t}$ = Rural Population of a province in Year t.

Industrial Sector

Industrial sector includes mining and Quarrying, Manufacturing (Large scale Manufacturing, Small Scale Manufacturing and Slaughtering), Construction and Electricity and Gas Distribution and Water. A detailed methodology for each sector and sub sectors are given bellow.

Mining and Quarrying

The share of a province in Mining and Quarrying is derived by using production approach. A quantum index for Mining and Quarrying is constructed for each province and Pakistan on the bases of 9 minerals (Coal, Natural gas, Crude oil, and 8 other Minerals). Benchmark values are taken from Census of Mining and Quarrying Industry 1999-00 by PBS.

$$Q.I._{P.M} = \frac{\sum_{i=1}^{11} W_{i*}\left(\frac{X_{i.P.T}}{X_{i.P.O}}\right)}{\sum_{i=1}^{11} W_{i*}} * 100$$

$Q.I._{P.M}$ = Quantum Index of Mining and Quarrying for a Province

$X_{i.P.T}$ = Production of i^{th} Mineral in a Province in a given year

$X_{i.P.0.}$ = Production of i^{th} Mineral in a Province in a base year

W_i = Weights of i^{th} mineral in Mining in a Province

where i = 1,2,3,4,5,…,11. t = 0,1,2,….,11.

Large Scale Manufacturing

Provincial share in Large-Scale Manufacturing (LSM) is estimated through production approach as we did in mining and quarrying. The data on 99 industrial items is taken from a publication, Monthly Performance of Industrial Production by Provincial Bureaus of Statistics. The data on same industrial products for Pakistan is taken from the publication of Quantum index for manufacturing by industry section of PBS. Quantum Index for each province and Pakistan LSM is constructed. Weights for each item are taken from census of manufacturing industries (CMI) 2000-01. Weights have been allocated at industry level on the basis of contribution to GDP as reported in CMI 2000-01. The percentage contribution of each industry has been considered as the weight of that industry. The weights for products in an industry on the bases of relative production value of the selected items.

$$Q.I._{pm} = \frac{\sum_{i=1}^{14} W_{i*}\left(\frac{X_{i.P.T}}{X_{i.P.0}}\right)}{\sum_{i=1}^{14} W_{i*}} * 100$$

$Q.I._{pm}$ = *uantum Index of LSM for a province*

$X_{i.P.T}$ = *Production of ith Industry item in a province in a given year*

$X_{i.P.0.}$ = *Production of ith Industry item in a province in a base year*

W_i = *Weights of ith Industrial item in LSM in a province.*

where i = 1,2,3,4,5,…,14. t=0,1,2,….,11.

Small Scale Manufacturing

The share of each province in Small-Scale Manufacturing (SSM) is derived on the basis of the share of a province in employment in informal sector manufacturing. The data on percentage distribution of employed labour force in informal sector manufacturing of each province and Pakistan is taken from labor force survey (LFS) published by PBS. Since LFS is not published regularly so the values for missing years are estimated through standard interpolation.

$$VA_{Sm.P.T} = VA_{S.N.t} * \left(\frac{ISM_{E.P.T}}{ISM_{E.N.T}}\right)$$

$VA_{Sm.P.T}$ = Value added in small scale manufacturing in a province for a year t.

$VA_{Sm.N.T}$ = Value added in small scale manufacturing in Pakistan for a year t.

$ISM_{E.P.T}$ = Employment in informal sector manufacturing in a province for a year t.

$ISM_{E.N.T}$ = Employment in informal sector manufacturing in Pakistan for a year t.

Slaughtering

According to SNA 1993 slaughtering is part of manufacturing. Share of each province in slaughtering is derived by same methodology which is used in livestock. Per capita consumption expenditure on Mutton, Beef and Chicken Meat is taken from HIES. Then we convert this per capita consumption into annual provincial and national consumption. The series is extended to non HIES years by using standard interpolation techniques. The share of a province is applied to national value added in slaughtering.

$$VA_{Sl.P.t} = VA_{Sl.N.t} * \left(\frac{BE_{C.P.t} + MU_{C.P.t} + CM_{C.P.t}}{BE_{C.N.t} + MU_{C.N.t} + CM_{C.N.t}}\right)$$

$$BE_{C.P.t} = (BE_{C.U.P.t} * N_{U.P.t}) + (BE_{C.R.P.t} * N_{U.P.t})$$
$$BE_{C.N.t} = (BE_{C.U.N.t} * N_{U.N.t}) + (BE_{C.R.N.t} * N_{U.N.t})$$
$$MU_{C.P.t} = (MU_{C.U.P.t} * N_{U.P.t}) + (MU_{C.R.P.t} * N_{U.P.t})$$
$$MU_{C.N.t} = (MU_{C.U.N.t} * N_{U.N.t}) + (MU_{C.R.N.t} * N_{U.N.t})$$
$$CM_{C.P.t} = (CM_{C.U.P.t} * N_{U.P.t}) + (CM_{C.R.P.t} * N_{U.P.t})$$
$$CM_{C.N.t} = (CM_{C.U.N.t} * N_{U.N.t}) + (CM_{C.R.N.t} * N_{U.N.t})$$

$VA_{Sl.P.t}$ = Value Added in Slaughtering of a province in Year t.

$VA_{Sl.N.t}$ = Value Added in Slaughtering of Pakistan in Year t.

$BE_{C.P.t}$ = Consumption Expenditures on Beef in a province in year t.

$BE_{C.U.P.t}$ = Consumption Expenditures on Beef in Urban Areas of a province in year t.

$BE_{C.R.P.t}$ = Consumption Expenditures on Beef in Rural Areas of a province in year t

$BE_{C.N.t}$ = Consumption Expenditures on Beef in Pakistan in year t.

$BE_{C.U.N.t}$ = Consumption Expenditures on Beef in Urban Areas of Pakistan in year t.

$BE_{C.R.N.t}$ = Consumption Expenditures on Beef in Rural Areas of Pakistan in year t.

$MU_{C.P.t}$ = Consumption Expenditures on Mutton in a province in year t.

$MU_{C.U.P.t}$ = Consumption Expenditures on Mutton in Urban Areas of a province in year t.

$MU_{C.R.P.t}$ = Consumption Expenditures on Mutton in Rural Areas of a province in year t.

$MU_{C.N.t}$ = Consumption Expenditures on Mutton in Pakistan in year t.

$MU_{C.U.N.t}$ = Consumption Expenditures on Mutton in Urban Areas of Pakistan in year t.

$ME_{C.R.N.t}$ = Consumption Expenditures on Mutton in Rural Areas of Pakistan in year t.

$CM_{C.P.t}$ = Consumption Expenditures on Chicken in a province in year t.

$CM_{C.U.P.t}$ = Consumption Expenditures on Chicken in Urban Areas of a province in year t.

$CM_{C.R.P.t}$ = Consumption Expenditures on Chicken in Rural Areas of a province in year t.

$CM_{C.N.t}$ = Consumption Expenditures on Chicken in Pakistan in year t.

$CM_{C.U.N.t}$ = Consumption Expenditures on Chicken in Urban Areas of Pakistan in year t.

$CM_{C.R.N.t}$ = Consumption Expenditure on Chicken in Rural Areas of Pakistan in year t.

$N_{U.N.t}$ = Urban population of Pakistan in year t.

$N_{R.N.t}$ = Rural Population of Pakistan in Year t.

$N_{U.P.t}$ = Urban population of a province in year t.

$N_{R.P.t}$ = Rural Population of a province in Year t.

Construction

At national level value added in construction is estimated through expenditure approach. But such data is not available at provincial level. So the share of each province is estimated through income approach. As construction is a labour intensive sector, the income earned by each employed person in construction is estimated for each province and Pakistan separately. The share of a province in construction is derived on the bases of income earned by employed people in construction. The data on employment in construction at provincial and Pakistan level is taken from LFS and Income earned by each employed person in construction is taken from HIES. Values for missing years are estimated through standard interpolation techniques.

$$VA_{C.P.T} = VA_{C.N.T} * \left(\frac{I.C._{P.T}}{I.C._{N.T}}\right)$$

$VA_{C.P.T}$ = Value Added in Construction in a province for a year t.

$VA_{C.N.T}$ = Value Added in Construction in Pakistan for a year t.

$I.C._{P.T}$ = Income earned by employed persons in Construction in a Province for a year t.

$I.C._{N.T}$ = Income earned by employed persons in Construction in Pakistan for a year t.

Electricity and Gas Distribution

Value Added in Electricity and Gas Distribution is estimated through production approach at national level. It includes electricity generation and transmission distribution, gas distribution and transmission and water supply. Since data was not available in the above mentioned format at provincial level we derive the share of a province in each category by using relevant allocators. Weights for each category are taken from Rebasing[6] publication of Pakistan.

$$VA_{E.G.P.T} = VA_{E.G.N.T} * \left\{\left(\frac{E_{G.P.T}}{E_{G.N.T}} * W_{E.G}\right) + \left(\frac{E_{CP.T}}{E_{C.N.T}} * W_{E.C}\right) + \left(\frac{G_{CP.T}}{G_{C.N.T}} * W_G\right) + \left(\frac{C.W_{W.P.T}}{C.W_{W.N.T}} * W_W\right)\right\}$$

$V.A_{E.G.P.T}$ = Value Added in electricity and gas distribution in a province for a year t.
$V.A_{E.G.N.T}$ = Value Added in electricity and gas distribution in a province for a year t.
$E_{G.P.T}$ = Electricity Generated by a province in year t.
$E_{C.P.T}$ = Electricity Consume by a province in year t.
$G_{C.P.T}$ = Gas Consumed by a province in year t.
$C.W_{W.P.T}$ = Canal water withdrawal by a province in a year t.
$E_{G.N.T}$ = Electricity generated by Pakistan in year t.
$E_{C.N.T}$ = Electricity consume by Pakistan in year t.
$G_{C.N.T}$ = Gas consumed by Pakistan in year t.
$C.W_{W.N.T}$ = Canal water withdrawal by Pakistan in a year t.
$W_{E.G}$ = Share of electricity generation in total value added at national level.
$W_{E.C}$ = Share of electricity distribution in total value added at national level.
W_G = Share of Gas distribution and transmission in total value added at national level.
W_W = Share of water and supply in total value added at national level.

Services Sector

The Sector covers the services like wholesale and retail trade, Transport, Storage and Communication, Finance and Insurance, Ownership of Dewellings, Public Administration and Defence and Community, Social and Personal Services. The methodology to derive the share of each province in these sectors is given bellow.

Wholesale and Retail Trade

The share of each province in wholesale and retail trade is estimated through income approach. The share of a province in wholesale and retail trade is derived on the bases of income earned by employed people in wholesale and retail trade. The data on employment in wholesale and retail trade at provincial and Pakistan level is taken from LFS and Income earned by each employed person in wholesale and retail trade is taken from HIES. Values for missing years are estimated through standard interpolation techniques.

$$VA_{W.R.T.P.T} = VA_{W.R.T.N.T} * \left(\frac{I.W.R.T_{P.T}}{I.W.R.T._{N.T}}\right)$$

$VA_{W.R.T.P.T}$ = *Value Added in wholesale and retail trade in a province for a year t.*
$VA_{W.R.T.N.T}$ = *Value Added in wholesale and retail trade in Pakistan for a year t.*
$I.W.R.T._{P.T}$ = *Income earned by employed persons in wholesale and retail trade in a Province for a year t.*
$I.W.R.T._{N.T}$ = *Income earned by employed persons in wholesale and retail trade in Pakistan for a year t.*

Finance and Insurance

The share of each province in this sector is estimated through income approach. The share of a province in finance and insurance is derived on the bases of income earned by employed people in this sector. The data on employment in finance and insurance at provincial and Pakistan level is taken from LFS and Income earned by each employed person in this sector is taken from HIES. Values for missing years are estimated through standard interpolation techniques.

$$VA_{F.I.P.T} = VA_{F.I.N.T} * \left(\frac{I.F.I._{P.T}}{I.F.I_{N.T}}\right)$$

$VA_{F.I.P.T}$ = *Value Added in finance and insurance in a province for a year t.*

$VA_{F.I.N.T}$ = *Value Added in finance and insurance in Pakistan for a year t.*

$I.F.I_{P.T}$ = *Income earned by employed persons in finance and insurance in a Province for a year t.*

$I.F.I_{N.T}$ = *Income earned by employed persons in finance and insurance in Pakistan for a year t.*

Transport and Communication

The share of each province in this sector is also estimated through income approach. The share of a province in this sector is derived on the bases of income earned by employed people in Transport and Communication. The data on employment in this sector at provincial and Pakistan level is taken from LFS and Income earned by each employed person in Transport and Communication is taken from HIES. Values for missing years are estimated through standard interpolation techniques.

$$VA_{T.C.P.T} = VA_{T.C.N.T} * \left(\frac{I.T.C._{P.T}}{I.T.C._{N.T}}\right)$$

$VA_{T.C.P.T}$ = *Value Added in Transport and Communication in a province for a year t.*

$VA_{T.C.N.T}$ = *Value Added in Transport and Communication in Pakistan for a year t.*

$I.T.C._{P.T}$ = *Income earned by employed persons in Transport and Communication in a Province for a year t.*

$I.T.C._{N.T}$ = *Income earned by employed persons in Transport and Communication in Pakistan for a year t.*

Ownership of Dwellings

For the present report, the provincial value-added of ownership and dwellings is derived from the provincial share of rental expenditures obtained from different published issues of the HIES. The value-added for non-survey years was interpolated. The house rent expenditures were estimated from the monthly expenditure per household, house rent shares in total expenditures, and total number of houses as per the HIES data.

$$VADWP = VADWN * (RP * HP)/ (RN * HN)$$

VADWP = *Value Added in ownership of dwellings sector DW in a Province P*

VADWN = *value added in ownership of dwellings sector DW nationally N*

RP = *average rent in a Province P*

HP = *number of household in province P*

RN = *average rent nationally N*

HN = *number of household nationally N*

Public Adminstration and Defence

For this sector employment is used to find the share of a province in Pakistan. The labour force estimates are used in order to find the final estimates for this sector. All the missing years in the LFS are interpolated/extrapolated as mentioned before. The formal representation of his sector in order to estimate the value added is given below;

$$VA_{AP} = VA_{AN} * (N_{AP} / N_{AN})$$

VA_{AP} = *value added in administration and defence sector* $_A$ *in a province* $_P$

VA_{AN} = *value added in administration and defence sector* $_A$ *nationally* $_N$

N_{AP} = *employment in administration and defence* $_A$ *in a province* $_P$

N_{AN} = *employment in administration and defence* $_A$ *nationally* $_N$

Community, Social and Personal Services

This sector comprises incomes of the private sector persons who are engaged in private education, medical & health professions, and other household and community services.

Provincial data for the above mentioned categories are not available; the value-added of a province in this sector is therefore estimated on the basis of the share of the province's labor force in the overall national labor force. The Labor Force data points are taken from various LFS publications, while the data for the missing years are interpolated to obtain a continuous series of allocators, which are then applied to the national data series.

Data on output and value added in services is not available by province. Moreover given that the sector comprises of a large variety of services, no one appropriate proxy variable or indirect allocator can be used in order to estimate the provincial output in the services sector. That is why provincial value added in services is estimated on the basis of provincial shares of employment in services. The formal representation of value added estimation for this sector is given as follows;

Formally:

$VA_{SVP} = VA_{SVN} * (N_{SVP}/N_{SVN})$

VA_{SVP} = value added in services sector $_{SV}$ in a province $_P$

VA_{SVN} = value added in services sector $_{SV}$ in nationally $_N$

N_{SVP} = employment in services sector $_{SV}$ in province $_P$

N_{SVN} = employment in services sector $_{SV}$ nationally $_N$

DECOMPOSE PROVINCIAL GRP INTO URBAN AND RURAL SECTOR

A number of provincial allocators have been used to distribute the provincial value added between Urban and Rural sectors. These are listed in Table 2 along with the data sources.

After a detailed methodology for decomposition of National GDP into Provincial GRP this section will present the methodology to divide the provincial GRP's into two parts, Urban and Rural. This section presents a detail methodology for decomposition at sectoral and sub-sectoral level.

Agriculture

Agriculture is primarily a rural activity. In order to find the share of rural and urban economy in agriculture sector we used income approach. The data on employment and income is taken from LFS and HIES. We applied this methodology on overall agriculture sector.

Table 2 Provincial Allocations for Different Sectors / Sub-Sectors

Section / Sub-Sector	Allocator	Data Sources*
AGRICULTURE		
Agriculture	Income-Adjusted Share in Employment	HIES, LFS
Mining and Quarrying	Income-Adjusted Share in Employment	HIES, LFS
Large-Scale Manufacturing	Income-Adjusted Share in Employment	HIES, LFS
Small-Scale Manufacturing	Share in Informal Sector Employment in Manufacturing	LFS
Slaughtering	Share in Consumption Expenditure on Livestock Products (excl. milk)	HIES
Electricity, Gas and Water	Income-Adjusted Share in Employment	HIES, LFS
Construction	Income-Adjusted Share in Employment	HIES, LFS
SERVICES		
Transport, Storage and Communications	Income-Adjusted Share in Employment	HIES, LFS
Wholesale and Retail Trade, Hotels and Restaurants	Income-Adjusted Share in Employment	HIES, LFS
Finance and Insurance	Income-Adjusted Share in Employment	HIES, LFS
Ownership of Dwellings	Share in actual and imputed rents	HIES
Public Admin and Defence	Income-adjusted share in employment	HIES, LFS
Community, Social and Personal Services	Income-adjusted share in employment	HIES, LFS

*HIES = Household Integrated Economic Survey, LFS = Labour Force Survey
SYB = Statistical Year Book

$$VA_{ARp} = VA_{App} * (I_{ARP}/I_{AP})$$

VA_{ARP} = *value added in agricultural sector* A *in rural sector* R *of a Province* P

VA_{APP} = *value added in agricultural sector* A *of a Province* P

I_{ARP} = *Income per worker employed in agricultural sector* A *in rural sector* R *in a Province* P

I_{AP} = *Income per worker employed in Agriculture sector* A *in a Province* P.

Industrial Sector

Mining and Quarrying

The share of a rural and urban sector in mining and quarrying of province is estimated through income approach. The data on employment and income is taken from LFS and HIES. We applied this methodology on overall agriculture sector.

$$VA_{MRp} = VA_{Mpp} * (I_{MRP}/I_{MP})$$

VA_{MRP} = *value added in mining and quarrying sector* M *in rural sector* R *of a Province* P

VA_{MPP} = *value added in mining and quarrying sector* M *of a Province* P

I_{MRP} = *Income per worker employed in mining and quarrying sector* M *in rural sector* R *in a Province* P

I_{MP} = *Income per worker employed in mining and quarrying sector* M *in a Province* P.

Large Scale Manufacturing

The share of a rural and urban sector in Large Scale Manufacturing of province is estimated through income approach. The data on employment and income is taken from LFS and HIES.

$$VA_{LSM.R.p} = VA_{LSM.p} * (I_{LSM.R.P}/I_{LSM.P})$$

$VA_{LSM.R.P}$ = *value added in Large Scale Manufacturing in rural sector* $_R$ *of a Province* $_P$

$VA_{LSM.P}$ = *value added in Large Scale Manufacturing of a Province* $_P$

$I_{LSM.R.P}$ = *Income per worker employed in Large Scale Manufacturing in rural sector* $_R$ *in a Province* $_P$

$I_{LSM.P}$ = *Income per worker employed in Large Scale Manufacturing in a Province* $_P$.

Small Scale Manufacturing

The share of urban and rural sectors in each province in Small-Scale Manufacturing (SSM) is derived by using same approach used at provincial level. The data on urban and rural percentage distribution of employed labour force in informal sector manufacturing of each province is taken from labor force survey (LFS) published by PBS.

$$VA_{SmR.P.T} = VA_{Sm.P.T} * \left(\frac{ISM_{E.R.P.T}}{ISM_{E.P.T}}\right)$$

$VA_{Sm.P.T}$ = *Value added in small scale manufacturing in a province.*

$VA_{SmR.P.T}$ = *Value added in small scale manufacturing in rural sector of a province.*

$ISM_{E.P.T}$ = *Employment in informal sector manufacturing in a province.*

$ISM_{E.R.P.T}$ = *Employment in informal sector manufacturing in rural sector of a province.*

Slaughtering

Share of Rural-Urban economy of each province in slaughtering is derived by same methodology which is used in slaughtering at provincial level. Per capita urban- rural consumption expenditures on Mutton, Beef and Chicken Meat are taken from HIES. The share of rural and urban sector of each province is applied to the corresponding province's value added in slaughtering.

$$VA_{Sl.R.P.t} = VA_{Sl.P.t} * \left(\frac{BE_{C.R.P.t} + MU_{C.R.P.t} + CM_{C.R.P.t}}{BE_{C.P.t} + MU_{C.P.t} + CM_{C.P.t}}\right)$$

$VA_{Sl.P.t}$ = *Value Added in Slaughtering of a province in Year t.*

$VA_{Sl.R.P.t}$ = *Value Added in rural sector of a province in Slaughtering in Year t.*

$BE_{C.P.t}$ = *Consumption Expenditures on Beef in a province in year t.*

$BE_{C.R.P.t}$ = *Consumption Expenditures on Beef in Rural Areas of a province in year t*

$MU_{C.P.t}$ = *Consumption Expenditures on Mutton in a province in year t.*

$MU_{C.R.P.t}$ = *Consumption Expenditures on Mutton in Rural Areas of a province in year t.*

$CM_{C.P.t}$ = *Consumption Expenditures on Chicken in a province in year t.*

$CM_{C.R.P.t}$ = *Consumption Expenditures on Chicken in Rural Areas of a province in year t.*

Construction

The share of rural sector in each province is estimated through income approach. The share of rural sector of a province in construction is derived on the bases of income earned by employed people in construction. The data on employment in construction at urban-rural and provincial is taken from LFS and Income earned by each employed person in construction is taken from HIES. Values for missing years are estimated through standard interpolation techniques.

$$VA_{C.R.P.T} = VA_{C.P.T} * \left(\frac{I.C._{.R.P.T}}{I.C._{.P.T}}\right)$$

$VA_{C.P.T}$ = Value Added in Construction in a province for a year t.

$VA_{C.N.T}$ = Value Added in rural sector of a province in Construction for a year t.

$I.C._{.P.T}$ = Income earned by employed persons in Construction in a Province for a year t.

$I.C._{.R.P.T}$ = Income earned by employed persons in Construction in rural sector of a province for a year t.

Electricity and Gas Distribution

The share of a rural sector in electricity and gas distribution in a province is estimated through income approach. The data on employment and income is taken from LFS and HIES.

$$VA_{E.G.R.P} = VA_{EG.P} * (I_{EG.R.P}/I_{EG.P})$$

$VA_{EG.R.P}$ = *value added in electricity and gas distribution sector in rural sector* $_R$ *of a Province* $_P$

$VA_{EG.P}$ = *value added in electricity and gas distribution sector of a Province* $_P$

$I_{EG.R.P}$ = *Income per worker employed in electricity and gas distribution in rural sector* $_R$ *in a Province* $_P$

$I_{EG.R.P}$ = *Income per worker employed in electricity and gas distribution in a Province* $_P$.

Services Sector

Wholesale and Retail Trade

The share of rural sector in each province in wholesale and retail trade is estimated through income approach. The share of rural sector of a province in wholesale and retail trade is derived on the bases of income earned by employed people in wholesale and retail trade. The data on employment in wholesale and retail trade at urban-rural and provincial is taken from LFS and Income earned by each employed person in wholesale and retail trade is taken from HIES. Values for missing years are estimated through standard interpolation techniques.

$$VA_{WR.R.P} = VA_{WR.P} * (I_{WR.R.P}/I_{WR.P})$$

$VA_{WR.R.P}$ = *value added in wholesale and retail trade sector in rural sector* $_R$ *of a Province* $_P$

$VA_{WR.P}$ = *value added in wholesale and retail trade sector of a Province* $_P$

$I_{WR.R.P}$ = *Income per worker employed in wholesale and retail trade in rural sector* $_R$ *in a Province* $_P$

$I_{WR.R.P}$ = *Income per worker employed in wholesale and retail trade in a Province* $_P$.

Transport, Storage and Communication

The share of a rural sector in *Transport, Storage and Communication* in a province is estimated through income approach. The data on employment and income is taken from LFS and HIES.

$$VA_{TSC.R.P} = VA_{TSC.P} * (I_{TSC.R.P}/I_{TSC.P})$$

$VA_{TSC.R.P}$ = *value added in Transport, Storage and Communication sector in rural sector* $_R$ *of a Province* $_P$

$VA_{TSC.P}$ = *value added in Transport, Storage and Communication sector of a Province* $_P$

$I_{TSC.R.P}$ = *Income per worker employed in Transport, Storage and Communication in rural sector* $_R$ *in a Province* $_P$

$I_{TSC.R.P}$ = *Income per worker employed in Transport, Storage and Communication in a Province* $_P$.

Finance and Insurance

The share of a rural sector in Finance and Insurance in a province is estimated through income approach. The data on employment and income is taken from LFS and HIES.

$$VA_{FI.R.P} = VA_{FI.P} * (I_{FI.R.P}/I_{FI.P})$$

$VA_{FI.R.P}$ = *value added in Finance and Insurance in rural sector* $_R$ *of a Province* $_P$

$VA_{FI.P}$ = *value added in Finance and Insurance sector of a Province* $_P$

$I_{FI.R.P}$ = *Income per worker employed in Finance and Insurance in rural sector* $_R$ *in a Province* $_P$

$I_{FI.R.P}$ = *Income per worker employed in Finance and Insurance in a Province* $_P$.

Public Administration and Defence

The share of rural sector in each province in Public Administration and Defence is derived by using same approach used at provincial level. The data on rural percentage distribution of employed labour force in Public Adminstration and Defence of each province is taken from labor force survey (LFS) published by PBS.

$$VA_{AD.R.P.T} = VA_{AD.P.T} * \left(\frac{PAD_{E.R.P.T}}{PAD_{E.P.T}}\right)$$

$VA_{AD.PT.}$ = *Value added in Public Adminstration and Defence in a province.*

$VA_{AD.R.PT.}$ = *Value added in Public Adminstration and Defence in rural sector of a province.*

$PAD_{E.PT.}$ = *Employment in Public Adminstration and Defence in a province.*

$PAD_{E.R.PT.}$ = *Employment in Public Adminstration and Defence in rural sector of a province.*

Ownership of Dwellings

The share of Rural section in provincial value-added of ownership and dwellings is derived from rural share of housing rental expenditures obtained from different published issues of the HIES. The house rent expenditures were estimated from the monthly expenditure per household, house rent shares in total expenditures, and total number of houses as per the HIES data.

$$VA_{DW.R.P} = VA_{DWN} * (RP * HP)/ (RN * HN)$$

VA_{DWP} = *Value Added in ownership of dwellings sector DW in a Province P*

VA_{DWN} = *value added in ownership of dwellings sector DW nationally N*

RP = *average rent in a Province P*

HP = *number of household in province P*

RRP = *average rent in a rural sector of a province P*

HRP = *number of household in a rural sector of a province N*

Community, Social and Personal Services

The share of a rural sector in Community, Social and Personal Services of province is estimated through income approach. The data on employment and income is taken from LFS and HIES.

$$VA_{CSP.R.p} = VA_{CSP.P} * (I_{CSP.R.P}/I_{CSP.P})$$

$VA_{CSP.R.P}$ = *value added in Community, Social and Personal Services in rural sector* $_R$ *of a Province* $_P$

$VA_{CSP.P}$ = *value added in Community, Social and Personal Services sector* $_M$ *of a Province* $_P$

$I_{CSP.R.P}$ = *Income per worker employed in Community, Social and Personal Services in rural sector* $_R$ *in a Province* $_P$

$I_{CSP.P}$ = *Income per worker employed in Community, Social and Personal Services in a Province* $_P$.

NOTES:

1. National Accounts of Pakistan Rebasing From 1980-81 to 1999-2000, Federal Bureau of Staistics, Annexure-1
2. National Accounts of Pakistan Rebasing From 1980-81 to 1999-2000, Federal Bureau of Staistics, Annexure-1
3. National Accounts of Pakistan Rebasing From 1980-81 to 1999-2000, Pakistan Bureau of Staistics, Annexure-4
4. National Accounts of Pakistan Rebasing From 1980-81 to 1999-2000, Pakistan Bureau of Staistics, Annexure-4
5. National Accounts of Pakistan Rebasing From 1980-81 to 1999-2000, Federal Bureau of Statistics, Annexure-26
6. National Accounts of Pakistan Rebasing From 1980-81 to 1999-2000, Federal Bureau of Statistics, Chapter 3.

Table A-1.1 **Gross Domestic Product at Constant Factor Cost – Pakistan (Overall)**

(Rs million)

	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
Agricultural Sector	**923,609**	**903,499**	**904,433**	**941,942**	**964,853**	**1,027,403**	**1,092,098**	**1,137,037**	**1,148,851**	**1,195,002**	**1,201,945**	**1,216,523**
Major Crops	342,200	308,474	300,911	321,505	327,057	385,058	370,005	398,617	373,188	402,135	392,651	376,822
Minor Crops	125,679	121,673	117,217	119,446	124,121	125,993	126,457	125,243	138,887	137,201	126,481	132,571
Livestock	417,120	433,066	448,968	460,495	473,771	484,876	561,500	577,400	601,408	620,253	646,783	670,743
Fishing	15,163	14,715	12,901	13,346	13,611	13,691	16,540	19,080	20,834	21,319	21,626	22,041
Forestry	23,447	25,571	24,436	27,150	26,293	17,785	17,596	16,697	14,534	14,094	14,404	14,346
Industrial Sector	**830,863**	**865,196**	**888,539**	**926,183**	**1,076,808**	**1,207,268**	**1,256,827**	**1,367,532**	**1,387,117**	**1,385,669**	**1,500,345**	**1,499,360**
Mining & Quarrying	81,050	85,528	90,431	96,418	111,473	122,621	128,288	132,254	138,047	137,348	140,378	140,971
Manufacturing	522,801	571,357	596,841	638,044	727,439	840,243	912,953	988,301	1,036,101	998,846	1,054,276	1,085,440
Large Scale	*338,602*	*375,687*	*388,859*	*416,955*	*492,632*	*590,759*	*639,585*	*695,489*	*723,626*	*665,285*	*698,062*	*704,936*
Small Scale	*132,369*	*142,310*	*152,997*	*164,487*	*176,841*	*190,121*	*206,656*	*223,365*	*240,139*	*258,173*	*277,562*	*298,407*
Slaughtering	*51,830*	*53,360*	*54,985*	*56,602*	*57,966*	*59,363*	*66,712*	*69,447*	*72,336*	*75,388*	*78,652*	*82,097*
Construction	87,386	87,846	89,241	92,789	82,818	98,190	108,195	134,536	127,076	112,884	144,985	146,169
Electricity and Gas Distribution	139,626	120,465	112,026	98,932	155,078	146,214	107,391	112,441	85,893	136,591	160,706	126,780
Commodity Producing Sectors	**1,754,472**	**1,768,695**	**1,792,972**	**1,868,125**	**2,041,661**	**2,234,671**	**2,348,925**	**2,504,569**	**2,535,968**	**2,580,671**	**2,702,290**	**2,715,883**
Services Sector	**1,807,546**	**1,863,396**	**1,952,146**	**2,053,979**	**2,173,947**	**2,358,559**	**2,511,551**	**2,687,140**	**2,847,044**	**2,895,042**	**2,979,241**	**3,101,523**
Transport, Storage & Comm.	400,983	422,195	427,296	445,552	461,276	477,171	496,073	519,486	539,297	558,703	574,101	581,388
Wholesale & Retail Trade	621,842	649,564	667,615	707,665	766,693	858,695	838,426	887,294	934,231	921,375	963,368	1,000,477
Finance & Insurance	132,454	112,455	131,761	130,081	141,768	185,501	265,056	304,514	338,386	312,818	277,555	260,172
Ownership of Dwellings	110,425	114,593	118,604	122,466	126,764	131,214	135,820	140,587	145,521	150,629	155,916	158,707
Public Administration & Defence	220,291	225,152	240,585	259,148	267,321	268,826	295,959	316,915	320,565	332,108	340,508	385,506
Social and Community Services	321,551	339,437	366,285	389,067	410,125	437,152	480,217	518,344	569,044	619,409	667,793	715,273
GDP	**3,562,018**	**3,632,091**	**3,745,118**	**3,922,104**	**4,215,608**	**4,593,230**	**4,860,476**	**5,191,709**	**5,383,012**	**5,475,713**	**5,681,531**	**5,817,406**

Table A-1.2 **Gross Domestic Product at Constant Factor Cost – Pakistan (Rural)**

(Rs million)

	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
Agricultural Sector	**850,865**	**833,911**	**837,122**	**874,329**	**899,468**	**955,514**	**1,007,215**	**1,054,472**	**1,080,675**	**1,112,311**	**1,118,811**	**1,121,134**
Industrial Sector	**306,284**	**333,878**	**354,078**	**353,849**	**414,707**	**500,750**	**500,878**	**552,440**	**570,984**	**586,820**	**653,176**	**629,536**
Mining & Quarrying	48,587	50,040	45,286	37,788	42,680	47,728	64,446	77,364	103,226	78,503	99,732	90,920
Manufacturing	152,504	179,120	199,910	209,508	239,648	311,857	325,468	344,999	364,285	386,748	394,128	390,780
Large Scale	*67,788*	*88,921*	*104,135*	*104,658*	*125,376*	*190,987*	*194,155*	*200,647*	*209,909*	*225,478*	*217,017*	*204,761*
Small Scale	*59,730*	*64,451*	*69,103*	*76,992*	*85,116*	*90,188*	*97,123*	*108,755*	*117,297*	*122,212*	*135,931*	*142,549*
Slaughtering	*24,986*	*25,748*	*26,673*	*27,859*	*29,156*	*30,682*	*34,190*	*35,597*	*37,079*	*39,058*	*41,179*	*43,470*
Construction	50,238	53,037	56,559	58,254	51,778	60,674	63,804	77,058	69,502	65,242	90,041	95,445
Electricity and Gas Distribution	54,954	51,681	52,322	48,298	80,601	80,492	47,160	53,019	33,970	56,326	69,275	52,391
Commodity Producing Sectors	**1,157,148**	**1,167,788**	**1,191,200**	**1,228,179**	**1,314,175**	**1,456,264**	**1,508,093**	**1,606,913**	**1,651,658**	**1,699,131**	**1,771,986**	**1,750,670**
Services Sector	**633,463**	**685,063**	**751,897**	**778,618**	**807,893**	**877,134**	**962,125**	**1,017,937**	**1,103,920**	**1,117,886**	**1,103,178**	**1,199,856**
Transport, Storage & Comm.	142,446	166,590	188,776	196,024	201,972	225,724	238,551	226,876	230,099	245,663	241,912	258,397
Wholesale & Retail Trade	190,868	209,840	229,505	241,485	259,536	288,025	298,761	327,181	377,428	344,099	323,014	337,424
Finance & Insurance	16,266	16,908	25,285	19,152	16,447	20,309	46,774	59,166	57,688	54,260	43,153	41,237
Ownership of Dwellings	37,317	38,163	38,764	40,190	41,974	43,970	45,046	50,425	55,689	56,808	57,727	57,703
Public Administration & Defence	105,161	107,482	114,849	123,710	127,612	128,330	141,283	151,287	153,029	158,681	159,546	192,145
Social and Community Services	141,405	146,080	154,719	158,057	160,351	170,776	191,710	203,004	229,986	258,375	277,826	312,951
GDP	**1,790,611**	**1,852,851**	**1,943,097**	**2,006,797**	**2,122,067**	**2,333,398**	**2,470,218**	**2,624,849**	**2,755,578**	**2,817,017**	**2,875,164**	**2,950,527**

Table A-1.3 **Gross Domestic Product at Constant Factor Cost – Pakistan (Urban)**

(Rs million)

	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
Agricultural Sector	**72,744**	**69,588**	**67,311**	**67,613**	**65,385**	**71,889**	**84,883**	**82,565**	**68,176**	**82,691**	**83,134**	**95,389**
Industrial Sector	**524,579**	**531,318**	**534,461**	**572,334**	**662,101**	**706,518**	**755,949**	**815,092**	**816,133**	**798,849**	**847,169**	**869,824**
Mining & Quarrying	32,463	35,488	45,145	58,630	68,793	74,893	63,842	54,890	34,821	58,845	40,646	50,051
Manufacturing	370,297	392,237	396,931	428,536	487,791	528,386	587,485	643,302	671,816	612,098	660,148	694,660
Large Scale	*270,814*	*286,766*	*284,724*	*312,297*	*367,256*	*399,772*	*445,430*	*494,842*	*513,717*	*439,807*	*481,045*	*500,175*
Small Scale	*72,639*	*77,859*	*83,894*	*87,495*	*91,725*	*99,933*	*109,533*	*114,610*	*122,842*	*135,961*	*141,631*	*155,858*
Slaughtering	*26,844*	*27,612*	*28,312*	*28,743*	*28,810*	*28,681*	*32,522*	*33,850*	*35,257*	*36,330*	*37,473*	*38,627*
Construction	37,148	34,809	32,682	34,535	31,040	37,516	44,391	57,478	57,574	47,642	54,944	50,724
Electricity and Gas Distribution	84,672	68,784	59,704	50,634	74,477	65,722	60,231	59,422	51,923	80,265	91,431	74,389
Commodity Producing Sectors	**597,324**	**600,907**	**601,772**	**639,946**	**727,486**	**778,407**	**840,832**	**897,656**	**884,310**	**881,540**	**930,304**	**965,213**
Services Sector	**1,174,083**	**1,178,333**	**1,200,249**	**1,275,361**	**1,366,054**	**1,481,425**	**1,549,426**	**1,669,203**	**1,743,124**	**1,777,156**	**1,876,063**	**1,901,667**
Transport, Storage & Comm.	258,537	255,605	238,520	249,528	259,304	251,447	257,522	292,610	309,198	313,040	332,189	322,991
Wholesale & Retail Trade	430,974	439,724	438,110	466,180	507,157	570,670	539,665	560,113	556,803	577,276	640,354	663,053
Finance & Insurance	116,188	95,547	106,476	110,929	125,321	165,192	218,282	245,348	280,698	258,558	234,402	218,935
Ownership of Dwellings	73,108	76,430	79,840	82,276	84,790	87,244	90,774	90,162	89,832	93,821	98,189	101,004
Public Administration & Defence	115,130	117,670	125,736	135,438	139,709	140,496	154,676	165,628	167,536	173,427	180,962	193,361
Social and Community Services	180,146	193,357	211,566	231,010	249,774	266,376	288,507	315,340	339,058	361,034	389,967	402,322
GDP	**1,771,407**	**1,779,240**	**1,802,021**	**1,915,307**	**2,093,541**	**2,259,832**	**2,390,258**	**2,566,860**	**2,627,434**	**2,658,696**	**2,806,367**	**2,866,879**

Table A-1.4 **Gross Domestic Product at Constant Factor Cost – Punjab (Overall)** ***(Rs million)***

	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
Agricultural Sector	**587,529**	**575,448**	**574,464**	**599,100**	**614,464**	**668,653**	**711,232**	**738,237**	**727,567**	**749,752**	**743,554**	**767,418**
Major Crops	244,173	228,141	221,574	236,952	242,567	293,380	277,020	297,052	270,417	289,119	276,080	287,676
Minor Crops	69,845	66,323	65,555	66,810	68,570	68,564	68,109	69,287	75,691	72,863	68,281	71,569
Livestock	259,974	267,139	273,930	279,655	286,840	293,559	353,948	359,968	370,408	376,721	387,694	396,388
Fishing	3,625	3,094	3,182	3,333	3,485	3,625	3,906	4,268	4,489	4,559	4,729	4,904
Forestry	9,912	10,751	10,223	12,350	13,002	9,525	8,249	7,662	6,562	6,490	6,770	6,881
Industrial Sector	**373,574**	**398,120**	**419,214**	**428,022**	**481,400**	**523,539**	**533,435**	**595,120**	**585,664**	**612,289**	**672,896**	**677,209**
Mining & Quarrying	18,304	23,408	24,975	17,478	18,677	18,706	21,109	19,677	19,483	18,267	18,079	18,155
Manufacturing	255,962	279,069	298,702	315,695	346,273	376,993	400,780	445,528	455,768	475,034	509,413	528,209
Large Scale	*136,533*	*148,351*	*158,530*	*166,453*	*190,587*	*211,931*	*217,912*	*250,232*	*247,213*	*256,823*	*275,046*	*276,449*
Small Scale	*92,089*	*102,143*	*110,265*	*119,033*	*125,052*	*133,614*	*144,242*	*156,507*	*169,609*	*177,855*	*192,454*	*208,251*
Slaughtering	*27,340*	*28,575*	*29,907*	*30,209*	*30,634*	*31,448*	*38,626*	*38,789*	*38,946*	*40,356*	*41,913*	*43,509*
Construction	47,174	48,740	50,636	53,571	48,408	57,815	63,852	79,180	74,211	65,086	82,118	80,919
Electricity and Gas Distribution	52,134	46,903	44,901	41,278	68,042	70,025	47,694	50,735	36,202	53,902	63,286	49,926
Commodity Producing Sectors	**961,103**	**973,568**	**993,678**	**1,027,122**	**1,095,864**	**1,192,192**	**1,244,667**	**1,333,357**	**1,313,231**	**1,362,041**	**1,416,450**	**1,444,627**
Services Sector	**1,015,265**	**1,042,589**	**1,108,784**	**1,174,121**	**1,246,525**	**1,346,247**	**1,465,710**	**1,558,995**	**1,613,853**	**1,642,678**	**1,682,453**	**1751733**
Transport, Storage & Comm.	227,206	237,730	237,699	254,808	267,100	271,511	293,445	300,874	310,483	318,383	321,520	337,568
Wholesale & Retail Trade	342,099	348,122	375,141	396,714	429,908	483,802	495,911	518,802	528,819	523,075	537,014	552,472
Finance & Insurance	63,578	57,577	70,887	71,414	78,256	102,953	142,865	164,438	181,375	170,799	150,435	143,095
Ownership of Dwellings	62,721	65,089	65,114	66,989	69,720	72,299	80,270	82,243	82,947	85,407	87,625	84,750
Public Administration & Defence	123,363	126,085	134,728	145,123	149,700	150,543	165,737	177,472	179,516	185,648	194,771	213,570
Social and Community Services	196,298	207,986	225,215	239,073	251,841	265,139	287,482	315,166	330,713	359,366	391,089	420,279
GDP	**1,976,368**	**2,016,157**	**2,102,462**	**2,201,243**	**2,342,389**	**2,538,439**	**2,710,377**	**2,892,352**	**2,927,084**	**3,004,719**	**3,098,903**	**3,196,360**

Table A-1.5 **Gross Domestic Product at Constant Factor Cost – Punjab (Rural)**

(Rs million)

	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
Agricultural Sector	**556,121**	**544,123**	**542,824**	**563,597**	**575,472**	**625,081**	**653,362**	**683,100**	**683,973**	**700,381**	**693,590**	**703,653**
Industrial Sector	**159,840**	**180,080**	**193,963**	**195,672**	**214,434**	**259,125**	**247,448**	**301,297**	**310,397**	**307,059**	**327,129**	**320,263**
Mining & Quarrying	8,857	11,327	6,370	4,221	4,266	6,541	14,137	11,784	14,468	7,557	4,682	8,899
Manufacturing	106,088	121,726	137,042	136,898	141,246	165,216	172,104	218,423	237,352	234,679	244,499	236,967
Large Scale	*45,443*	*54,713*	*64,494*	*58,878*	*58,841*	*77,805*	*75,442*	*112,444*	*124,342*	*118,527*	*119,654*	*106,682*
Small Scale	*45,907*	*50,919*	*54,968*	*60,477*	*64,730*	*69,295*	*74,950*	*83,877*	*90,549*	*92,659*	*100,226*	*104,454*
Slaughtering	*14,738*	*16,094*	*17,580*	*17,544*	*17,674*	*18,116*	*21,711*	*22,102*	*22,461*	*23,493*	*24,619*	*25,831*
Construction	29,381	31,155	33,252	35,759	32,863	38,555	39,272	50,285	46,456	40,489	53,061	52,176
Electricity and Gas Distribution	15,514	15,872	17,299	18,794	36,060	48,813	21,935	20,805	12,120	24,334	24,888	22,222
Commodity Producing Sectors	**715,961**	**724,204**	**736,787**	**759,269**	**789,906**	**884,205**	**900,810**	**984,397**	**994,369**	**1,007,440**	**1,020,719**	**1,023,916**
Services Sector	**364,117**	**394,449**	**441,256**	**453,917**	**468,919**	**506,307**	**582,229**	**604,215**	**670,010**	**649,275**	**609,609**	**675,414**
Transport, Storage & Comm.	84,570	103,680	122,444	128,643	132,696	144,104	155,573	144,719	138,137	142,250	135,650	156,779
Wholesale & Retail Trade	116,255	122,957	137,884	147,035	160,704	179,230	203,368	217,129	259,014	226,865	197,026	200,398
Finance & Insurance	8,513	10,916	18,826	13,281	10,080	12,919	31,772	33,790	39,974	35,112	26,268	29,705
Ownership of Dwellings	22,790	23,662	23,688	24,002	24,598	25,115	28,551	32,919	37,036	36,934	36,628	34,276
Public Administration & Defence	35,849	36,640	39,151	42,172	43,502	43,747	48,163	51,573	52,167	53,949	56,571	73,911
Social and Community Services	96,140	96,593	99,263	98,785	97,339	101,192	114,802	124,085	143,682	154,165	157,466	180,346
GDP	**1,080,079**	**1,118,652**	**1,178,043**	**1,213,186**	**1,258,825**	**1,390,512**	**1,483,039**	**1,588,612**	**1,664,379**	**1,656,715**	**1,630,328**	**1,699,331**

Table A-1.6 **Gross Domestic Product at Constant Factor Cost – Punjab (Urban)**

(Rs million)

	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
Agricultural Sector	**31,408**	**31,325**	**31,640**	**35,503**	**38,992**	**43,572**	**57,870**	**55,137**	**43,594**	**49,371**	**49,964**	**63,765**
Industrial Sector	**213,734**	**218,040**	**225,251**	**232,350**	**266,966**	**264,414**	**285,987**	**293,823**	**275,267**	**305,230**	**345,767**	**356,946**
Mining & Quarrying	9,447	12,081	18,605	13,257	14,411	12,165	6,972	7,893	5,015	10,710	13,397	9,256
Manufacturing	149,874	157,343	161,660	178,797	205,027	211,777	228,676	227,105	218,416	240,355	264,914	291,242
Large Scale	*91,090*	*93,638*	*94,036*	*107,575*	*131,746*	*134,126*	*142,470*	*137,788*	*122,871*	*138,296*	*155,392*	*169,767*
Small Scale	*46,182*	*51,224*	*55,297*	*58,556*	*60,322*	*64,319*	*69,292*	*72,630*	*79,060*	*85,196*	*92,228*	*103,797*
Slaughtering	*12,602*	*12,481*	*12,327*	*12,665*	*12,960*	*13,332*	*16,915*	*16,687*	*16,485*	*16,863*	*17,294*	*17,678*
Construction	17,793	17,585	17,384	17,812	15,545	19,260	24,580	28,895	27,755	24,597	29,057	28,743
Electricity and Gas Distribution	36,620	31,031	27,602	22,484	31,982	21,212	25,759	29,930	24,082	29,568	38,398	27,704
Commodity Producing Sectors	**245,142**	**249,364**	**256,891**	**267,853**	**305,958**	**307,987**	**343,857**	**348,960**	**318,862**	**354,601**	**395,731**	**420,711**
Services Sector	**651,148**	**648,140**	**667,528**	**720,204**	**777,606**	**839,940**	**883,481**	**954,780**	**943,844**	**993,402**	**1,072,845**	**1,076,319**
Transport, Storage & Comm.	142,636	134,050	115,255	126,165	134,404	127,407	137,872	156,155	172,346	176,133	185,870	180,789
Wholesale & Retail Trade	225,844	225,165	237,257	249,679	269,204	304,572	292,543	301,673	269,805	296,210	339,988	352,074
Finance & Insurance	55,065	46,661	52,062	58,134	68,176	90,034	111,093	130,647	141,401	135,686	124,167	113,389
Ownership of Dwellings	39,931	41,427	41,425	42,987	45,122	47,184	51,719	49,325	45,911	48,473	50,997	50,473
Public Administration & Defence	87,514	89,445	95,576	102,951	106,198	106,795	117,574	125,900	127,350	131,700	138,200	139,659
Social and Community Services	100,158	111,393	125,952	140,288	154,502	163,947	172,680	191,081	187,031	205,201	233,623	239,933
GDP	**896,290**	**897,505**	**924,419**	**988,057**	**1,083,564**	**1,147,926**	**1,227,337**	**1,303,740**	**1,262,705**	**1,348,004**	**1,468,575**	**1,497,030**

Table A-1.7 **Gross Domestic Product at Constant Factor Cost – Sindh (Overall)**

(Rs million)

	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
Agricultural Sector	**208,161**	**199,097**	**197,077**	**202,600**	**209,470**	**212,545**	**226,513**	**236,419**	**259,125**	**271,634**	**286,492**	**274,738**
Major Crops	68,992	54,098	51,905	54,535	55,736	61,494	62,439	67,643	72,167	77,910	86,757	67,057
Minor Crops	29,447	28,978	24,979	24,962	28,733	26,753	27,612	26,530	33,710	33,162	30,862	30,741
Livestock	93,747	99,524	105,504	108,179	110,938	112,602	122,325	128,323	136,522	142,978	151,123	158,993
Fishing	10,295	10,031	8,255	8,599	8,720	8,585	10,651	10,602	13,844	14,734	14,783	14,942
Forestry	5,681	6,466	6,434	6,325	5,343	3,112	3,485	3,322	2,882	2,852	2,967	3,004
Industrial Sector	**315,477**	**314,569**	**311,698**	**343,720**	**410,011**	**453,603**	**473,633**	**562,777**	**585,217**	**511,662**	**567,593**	**557,785**
Mining & Quarrying	30,098	27,969	31,264	47,221	61,614	72,605	75,439	79,297	84,247	86,207	88,909	89,285
Manufacturing	219,937	229,186	226,625	246,570	282,928	317,066	344,098	422,177	443,575	355,922	396,414	400,354
Large Scale	*179,391*	*187,881*	*182,863*	*200,068*	*231,584*	*260,038*	*281,542*	*354,814*	*376,497*	*279,404*	*321,101*	*324,184*
Small Scale	*25,153*	*25,522*	*27,608*	*29,763*	*34,286*	*39,891*	*45,291*	*48,508*	*46,553*	*55,086*	*52,941*	*52,781*
Slaughtering	*15,392*	*15,782*	*16,154*	*16,739*	*17,058*	*17,137*	*17,266*	*18,855*	*20,525*	*21,432*	*22,372*	*23,388*
Construction	20,310	19,091	18,187	18,557	16,273	20,186	23,935	30,325	32,461	24,699	29,109	26,208
Electricity and Gas Distribution	45,131	38,323	35,622	31,373	49,195	43,747	30,162	30,977	24,935	44,834	53,161	41,938
Commodity Producing Sectors	**523,638**	**513,665**	**508,775**	**546,320**	**619,480**	**666,149**	**700,146**	**799,196**	**844,342**	**783,296**	**854,085**	**832,523**
Services Sector	**507,302**	**524,478**	**540,966**	**570,203**	**608,068**	**679,938**	**700,743**	**746,540**	**808,022**	**804,335**	**842,476**	**869,948**
Transport, Storage & Comm.	99,655	112,269	121,850	121,019	121,557	122,972	119,539	139,417	125,486	137,525	150,511	140,840
Wholesale & Retail Trade	185,157	192,536	179,830	198,478	222,357	262,762	249,805	254,390	280,592	269,793	288,988	295,866
Finance & Insurance	54,447	44,423	50,335	49,364	53,900	70,140	93,419	104,036	133,397	110,766	98,324	95,343
Ownership of Dwellings	34,914	36,513	39,740	41,248	42,350	43,582	41,605	43,585	46,586	48,094	49,837	53,365
Public Administration & Defence	56,852	58,106	62,089	66,880	68,989	69,377	76,380	81,788	82,730	85,904	84,363	104,943
Social and Community Services	76,277	80,630	87,122	93,214	98,915	111,103	119,994	123,322	139,230	152,253	170,453	179,590
GDP	**1,030,940**	**1,038,143**	**1,049,741**	**1,116,523**	**1,227,548**	**1,346,087**	**1,400,889**	**1,545,736**	**1,652,364**	**1,587,631**	**1,696,561**	**1,702,471**

Table A-1.8 **Gross Domestic Product at Constant Factor Cost – Sindh (Rural)**

(Rs million)

	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
Agricultural Sector	188,974	180,368	178,160	185,754	194,496	196,180	212,137	222,472	243,030	259,836	273,649	264,280
Industrial Sector	42,986	43,172	46,631	50,150	71,958	85,389	81,750	104,336	119,759	103,035	145,477	130,674
Mining & Quarrying	13,333	12,390	13,861	11,369	15,534	19,166	28,801	43,784	67,274	51,463	75,304	64,383
Manufacturing	14,535	15,447	16,203	22,874	34,210	49,995	38,008	46,083	40,947	38,045	47,224	47,635
Large Scale	*6,441*	*7,556*	*8,258*	*13,086*	*21,767*	*35,718*	*22,422*	*28,041*	*24,286*	*19,414*	*27,507*	*27,544*
Small Scale	3,563	*3,616*	*3,911*	*5,204*	*7,332*	*8,674*	*10,013*	*12,004*	*10,109*	*11,644*	*12,270*	*12,146*
Slaughtering	*4,531*	*4,275*	*4,034*	*4,584*	*5,111*	*5,604*	*5,574*	*6,038*	*6,552*	*6,988*	*7,447*	*7,946*
Construction	5,516	6,305	7,262	6,426	4,860	6,125	8,007	7,349	7,425	6,390	10,084	11,049
Electricity and Gas Distribution	9,601	9,031	9,305	9,480	17,353	10,102	6,933	7,120	4,113	7,137	12,865	7,608
Commodity Producing Sectors	231,959	223,540	224,791	235,904	266,454	281,568	293,887	326,807	362,789	362,872	419,126	394,954
Services Sector	105,411	118,645	133,923	141,632	148,245	170,689	171,243	175,239	169,657	188,964	210,822	227,248
Transport, Storage & Comm.	16,862	20,464	24,017	23,587	23,444	29,708	28,923	31,951	28,537	36,879	38,219	31,653
Wholesale & Retail Trade	20,078	26,460	31,402	32,340	33,787	42,701	37,958	36,144	37,276	35,484	44,713	46,600
Finance & Insurance	331	324	442	706	1,263	1,821	3,527	5,424	5,113	3,996	2,723	3,408
Ownership of Dwellings	5,975	5,732	5,715	6,727	7,809	9,056	7,540	7,947	8,547	8,696	8,880	9,370
Public Administration & Defence	47,301	48,345	51,659	55,645	57,400	57,723	63,549	68,049	68,833	71,473	68,901	83,581
Social and Community Services	14,864	17,319	20,686	22,626	24,541	29,680	29,746	25,724	21,352	32,436	47,386	52,635
GDP	337,371	342,185	358,714	377,535	414,699	452,257	465,130	502,047	532,445	551,836	629,949	622,202

Table A-1.9 **Gross Domestic Product at Constant Factor Cost – Sindh (Urbanl)**

(Rs million)

	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
Agricultural Sector	**19,187**	**18,729**	**18,916**	**16,846**	**14,973**	**16,366**	**14,375**	**13,948**	**16,095**	**11,798**	**12,844**	**10,458**
Industrial Sector	**272,491**	**271,396**	**265,067**	**293,571**	**338,053**	**368,215**	**391,883**	**458,441**	**465,459**	**408,626**	**422,116**	**427,111**
Mining & Quarrying	16,765	15,579	17,403	35,851	46,081	53,438	46,638	35,514	16,973	34,745	13,605	24,902
Manufacturing	205,402	213,739	210,422	223,696	248,718	267,071	306,090	376,094	402,628	317,877	349,190	352,718
Large Scale	*172,950*	*180,325*	*174,605*	*186,982*	*209,817*	*224,320*	*259,120*	*326,773*	*352,211*	*259,990*	*293,594*	*296,641*
Small Scale	*21,590*	*21,907*	*23,697*	*24,559*	*26,954*	*31,217*	*35,278*	*36,505*	*36,444*	*43,442*	*40,672*	*40,635*
Slaughtering	*10,862*	*11,507*	*12,120*	*12,155*	*11,947*	*11,533*	*11,692*	*12,816*	*13,973*	*14,444*	*14,924*	*15,442*
Construction	14,794	12,787	10,925	12,131	11,412	14,061	15,928	22,977	25,036	18,309	19,025	15,160
Electricity and Gas Distribution	35,530	29,292	26,317	21,893	31,842	33,645	23,229	23,857	20,822	37,696	40,295	34,331
Commodity Producing Sectors	**291,678**	**290,125**	**283,984**	**310,416**	**353,026**	**384,580**	**406,259**	**472,389**	**481,553**	**420,424**	**434,959**	**437,569**
Services Sector	**401,891**	**405,833**	**407,043**	**428,571**	**459,823**	**509,249**	**529,500**	**571,300**	**638,365**	**615,371**	**631,654**	**642,700**
Transport, Storage & Comm.	82,793	91,805	97,833	97,432	98,113	93,264	90,617	107,466	96,949	100,647	112,291	109,187
Wholesale & Retail Trade	165,079	166,076	148,428	166,137	188,570	220,061	211,846	218,247	243,315	234,309	244,274	249,266
Finance & Insurance	54,117	44,099	49,893	48,658	52,637	68,319	89,893	98,612	128,285	106,770	95,602	91,935
Ownership of Dwellings	28,939	30,780	34,024	34,521	34,541	34,526	34,065	35,638	38,040	39,398	40,957	43,995
Public Administration & Defence	9,550	9,761	10,430	11,235	11,589	11,654	12,831	13,739	13,897	14,431	15,463	21,362
Social and Community Services	61,413	63,312	66,436	70,588	74,373	81,424	90,248	97,598	117,879	119,817	123,067	126,955
GDP	**693,569**	**695,958**	**691,027**	**738,987**	**812,850**	**893,830**	**935,759**	**1,043,689**	**1,119,918**	**1,035,795**	**1,066,613**	**1,080,268**

Table A-1.10 **Gross Domestic Product at Constant Factor Cost – Khyber Pakhtunkhwa (Overall)**

(Rs million)

	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
Agricultural Sector	**80,762**	**80,041**	**81,888**	**85,620**	**86,853**	**88,688**	**92,810**	**96,895**	**100,066**	**104,660**	**107,855**	**111,037**
Major Crops	19,820	16,948	18,104	19,082	18,641	19,809	18,899	20,734	19,773	20,767	18,338	15,333
Minor Crops	10,867	10,497	9,226	9,029	8,339	8,562	8,577	7,577	9,099	8,358	8,449	9,169
Livestock	45,733	47,827	49,998	52,311	54,786	56,840	61,484	64,216	68,001	72,468	77,914	83,367
Fishing	64	86	92	142	171	183	253	1,014	333	340	419	499
Forestry	4,278	4,683	4,468	5,057	4,917	3,294	3,596	3,355	2,859	2,727	2,734	2,668
Industrial Sector	**90,900**	**97,410**	**97,995**	**93,836**	**111,548**	**156,494**	**196,151**	**152,017**	**149,474**	**179,759**	**184,164**	**194,299**
Mining & Quarrying	365	682	750	1,097	929	1,318	1,810	2,884	2,818	2,090	4,002	4,019
Manufacturing	40,889	54,432	59,176	59,785	74,470	118,802	152,900	102,738	114,044	135,738	122,479	134,275
Large Scale	*21,176*	*35,354*	*39,895*	*39,815*	*52,983*	*96,416*	*130,291*	*78,570*	*83,999*	*104,463*	*84,819*	*91,032*
Small Scale	*13,227*	*12,691*	*12,982*	*13,133*	*14,185*	*14,697*	*14,903*	*15,775*	*20,911*	*21,617*	*27,454*	*32,443*
Slaughtering	*6,486*	*6,387*	*6,298*	*6,836*	*7,302*	*7,689*	*7,706*	*8,393*	*9,135*	*9,659*	*10,206*	*10,800*
Construction	13,976	13,782	13,774	14,872	13,801	16,415	16,946	19,834	15,761	18,500	28,036	32,616
Electricity and Gas Distribution	35,670	28,514	24,297	18,082	22,348	19,959	24,495	26,561	16,850	23,431	29,647	23,388
Commodity Producing Sectors	**171,663**	**177,451**	**179,884**	**179,456**	**198,401**	**245,183**	**288,961**	**248,912**	**249,540**	**284,419**	**292,019**	**305,336**
Services Sector	**198,196**	**204,055**	**206,634**	**207,593**	**210,073**	**219,913**	**251,508**	**278,209**	**304,979**	**329,652**	**338,792**	**360,844**
Transport, Storage & Comm.	48,687	47,273	44,219	46,337	49,108	58,538	62,937	56,242	73,790	73,029	74,534	81,781
Wholesale & Retail Trade	68,208	77,991	80,100	76,832	74,807	72,016	70,513	89,504	97,162	100,204	102,248	110,657
Finance & Insurance	13,301	9,523	9,469	7,720	7,008	8,911	25,476	30,811	17,319	25,659	25,069	18,786
Ownership of Dwellings	7,544	7,524	7,821	8,651	9,483	10,436	10,035	10,644	11,540	12,383	13,341	14,858
Public Administration & Defence	23,312	23,826	25,459	27,423	28,288	28,448	31,319	33,536	33,923	35,224	37,328	40,984
Social and Community Services	37,144	37,918	39,566	40,629	41,378	41,565	51,228	57,471	71,246	83,153	86,273	93,777
GDP	**369,859**	**381,505**	**386,517**	**387,049**	**408,474**	**465,096**	**540,469**	**527,121**	**554,519**	**614,071**	**630,811**	**666,179**

Table A-1.11 **Gross Domestic Product at Constant Factor Cost – Khyber Pakhtunkhwa (Rural)**

(Rs million)

	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
Agricultural Sector	**78,270**	**77,809**	**79,849**	**83,360**	**84,429**	**86,399**	**90,610**	**94,626**	**97,621**	**101,690**	**104,174**	**108,170**
Industrial Sector	**65,563**	**71,593**	**72,524**	**69,711**	**83,194**	**115,473**	**142,205**	**115,281**	**107,948**	**132,213**	**140,451**	**143,392**
Mining & Quarrying	338	631	642	940	796	1,200	1,749	2,714	2,679	2,007	3,881	3,936
Manufacturing	28,913	37,826	40,131	42,352	55,068	87,078	110,765	73,758	79,366	98,924	91,470	95,869
Large Scale	15,428	24,960	27,294	28,350	39,264	70,755	94,684	56,704	58,312	76,457	63,592	65,074
Small Scale	*9,206*	*8,833*	*9,035*	*9,687*	*10,998*	*11,059*	*10,851*	*11,394*	*14,918*	*15,931*	*20,920*	*23,380*
Slaughtering	*4,279*	*4,034*	*3,802*	*4,316*	*4,807*	*5,264*	*5,230*	*5,660*	*6,135*	*6,536*	*6,957*	*7,415*
Construction	*11,789*	*11,761*	*11,891*	*12,854*	*11,942*	*14,404*	*15,079*	*16,849*	*13,323*	*16,176*	*23,815*	*28,791*
Electricity and Gas Distribution	24,523	21,375	19,860	13,565	15,387	12,791	14,611	21,960	12,581	15,107	21,285	14,797
Commodity Producing Sectors	**143,833**	**149,402**	**152,374**	**153,071**	**167,623**	**201,872**	**232,814**	**209,908**	**205,569**	**233,903**	**244,624**	**251,562**
Services Sector	**133,313**	**138,944**	**141,679**	**145,053**	**149,424**	**153,935**	**168,261**	**194,013**	**212,911**	**232,167**	**238,041**	**251,586**
Transport, Storage & Comm.	34,723	36,078	36,113	37,442	39,260	45,771	48,128	43,307	54,361	57,213	59,248	63,063
Wholesale & Retail Trade	46,627	50,738	49,592	50,471	52,140	49,581	47,954	63,447	68,437	70,181	70,266	76,725
Finance & Insurance	7,299	5,529	5,816	4,812	4,432	4,497	10,261	17,565	9,933	13,397	13,151	7,725
Ownership of Dwellings	5,196	5,366	5,776	6,319	6,852	7,455	7,087	7,770	8,361	9,125	9,796	11,101
Public Administration & Defence	13,882	14,188	15,160	16,330	16,845	16,940	18,650	19,970	20,200	20,975	22,228	22,904
Social and Community Services	25,586	27,045	29,221	29,678	29,895	29,691	36,180	41,953	51,619	61,275	63,351	70,068
GDP	**277,146**	**288,347**	**294,053**	**298,124**	**317,047**	**355,807**	**401,075**	**403,921**	**418,480**	**466,070**	**482,665**	**503,148**

Table A-1.12 **Gross Domestic Product at Constant Factor Cost – Khyber Pakhtunkhwa (Urban)**

(Rs million)

	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
Agricultural Sector	**2,492**	**2,232**	**2,039**	**2,261**	**2,424**	**2,289**	**2,200**	**2,269**	**2,446**	**2,970**	**3,681**	**2,867**
Industrial Sector	**25,337**	**25,816**	**25,471**	**24,125**	**28,354**	**41,022**	**53,946**	**36,735**	**41,525**	**47,546**	**43,714**	**50,906**
Mining & Quarrying	27	51	107	157	133	118	60	170	139	84	122	84
Manufacturing	11,976	16,606	19,044	17,433	19,401	31,724	42,135	28,980	34,679	36,814	31,009	38,406
Large Scale	*5,748*	*10,394*	*12,601*	*11,465*	*13,719*	*25,661*	*35,608*	*21,866*	*25,686*	*28,006*	*21,226*	*25,958*
Small Scale	*4,021*	*3,858*	*3,947*	*3,446*	*3,187*	*3,638*	*4,052*	*4,381*	*5,992*	*5,685*	*6,534*	*9,063*
Slaughtering	*2,207*	*2,354*	*2,496*	*2,521*	*2,495*	*2,425*	*2,476*	*2,733*	*3,000*	*3,123*	*3,248*	*3,385*
Construction	2,187	2,021	1,883	2,018	1,859	2,011	1,867	2,985	2,438	2,324	4,221	3,825
Electricity and Gas Distribution	11,147	7,139	4,437	4,517	6,961	7,168	9,884	4,601	4,269	8,324	8,362	8,592
Commodity Producing Sectors	**27,829**	**28,048**	**27,510**	**26,385**	**30,778**	**43,311**	**56,146**	**39,004**	**43,971**	**50,516**	**47,395**	**53,774**
Services Sector	**64,883**	**65,110**	**64,955**	**62,540**	**60,650**	**65,979**	**83,247**	**84,196**	**92,068**	**97,485**	**100,752**	**109,258**
Transport, Storage & Comm.	13,964	11,195	8,106	8,895	9,848	12,768	14,809	12,935	19,429	15,816	15,286	18,718
Wholesale & Retail Trade	21,581	27,253	30,509	26,361	22,667	22,435	22,560	26,057	28,725	30,022	31,982	33,932
Finance & Insurance	6,002	3,994	3,652	2,909	2,577	4,414	15,215	13,246	7,386	12,262	11,918	11,061
Ownership of Dwellings	2,347	2,157	2,045	2,332	2,632	2,981	2,948	2,874	3,179	3,258	3,544	3,756
Public Administration & Defence	9,430	9,638	10,299	11,093	11,443	11,508	12,669	13,566	13,722	14,249	15,100	18,080
Social and Community Services	11,559	10,873	10,344	10,951	11,483	11,874	15,048	15,517	19,627	21,878	22,922	23,710
GDP	**92,712**	**93,159**	**92,464**	**88,926**	**91,427**	**109,289**	**139,394**	**123,200**	**136,039**	**148,001**	**148,146**	**163,031**

Table A-1.13 **Gross Domestic Product at Constant Factor Cost – Balochistan (Overall)**

(Rs million)

	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
Agricultural Sector	**47,156**	**48,913**	**51,004**	**54,622**	**54,067**	**57,516**	**61,543**	**65,485**	**62,093**	**68,956**	**64,044**	**63,330**
Major Crops	9,215	9,287	9,328	10,936	10,114	10,375	11,647	13,189	10,831	14,340	11,476	6,756
Minor Crops	15,520	15,875	17,457	18,645	18,479	22,115	22,159	21,850	20,386	22,819	18,888	21,091
Livestock	17,666	18,576	19,536	20,351	21,206	21,875	23,743	24,893	26,476	28,086	30,052	31,994
Fishing	1,179	1,504	1,372	1,272	1,236	1,297	1,730	3,196	2,168	1,686	1,695	1,696
Forestry	3,576	3,671	3,311	3,418	3,032	1,854	2,266	2,358	2,232	2,026	1,933	1,793
Industrial Sector	**50,912**	**55,097**	**59,631**	**60,605**	**73,849**	**73,631**	**53,608**	**57,619**	**66,762**	**81,959**	**75,692**	**70,067**
Mining & Quarrying	32,283	33,469	33,442	30,623	30,253	29,992	29,931	30,396	31,499	30,783	29,387	29,512
Manufacturing	6,013	8,670	12,338	15,994	23,768	27,382	15,175	17,858	22,714	32,152	25,970	22,602
Large Scale	*1,502*	*4,101*	*7,571*	*10,618*	*17,478*	*22,374*	*9,840*	*11,873*	*15,918*	*24,595*	*17,096*	*13,271*
Small Scale	*1,899*	*1,954*	*2,142*	*2,558*	*3,318*	*1,919*	*2,221*	*2,575*	*3,066*	*3,615*	*4,712*	*4,931*
Slaughtering	*2,612*	*2,615*	*2,625*	*2,818*	*2,972*	*3,088*	*3,114*	*3,410*	*3,730*	*3,941*	*4,161*	*4,400*
Construction	5,926	6,233	6,644	5,790	4,336	3,774	3,462	5,197	4,643	4,600	5,722	6,425
Electricity and Gas Distribution	6,690	6,725	7,206	8,199	15,493	12,484	5,040	4,169	7,906	14,424	14,613	11,528
Commodity Producing Sectors	**98,069**	**104,011**	**110,635**	**115,227**	**127,916**	**131,148**	**115,151**	**123,104**	**128,855**	**150,915**	**139,736**	**133,398**
Services Sector	**86,783**	**92,275**	**95,763**	**102,061**	**109,281**	**112,461**	**93,590**	**103,396**	**120,190**	**118,377**	**115,519**	**118,998**
Transport, Storage & Comm.	25,435	24,923	23,528	23,387	23,511	24,149	20,151	22,953	29,538	29,766	27,536	21,199
Wholesale & Retail Trade	26,378	30,915	32,543	35,641	39,621	40,115	22,197	24,598	27,659	28,303	35,118	41,482
Finance & Insurance	1,127	932	1,070	1,582	2,603	3,497	3,296	5,229	6,295	5,594	3,727	2,948
Ownership of Dwellings	5,246	5,468	5,930	5,578	5,210	4,897	3,910	4,114	4,448	4,745	5,114	5,735
Public Administration & Defence	16,765	17,135	18,309	19,722	20,344	20,458	22,523	24,118	24,396	25,332	24,047	26,008
Social and Community Services	11,832	12,903	14,382	16,152	17,991	19,344	21,513	22,385	27,855	24,637	19,978	21,627
GDP	**184,852**	**196,285**	**206,398**	**217,289**	**237,197**	**243,608**	**208,742**	**226,500**	**249,046**	**269,293**	**255,255**	**252,395**

Table A-1.14 **Gross Domestic Product at Constant Factor Cost – Balochistan (Rural)**

(Rs million)

	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
Agricultural Sector	**27,500**	**31,610**	**36,289**	**41,618**	**45,071**	**47,854**	**51,105**	**54,274**	**56,051**	**50,404**	**47,398**	**45,032**
Industrial Sector	**37,895**	**39,031**	**40,959**	**38,317**	**45,121**	**40,764**	**29,475**	**31,527**	**32,880**	**44,512**	**40,118**	**35,206**
Mining & Quarrying	26,059	25,692	24,413	21,258	22,084	20,821	19,759	19,082	18,806	17,477	15,866	13,703
Manufacturing	2,968	4,121	6,534	7,384	9,124	9,568	4,590	6,735	6,620	15,100	10,934	10,309
Large Scale	*476*	*1,692*	*4,089*	*4,344*	*5,505*	*6,709*	*1,607*	*3,457*	*2,968*	*11,080*	*6,263*	*5,462*
Small Scale	*1,054*	*1,084*	*1,189*	*1,625*	*2,056*	*1,160*	*1,309*	*1,481*	*1,720*	*1,978*	*2,516*	*2,568*
Slaughtering	*1,438*	*1,344*	*1,257*	*1,415*	*1,564*	*1,698*	*1,674*	*1,797*	*1,932*	*2,041*	*2,155*	*2,279*
Construction	3,552	3,816	4,155	3,216	2,112	1,589	1,445	2,576	2,299	2,187	3,081	3,430
Electricity and Gas Distribution	5,315	5,402	5,858	6,459	11,801	8,786	3,681	3,134	5,155	9,748	10,237	7,765
Commodity Producing Sectors	**65,394**	**70,642**	**77,248**	**79,935**	**90,192**	**88,618**	**80,581**	**85,801**	**88,931**	**94,916**	**87,517**	**80,238**
Services Sector	**30,622**	**33,025**	**35,040**	**38,016**	**41,305**	**46,204**	**40,393**	**44,469**	**51,343**	**47,480**	**44,706**	**45,607**
Transport, Storage & Comm.	6,290	6,368	6,202	6,352	6,571	6,141	5,927	6,897	9,064	9,321	8,795	6,902
Wholesale & Retail Trade	7,909	9,686	10,628	11,638	12,906	16,512	9,481	10,462	12,701	11,569	11,009	13,701
Finance & Insurance	123	139	200	354	672	1,073	1,214	2,386	2,669	1,754	1,011	398
Ownership of Dwellings	3,355	3,402	3,584	3,142	2,715	2,345	1,868	1,788	1,746	2,053	2,423	2,955
Public Administration & Defence	8,129	8,309	8,878	9,563	9,865	9,920	10,921	11,695	11,829	12,283	11,846	11,749
Social and Community Services	4,815	5,122	5,548	6,969	8,576	10,213	10,982	11,241	13,333	10,499	9,622	9,902
GDP	**96,016**	**103,667**	**112,288**	**117,952**	**131,497**	**134,822**	**120,974**	**130,270**	**140,274**	**142,396**	**132,223**	**125,846**

Table A-1.15 **Gross Domestic Product at Constant Factor Cost – Balochistan (Urban)**

(Rs million)

	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
Agricultural Sector	**19,657**	**17,303**	**14,715**	**13,003**	**8,996**	**9,662**	**10,438**	**11,212**	**6,042**	**18,552**	**16,645**	**18,298**
Industrial Sector	**13,018**	**16,066**	**18,672**	**22,288**	**28,729**	**32,867**	**24,133**	**26,092**	**33,882**	**37,447**	**35,573**	**34,861**
Mining & Quarrying	6,224	7,777	9,030	9,364	8,168	9,172	10,172	11,313	12,694	13,306	13,521	15,809
Manufacturing	3,045	4,549	5,804	8,610	14,644	17,814	10,585	11,123	16,094	17,052	15,036	12,294
Large Scale	*1,026*	*2,409*	*3,483*	*6,275*	*11,973*	*15,665*	*8,233*	*8,415*	*12,949*	*13,515*	*10,833*	*7,809*
Small Scale	*845*	*869*	*953*	*933*	*1,262*	*759*	*911*	*1,094*	*1,346*	*1,637*	*2,197*	*2,364*
Slaughtering	*1,174*	*1,271*	*1,368*	*1,402*	*1,409*	*1,390*	*1,440*	*1,614*	*1,798*	*1,900*	*2,006*	*2,122*
Construction	2,374	2,417	2,490	2,573	2,224	2,185	2,017	2,621	2,344	2,412	2,641	2,996
Electricity and Gas Distribution	1,375	1,323	1,349	1,740	3,692	3,697	1,360	1,035	2,751	4,676	4,376	3,763
Commodity Producing Sectors	**32,674**	**33,369**	**33,387**	**35,292**	**37,724**	**42,529**	**34,571**	**37,303**	**39,924**	**55,999**	**52,219**	**53,159**
Services Sector	**56,161**	**59,250**	**60,723**	**64,045**	**67,976**	**66,257**	**53,197**	**58,927**	**68,848**	**70,897**	**70,813**	**73,390**
Transport, Storage & Comm.	19,144	18,555	17,326	17,036	16,940	18,008	14,225	16,055	20,474	20,445	18,741	14,297
Wholesale & Retail Trade	18,469	21,229	21,916	24,003	26,715	23,603	12,716	14,136	14,958	16,734	24,110	27,780
Finance & Insurance	1,005	793	870	1,228	1,931	2,425	2,082	2,843	3,626	3,840	2,716	2,549
Ownership of Dwellings	1,891	2,066	2,346	2,436	2,495	2,552	2,042	2,325	2,702	2,692	2,691	2,780
Public Administration & Defence	8,636	8,826	9,431	10,159	10,479	10,538	11,602	12,423	12,566	13,048	12,200	14,259
Social and Community Services	7,017	7,780	8,834	9,183	9,416	9,131	10,531	11,144	14,521	14,138	10,356	11,724
GDP	**88,836**	**92,619**	**94,110**	**99,337**	**105,700**	**108,787**	**87,768**	**96,230**	**108,772**	**126,897**	**123,032**	**126,550**

Table A-1.16 **Gross Domestic Product at Current Prices – Pakistan (Overall)**

(Rs million)

	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
Agricultural Sector	**923,609**	**945,301**	**968,291**	**1,059,316**	**1,164,751**	**1,314,234**	**1,457,222**	**1,685,240**	**2,017,181**	**2,611,526**	**2,978,950**	**3,698,658**
Major Crops	342,200	325,579	316,857	370,117	411,836	497,556	464,276	546,418	671,374	979,148	1,082,408	1,424,927
Minor Crops	125,679	130,679	133,136	130,450	126,372	154,218	168,461	184,121	211,553	237,536	262,586	363,749
Livestock	417,120	446,058	476,310	512,976	578,218	621,170	766,448	881,806	1,051,442	1,299,865	1,533,716	1,802,221
Fishing	15,163	16,546	16,377	16,625	16,728	17,490	30,492	42,668	52,391	59,514	60,347	61,403
Forestry	23,447	26,439	25,611	29,148	31,597	23,800	27,545	30,227	30,421	35,463	39,893	46,358
Industrial Sector	**830,865**	**942,263**	**989,349**	**1,083,914**	**1,416,986**	**1,659,285**	**1,923,698**	**2,214,612**	**2,658,205**	**2,994,975**	**3,577,659**	**4,323,057**
Mining & Quarrying	81,052	106,370	116,952	137,044	208,290	182,051	219,682	252,541	301,469	346,412	371,233	431,907
Manufacturing	522,801	608,132	642,850	725,434	902,486	1,136,634	1,370,793	1,567,313	1,950,522	2,069,482	2,487,069	3,167,947
Large Scale	*338,602*	*410,879*	*424,089*	*481,374*	*621,899*	*814,657*	*1,003,062*	*1,149,573*	*1,467,225*	*1,502,879*	*1,809,446*	*2,319,590*
Small Scale	*132,369*	*143,463*	*161,734*	*176,533*	*200,626*	*222,176*	*245,962*	*279,943*	*334,610*	*395,005*	*449,933*	*544,771*
Slaughtering	*51,830*	*53,790*	*57,027*	*67,527*	*79,961*	*99,801*	*121,769*	*137,797*	*148,687*	*171,598*	*227,690*	*303,586*
Construction	87,386	94,670	95,197	100,880	115,497	153,333	179,885	225,239	260,340	294,990	352,530	396,777
Electricity and Gas Distribution	139,626	133,091	134,350	120,556	190,713	187,267	153,338	169,519	145,874	284,091	366,827	326,426
Commodity Producing Sectors	**1,754,474**	**1,887,564**	**1,957,640**	**2,143,230**	**2,581,737**	**2,973,519**	**3,380,920**	**3,899,852**	**4,675,386**	**5,606,501**	**6,556,609**	**8,021,715**
Services Sector	**1,807,546**	**2,035,680**	**2,188,527**	**2,390,988**	**2,668,790**	**3,149,049**	**3,777,607**	**4,335,247**	**5,246,198**	**6,503,961**	**7,509,906**	**9,085,772**
Transport, Storage & Comm.	400,983	512,997	542,828	609,929	675,623	759,711	908,409	1,012,206	1,155,873	1,587,934	1,846,735	2,132,844
Wholesale & Retail Trade	621,842	691,854	720,812	785,776	896,357	1,093,114	1,262,001	1,441,786	1,829,944	2,104,337	2,464,342	3,115,906
Finance & Insurance	132,454	116,997	142,424	144,989	165,230	236,254	364,320	447,270	556,679	621,508	616,116	649,701
Ownership of Dwellings	110,425	124,359	126,454	135,139	146,264	165,441	184,812	206,166	239,010	298,789	345,555	401,687
Public Administration & Defence	220,291	235,039	260,042	285,854	312,105	343,348	404,628	467,685	530,074	662,723	757,140	975,296
Social and Community Services	321,551	354,434	395,967	429,301	473,211	551,181	653,437	760,134	934,618	1,228,670	1,480,018	1,810,338
GDP	**3,562,020**	**3,923,244**	**4,146,167**	**4,534,218**	**5,250,527**	**6,122,568**	**7,158,527**	**8,235,099**	**9,921,584**	**12,110,46**	**14,066,51**	**17,107,48**

Table A-1.17 **Gross Domestic Product at Current Prices – Pakistan (Rural)**

(Rs million)

	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
Agricultural Sector	**850,865**	**872,379**	**895,941**	**983,353**	**1,086,105**	**1,222,378**	**1,344,022**	**1,562,850**	**1,897,520**	**2,432,243**	**2,774,000**	**3,409,227**
Industrial Sector	**306,285**	**364,667**	**395,932**	**412,593**	**546,137**	**689,047**	**766,272**	**895,255**	**1,090,778**	**1,270,883**	**1,542,891**	**1,767,290**
Mining & Quarrying	48,588	62,234	58,568	53,710	79,748	70,860	110,359	147,727	225,427	197,997	263,745	278,561
Manufacturing	152,504	188,179	214,282	236,693	295,058	420,348	482,496	538,584	665,270	785,243	902,087	1,094,749
Large Scale	*67,788*	*97,251*	*113,570*	*120,827*	*158,275*	*263,371*	*304,493*	*331,649*	*425,612*	*509,354*	*562,531*	*673,765*
Small Scale	*59,730*	*64,974*	*73,049*	*82,630*	*96,564*	*105,394*	*115,596*	*136,303*	*163,441*	*186,985*	*220,347*	*260,236*
Slaughtering	*24,986*	*25,955*	*27,663*	*33,236*	*40,219*	*51,583*	*62,406*	*70,632*	*76,217*	*88,904*	*119,209*	*160,748*
Construction	50,238	57,157	60,334	63,334	72,208	94,747	106,080	129,011	142,389	170,492	218,934	259,087
Electricity and Gas Distribution	54,954	57,098	62,749	58,855	99,122	103,092	67,337	79,933	57,692	117,151	158,126	134,893
Commodity Producing Sectors	**1,157,150**	**1,237,046**	**1,291,873**	**1,395,946**	**1,632,243**	**1,911,425**	**2,110,294**	**2,458,105**	**2,988,299**	**3,703,126**	**4,316,891**	**5,176,517**
Services Sector	**633,463**	**749,662**	**847,664**	**913,040**	**1,000,862**	**1,186,565**	**1,466,137**	**1,655,512**	**2,049,615**	**2,533,763**	**2,798,685**	**3,526,022**
Transport, Storage & Comm.	142,446	202,419	239,817	268,342	295,825	359,378	436,835	442,062	493,170	698,218	778,168	947,937
Wholesale & Retail Trade	190,868	223,502	247,793	268,139	303,430	366,654	449,696	531,644	739,295	785,892	826,286	1,050,881
Finance & Insurance	16,266	17,591	27,331	21,347	19,169	25,865	64,291	86,902	94,903	107,804	95,790	102,977
Ownership of Dwellings	37,317	41,415	41,329	44,349	48,431	55,440	61,295	73,946	91,466	112,685	127,940	146,045
Public Administration & Defence	105,161	112,201	124,137	136,459	148,991	163,905	193,159	223,261	253,043	316,648	354,760	486,111
Social and Community Services	141,405	152,534	167,256	174,402	185,016	215,322	260,862	297,698	377,737	512,517	615,741	792,070
GDP	**1,790,613**	**1,986,709**	**2,139,536**	**2,308,985**	**2,633,104**	**3,097,989**	**3,576,432**	**4,113,617**	**5,037,913**	**6,236,889**	**7,115,576**	**8,702,539**

Table A-1.18 **Gross Domestic Product at Current Prices – Pakistan (Urban)**

(Rs million)

	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
Agricultural Sector	**72,744**	**72,922**	**72,350**	**75,963**	**78,646**	**91,856**	**113,200**	**122,390**	**119,661**	**179,283**	**204,950**	**289,431**
Industrial Sector	**524,580**	**577,596**	**593,417**	**671,321**	**870,849**	**970,238**	**1,157,426**	**1,319,357**	**1,567,427**	**1,724,092**	**2,034,768**	**2,555,767**
Mining & Quarrying	32,464	44,136	58,384	83,334	128,542	111,191	109,323	104,814	76,042	148,415	107,488	153,346
Manufacturing	370,297	419,953	428,568	488,741	607,428	716,286	888,297	1,028,729	1,285,252	1,284,239	1,584,982	2,073,198
Large Scale	*270,814*	*313,628*	*310,519*	*360,547*	*463,624*	*551,286*	*698,569*	*817,924*	*1,041,613*	*993,525*	*1,246,915*	*1,645,825*
Small Scale	*72,639*	*78,489*	*88,685*	*93,902*	*104,062*	*116,782*	*130,366*	*143,640*	*171,169*	*208,020*	*229,586*	*284,535*
Slaughtering	*26,844*	*27,835*	*29,364*	*34,291*	*39,742*	*48,218*	*59,363*	*67,165*	*72,470*	*82,694*	*108,481*	*142,838*
Construction	37,148	37,513	34,863	37,546	43,289	58,586	73,805	96,228	117,951	124,498	133,596	137,690
Electricity and Gas Distribution	84,672	75,993	71,601	61,701	91,591	84,175	86,001	89,586	88,182	166,940	208,701	191,533
Commodity Producing Sectors	**597,324**	**650,518**	**665,767**	**747,284**	**949,494**	**1,062,094**	**1,270,626**	**1,441,747**	**1,687,087**	**1,903,375**	**2,239,718**	**2,845,198**
Services Sector	**1,174,083**	**1,286,018**	**1,340,863**	**1,477,948**	**1,667,928**	**1,962,484**	**2,311,470**	**2,679,735**	**3,196,583**	**3,970,198**	**4,711,221**	**5,559,750**
Transport, Storage & Comm.	258,537	310,578	303,011	341,587	379,798	400,333	471,574	570,144	662,703	889,716	1,068,567	1,184,907
Wholesale & Retail Trade	430,974	468,352	473,019	517,637	592,927	726,460	812,305	910,142	1,090,649	1,318,445	1,638,056	2,065,025
Finance & Insurance	116,188	99,406	115,093	123,642	146,061	210,389	300,029	360,368	461,776	513,704	520,326	546,724
Ownership of Dwellings	73,108	82,944	85,125	90,790	97,833	110,001	123,517	132,220	147,544	186,104	217,615	255,642
Public Administration & Defence	115,130	122,838	135,905	149,395	163,114	179,443	211,469	244,424	277,031	346,075	402,380	489,185
Social and Community Services	180,146	201,900	228,711	254,899	288,195	335,859	392,575	462,436	556,881	716,153	864,277	1,018,268
GDP	**1,771,407**	**1,936,535**	**2,006,631**	**2,225,233**	**2,617,423**	**3,024,579**	**3,582,095**	**4,121,482**	**4,883,671**	**5,873,573**	**6,950,939**	**8,404,948**

Table A-1.19 **Gross Domestic Product at Current Prices – Punjab (Overall)**

(Rs million)

	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
Agricultural Sector	**587,529**	**601,772**	**613,140**	**674,681**	**745,243**	**856,470**	**941,585**	**1,082,212**	**1,274,387**	**1,648,668**	**1,854,103**	**2,385,152**
Major Crops	244,173	240,792	233,316	272,779	305,445	379,093	347,600	407,194	486,487	703,968	761,061	1,087,827
Minor Crops	69,845	71,232	74,458	72,965	69,814	83,924	90,732	101,860	115,293	126,148	141,758	196,371
Livestock	259,974	275,153	290,612	311,526	350,076	376,076	483,139	549,744	647,585	789,495	919,338	1,065,056
Fishing	3,625	3,479	4,039	4,152	4,283	4,631	7,201	9,544	11,288	12,727	13,196	13,662
Forestry	9,912	11,116	10,715	13,259	15,625	12,746	12,913	13,871	13,735	16,330	18,750	22,235
Industrial Sector	**373,574**	**427,481**	**460,636**	**489,345**	**610,811**	**709,007**	**794,340**	**933,349**	**1,073,702**	**1,272,404**	**1,538,188**	**1,854,554**
Mining & Quarrying	18,304	29,112	32,300	24,842	34,898	27,772	36,147	37,574	42,547	46,072	47,810	55,623
Manufacturing	255,962	294,023	320,472	355,960	424,727	501,265	583,932	686,723	817,636	944,140	1,146,252	1,450,729
Large Scale	*136,533*	*162,248*	*172,893*	*192,170*	*240,597*	*292,253*	*341,752*	*413,608*	*501,249*	*580,163*	*712,947*	*909,655*
Small Scale	*92,089*	*102,971*	*116,562*	*127,750*	*141,871*	*156,142*	*171,677*	*196,150*	*236,333*	*272,118*	*311,971*	*380,182*
Slaughtering	*27,340*	*28,805*	*31,018*	*36,040*	*42,258*	*52,870*	*70,504*	*76,965*	*80,054*	*91,858*	*121,334*	*160,892*
Construction	47,174	52,526	54,015	58,242	67,509	90,284	106,160	132,562	152,036	170,084	199,669	219,655
Electricity and Gas Distribution	52,134	51,819	53,849	50,300	83,677	89,686	68,100	76,489	61,483	112,109	144,456	128,547
Commodity Producing Sectors	**961,103**	**1,029,252**	**1,073,775**	**1,164,026**	**1,356,054**	**1,565,477**	**1,735,925**	**2,015,561**	**2,348,089**	**2,921,072**	**3,392,291**	**4,239,706**
Services Sector	**1,015,265**	**1,138,981**	**1,242,137**	**1,366,711**	**1,530,842**	**1,797,007**	**2,207,167**	**2,515,477**	**2,975,924**	**3,691,621**	**4,235,939**	**5,134,877**
Transport, Storage & Comm.	227,206	288,859	301,968	348,814	391,217	432,277	537,357	586,246	665,457	904,902	1,034,247	1,238,381
Wholesale & Retail Trade	342,099	370,787	405,033	440,503	502,615	615,877	746,447	843,014	1,035,835	1,194,656	1,373,708	1,720,630
Finance & Insurance	63,578	59,902	76,624	79,599	91,207	131,121	196,368	241,526	298,380	339,343	333,935	357,336
Ownership of Dwellings	62,721	70,636	69,423	73,921	80,445	91,158	109,224	120,607	136,236	169,413	194,202	214,501
Public Administration & Defence	123,363	131,622	145,624	160,078	174,779	192,275	226,592	261,904	296,841	370,462	433,084	540,314
Social and Community Services	196,298	217,175	243,465	263,796	290,580	334,299	391,180	462,180	543,175	712,844	866,764	1,063,716
GDP	**1,976,369**	**2,168,233**	**2,315,913**	**2,530,737**	**2,886,896**	**3,362,484**	**3,943,092**	**4,531,038**	**5,324,013**	**6,612,693**	**7,628,230**	**9,374,583**

Table A-1.20 **Gross Domestic Product at Current Prices – Punjab (Rural)**

(Rs million)

	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
Agricultural Sector	**556,121**	**569,014**	**579,369**	**634,700**	**697,951**	**800,659**	**864,973**	**1,001,385**	**1,198,028**	**1,540,102**	**1,729,514**	**2,186,969**
Industrial Sector	**159,840**	**192,592**	**211,133**	**221,588**	**270,245**	**351,164**	**367,974**	**472,890**	**571,811**	**638,474**	**742,100**	**863,357**
Mining & Quarrying	8,857	14,087	8,238	5,999	7,971	9,711	24,208	22,501	31,596	19,060	12,380	27,264
Manufacturing	106,088	127,394	146,676	153,810	172,098	218,727	247,152	334,836	424,456	462,995	543,893	637,246
Large Scale	*45,443*	*59,838*	*70,337*	*67,974*	*74,281*	*107,293*	*118,316*	*185,858*	*252,117*	*267,753*	*310,156*	*351,035*
Small Scale	*45,907*	*51,331*	*58,107*	*64,906*	*73,436*	*80,978*	*89,206*	*105,123*	*126,171*	*141,768*	*162,468*	*190,692*
Slaughtering	*14,738*	*16,224*	*18,233*	*20,930*	*24,381*	*30,456*	*39,630*	*43,855*	*46,168*	*53,474*	*71,269*	*95,519*
Construction	29,381	33,575	35,471	38,877	45,830	60,208	65,294	84,187	95,175	105,806	129,018	141,631
Electricity and Gas Distribution	15,514	17,536	20,747	22,902	44,346	62,518	31,320	31,366	20,584	50,612	56,809	57,215
Commodity Producing Sectors	**715,961**	**761,606**	**790,502**	**856,287**	**968,196**	**1,151,823**	**1,232,946**	**1,474,276**	**1,769,839**	**2,178,576**	**2,471,613**	**3,050,327**
Services Sector	**364,117**	**433,086**	**499,651**	**536,174**	**585,472**	**689,170**	**895,576**	**990,780**	**1,252,257**	**1,478,922**	**1,554,618**	**2,003,643**
Transport, Storage & Comm.	84,570	125,979	155,550	176,103	194,358	229,430	284,886	281,982	296,068	404,300	436,351	575,149
Wholesale & Retail Trade	116,255	130,962	148,871	163,265	187,882	228,159	306,110	352,818	507,349	518,139	504,002	624,123
Finance & Insurance	8,513	11,357	20,349	14,803	11,748	16,453	43,671	49,631	65,761	69,761	58,310	74,180
Ownership of Dwellings	22,790	25,679	25,256	26,485	28,382	31,666	38,849	48,274	60,829	73,263	81,177	86,753
Public Administration & Defence	35,849	38,249	42,318	46,518	50,790	55,874	65,847	76,108	86,261	107,655	125,788	186,988
Social and Community Services	96,140	100,861	107,307	109,000	112,312	127,587	156,213	181,967	235,989	305,805	348,990	456,450
GDP	**1,080,079**	**1,194,692**	**1,290,152**	**1,392,461**	**1,553,668**	**1,840,993**	**2,128,522**	**2,465,056**	**3,022,096**	**3,657,498**	**4,026,232**	**5,053,969**

Table A-1.21 **Gross Domestic Product at Current Prices – Punjab (Urban)**

(Rs million)

	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
Agricultural Sector	**31,408**	**32,758**	**33,771**	**39,982**	**47,291**	**55,811**	**76,612**	**80,827**	**76,359**	**108,565**	**124,589**	**198,183**
Industrial Sector	**213,734**	**234,889**	**249,503**	**267,757**	**340,566**	**357,843**	**426,366**	**460,459**	**501,892**	**633,931**	**796,089**	**991,197**
Mining & Quarrying	9,447	15,026	24,061	18,844	26,928	18,061	11,939	15,073	10,951	27,012	35,430	28,359
Manufacturing	149,874	166,630	173,795	202,150	252,628	282,538	336,780	351,887	393,181	481,144	602,359	813,483
Large Scale	*91,090*	*102,409*	*102,555*	*124,196*	*166,317*	*184,960*	*223,435*	*227,750*	*249,133*	*312,410*	*402,791*	*558,619*
Small Scale	*46,182*	*51,639*	*58,455*	*62,844*	*68,435*	*75,163*	*82,471*	*91,027*	*110,162*	*130,350*	*149,503*	*189,491*
Slaughtering	*12,602*	*12,581*	*12,785*	*15,110*	*17,877*	*22,414*	*30,874*	*33,110*	*33,886*	*38,384*	*50,065*	*65,373*
Construction	17,793	18,951	18,544	19,365	21,679	30,076	40,867	48,376	56,861	64,277	70,652	78,024
Electricity and Gas Distribution	36,620	34,283	33,102	27,398	39,331	27,168	36,780	45,123	40,898	61,497	87,648	71,332
Commodity Producing Sectors	**245,142**	**267,647**	**283,274**	**307,739**	**387,858**	**413,654**	**502,979**	**541,286**	**578,250**	**742,496**	**920,678**	**1,189,379**
Services Sector	**651,148**	**705,894**	**742,487**	**830,537**	**945,370**	**1,107,837**	**1,311,592**	**1,524,697**	**1,723,666**	**2,212,698**	**2,681,321**	**3,131,234**
Transport, Storage & Comm.	142,636	162,880	146,418	172,711	196,859	202,847	252,471	304,264	369,389	500,602	597,896	663,232
Wholesale & Retail Trade	225,844	239,825	256,162	277,238	314,732	387,718	440,337	490,197	528,486	676,517	869,706	1,096,507
Finance & Insurance	55,065	48,545	56,275	64,796	79,459	114,668	152,697	191,895	232,619	269,582	275,625	283,156
Ownership of Dwellings	39,931	44,957	44,167	47,436	52,063	59,492	70,374	72,333	75,406	96,151	113,024	127,748
Public Administration & Defence	87,514	93,373	103,306	113,560	123,989	136,400	160,745	185,795	210,580	262,807	307,296	353,326
Social and Community Services	100,158	116,314	136,159	154,796	178,268	206,712	234,968	280,214	307,186	407,040	517,774	607,265
GDP	**896,290**	**973,541**	**1,025,760**	**1,138,275**	**1,333,228**	**1,521,491**	**1,814,570**	**2,065,982**	**2,301,917**	**2,955,195**	**3,601,999**	**4,320,614**

Table A-1.22 **Gross Domestic Product at Current Prices – Sindh (Overall)**

(Rs million)

	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
Agricultural Sector	**208,161**	**208,695**	**212,178**	**228,052**	**251,970**	**271,590**	**307,197**	**357,423**	**460,703**	**595,057**	**711,060**	**816,453**
Major Crops	68,992	57,098	54,656	62,781	70,184	79,460	78,348	92,723	129,830	189,700	239,161	253,571
Minor Crops	29,447	31,123	28,371	27,262	29,254	32,746	36,784	39,001	51,348	57,413	64,073	84,348
Livestock	93,747	102,509	111,929	120,507	135,396	144,253	166,974	195,975	238,682	299,638	358,358	427,200
Fishing	10,295	11,279	10,479	10,712	10,716	10,967	19,636	23,708	34,812	41,131	41,250	41,626
Forestry	5,681	6,686	6,743	6,790	6,421	4,164	5,455	6,015	6,032	7,175	8,218	9,707
Industrial Sector	**315,477**	**344,818**	**347,923**	**408,413**	**553,102**	**629,366**	**739,005**	**933,570**	**1,163,271**	**1,139,458**	**1,410,154**	**1,702,245**
Mining & Quarrying	30,099	34,785	40,433	67,118	115,128	107,793	129,182	151,420	183,979	217,428	235,122	273,551
Manufacturing	219,937	247,119	245,369	282,891	354,780	434,020	526,962	684,679	870,442	764,239	982,909	1,249,571
Large Scale	*179,391*	*205,481*	*199,430*	*230,978*	*292,352*	*358,592*	*441,543*	*586,472*	*763,385*	*631,174*	*832,326*	*1,066,727*
Small Scale	*25,153*	*25,729*	*29,185*	*31,943*	*38,897*	*46,617*	*53,905*	*60,795*	*64,867*	*84,281*	*85,819*	*96,357*
Slaughtering	*15,392*	*15,909*	*16,754*	*19,970*	*23,531*	*28,811*	*31,515*	*37,412*	*42,190*	*48,784*	*64,764*	*86,487*
Construction	20,310	20,574	19,401	20,175	22,694	31,523	39,794	50,770	66,503	64,543	70,778	71,143
Electricity and Gas Distribution	45,131	42,339	42,721	38,230	60,500	56,030	43,066	46,701	42,347	93,248	121,345	107,980
Commodity Producing Sectors	**523,638**	**553,512**	**560,102**	**636,465**	**805,072**	**900,956**	**1,046,201**	**1,290,993**	**1,623,974**	**1,734,514**	**2,121,214**	**2,518,698**
Services Sector	**507,302**	**572,179**	**607,026**	**663,216**	**744,366**	**903,257**	**1,047,627**	**1,203,287**	**1,480,012**	**1,795,957**	**2,117,471**	**2,531,322**
Transport, Storage & Comm.	99,655	136,415	154,796	165,667	178,042	195,786	218,901	271,651	268,954	390,871	484,155	516,675
Wholesale & Retail Trade	185,157	205,071	194,159	220,385	259,962	334,495	376,006	413,365	549,614	616,183	739,244	921,452
Finance & Insurance	54,447	46,217	54,408	55,022	62,820	89,330	128,405	152,809	219,452	220,071	218,260	238,091
Ownership of Dwellings	34,914	39,625	42,370	45,517	48,865	54,951	56,613	63,917	76,515	95,400	110,452	135,067
Public Administration & Defence	56,852	60,658	67,111	73,772	80,547	88,610	104,425	120,698	136,799	171,421	187,587	265,498
Social and Community Services	76,277	84,193	94,182	102,853	114,130	140,084	163,278	180,848	228,677	302,012	377,773	454,538
GDP	**1,030,940**	**1,125,691**	**1,167,128**	**1,299,681**	**1,549,438**	**1,804,213**	**2,093,828**	**2,494,281**	**3,103,986**	**3,530,472**	**4,238,685**	**5,050,020**

Table A-1.23 **Gross Domestic Product at Current Prices – Sindh (Rural)**

(Rs million)

	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
Agricultural Sector	**188,974**	**189,063**	**191,812**	**209,090**	**233,959**	**250,678**	**287,701**	**336,337**	**432,088**	**569,212**	**679,183**	**785,374**
Industrial Sector	**42,986**	**48,400**	**54,157**	**60,860**	**99,992**	**119,771**	**129,787**	**180,018**	**245,906**	**238,916**	**365,779**	**389,023**
Mining & Quarrying	13,334	15,410	17,926	16,160	29,025	28,456	49,319	83,606	146,914	129,797	199,143	197,256
Manufacturing	14,535	16,218	17,325	26,162	42,848	68,812	57,255	73,375	76,796	77,577	112,750	142,188
Large Scale	*6,441*	*8,263*	*9,006*	*15,108*	*27,479*	*49,255*	*35,164*	*46,349*	*49,242*	*43,856*	*71,302*	*90,632*
Small Scale	*3,563*	*3,645*	*4,134*	*5,585*	*8,318*	*10,136*	*11,917*	*15,044*	*14,086*	*17,815*	*19,889*	*22,174*
Slaughtering	*4,531*	*4,310*	*4,184*	*5,469*	*7,051*	*9,421*	*10,174*	*11,981*	*13,468*	*15,906*	*21,559*	*29,382*
Construction	5,516	6,794	7,746	6,986	6,778	9,565	13,313	12,303	15,211	16,698	24,519	29,992
Electricity and Gas Distribution	9,601	9,977	11,159	11,552	21,341	12,938	9,900	10,734	6,985	14,845	29,366	19,588
Commodity Producing Sectors	**231,960**	**237,463**	**245,969**	**269,950**	**333,951**	**370,449**	**417,488**	**516,354**	**677,994**	**808,128**	**1,044,961**	**1,174,398**
Services Sector	**105,411**	**128,159**	**149,187**	**162,755**	**179,654**	**226,541**	**252,564**	**278,755**	**305,515**	**418,012**	**521,272**	**638,152**
Transport, Storage & Comm.	16,862	24,866	30,511	32,289	34,339	47,299	52,963	62,257	61,164	104,816	122,942	116,120
Wholesale & Retail Trade	20,078	28,183	33,905	35,910	39,501	54,359	57,135	58,731	73,016	81,042	114,379	145,132
Finance & Insurance	331	337	478	787	1,472	2,319	4,847	7,967	8,411	7,940	6,044	8,511
Ownership of Dwellings	5,975	6,221	6,094	7,424	9,011	11,418	10,260	11,654	14,037	17,249	19,680	23,716
Public Administration & Defence	47,301	50,468	55,837	61,379	67,016	73,725	86,883	100,423	113,819	142,625	153,205	211,454
Social and Community Services	14,864	18,084	22,363	24,966	28,316	37,421	40,476	37,723	35,069	64,341	105,022	133,218
GDP	**337,371**	**365,621**	**395,156**	**432,705**	**513,605**	**596,990**	**670,051**	**795,109**	**983,509**	**1,226,140**	**1,566,233**	**1,812,550**

Table A-1.24 **Gross Domestic Product at Current Prices – Sindh (Urban)**

(Rs million)

	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
Agricultural Sector	**19,187**	**19,632**	**20,366**	**18,962**	**18,011**	**20,912**	**19,496**	**21,086**	**28,615**	**25,845**	**31,877**	**31,079**
Industrial Sector	**272,491**	**296,418**	**293,767**	**347,553**	**453,110**	**509,595**	**609,218**	**753,553**	**917,365**	**900,541**	**1,044,375**	**1,313,222**
Mining & Quarrying	16,765	19,375	22,507	50,958	86,103	79,338	79,863	67,814	37,065	87,631	35,979	76,295
Manufacturing	205,402	230,901	228,044	256,729	311,932	365,208	469,707	611,304	793,646	686,662	870,159	1,107,383
Large Scale	*172,950*	*197,217*	*190,423*	*215,870*	*264,873*	*309,338*	*406,378*	*540,123*	*714,143*	*587,318*	*761,024*	*976,095*
Small Scale	*21,590*	*22,084*	*25,050*	*26,358*	*30,579*	*36,480*	*41,988*	*45,751*	*50,781*	*66,467*	*65,930*	*74,184*
Slaughtering	*10,862*	*11,600*	*12,570*	*14,501*	*16,480*	*19,390*	*21,341*	*25,430*	*28,722*	*32,878*	*43,205*	*57,104*
Construction	14,794	13,780	11,655	13,188	15,916	21,958	26,481	38,468	51,292	47,845	46,260	41,151
Electricity and Gas Distribution	35,530	32,362	31,561	26,678	39,159	43,091	33,167	35,967	35,362	78,403	91,978	88,392
Commodity Producing Sectors	**291,679**	**316,050**	**314,133**	**366,515**	**471,121**	**530,507**	**628,714**	**774,639**	**945,980**	**926,386**	**1,076,253**	**1,344,301**
Services Sector	**401,891**	**444,020**	**457,839**	**500,461**	**564,712**	**676,716**	**795,064**	**924,533**	**1,174,497**	**1,377,945**	**1,596,200**	**1,893,169**
Transport, Storage & Comm.	82,793	111,550	124,285	133,378	143,704	148,487	165,937	209,394	207,791	286,056	361,213	400,555
Wholesale & Retail Trade	165,079	176,888	160,255	184,475	220,461	280,136	318,872	354,635	476,599	535,141	624,866	776,320
Finance & Insurance	54,117	45,880	53,930	54,235	61,348	87,011	123,558	144,841	211,041	212,131	212,217	229,580
Ownership of Dwellings	28,939	33,404	36,276	38,093	39,855	43,533	46,353	52,262	62,478	78,151	90,772	111,351
Public Administration & Defence	9,550	10,190	11,274	12,393	13,531	14,885	17,542	20,276	22,980	28,796	34,382	54,044
Social and Community Services	61,413	66,109	71,819	77,887	85,813	102,663	122,802	143,125	193,608	237,670	272,751	321,320
GDP	**693,569**	**760,070**	**771,972**	**866,975**	**1,035,833**	**1,207,223**	**1,423,777**	**1,699,171**	**2,120,477**	**2,304,331**	**2,672,452**	**3,237,470**

Table A-1.25 **Gross Domestic Product at Current Prices – Khyber Pakhtunkhwa (Overall)**

(Rs million)

	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
Agricultural Sector	**80,762**	**83,362**	**87,385**	**95,706**	**104,945**	**113,536**	**125,163**	**145,972**	**175,142**	**224,717**	**261,593**	**317,151**
Major Crops	19,820	17,888	19,064	21,967	23,473	25,596	23,714	28,421	35,573	50,564	50,552	57,980
Minor Crops	10,867	11,274	10,479	9,860	8,490	10,480	11,426	11,139	13,860	14,470	17,542	25,159
Livestock	45,733	49,262	53,042	58,273	66,865	72,817	83,926	98,070	118,887	151,872	184,757	224,000
Fishing	64	97	117	177	210	234	467	2,269	838	950	1,169	1,391
Forestry	4,278	4,842	4,683	5,429	5,908	4,408	5,629	6,074	5,984	6,861	7,573	8,621
Industrial Sector	**90,900**	**105,101**	**108,566**	**107,980**	**141,517**	**216,213**	**302,387**	**245,049**	**285,290**	**393,389**	**440,333**	**559,775**
Mining & Quarrying	365	848	969	1,559	1,736	1,957	3,099	5,507	6,154	5,272	10,585	12,315
Manufacturing	40,889	57,898	63,765	68,218	93,051	163,060	236,139	166,292	218,230	291,040	293,907	398,705
Large Scale	*21,176*	*38,665*	*43,510*	*45,967*	*66,886*	*132,958*	*204,336*	*129,869*	*170,316*	*235,982*	*219,859*	*299,540*
Small Scale	*13,227*	*12,794*	*13,723*	*14,095*	*16,093*	*17,175*	*17,737*	*19,770*	*29,137*	*33,074*	*44,504*	*59,228*
Slaughtering	*6,486*	*6,439*	*6,532*	*8,156*	*10,072*	*12,927*	*14,066*	*16,653*	*18,777*	*21,985*	*29,545*	*39,936*
Construction	13,976	14,852	14,693	16,169	19,247	25,634	28,174	33,206	32,290	48,344	68,170	88,537
Electricity and Gas Distribution	35,670	31,503	29,138	22,034	27,483	25,563	34,975	40,044	28,617	48,733	67,672	60,218
Commodity Producing Sectors	**171,663**	**188,463**	**195,951**	**203,686**	**246,462**	**329,749**	**427,550**	**391,021**	**460,432**	**618,106**	**701,926**	**876,926**
Services Sector	**198,196**	**223,047**	**231,521**	**241,977**	**259,267**	**298,123**	**382,583**	**449,659**	**569,026**	**747,193**	**860,733**	**1,070,203**
Transport, Storage & Comm.	48,687	57,440	56,175	63,432	71,927	93,200	115,251	109,587	158,154	207,560	239,757	300,018
Wholesale & Retail Trade	68,208	83,069	86,483	85,313	87,459	91,676	106,137	145,437	190,317	228,856	261,555	344,632
Finance & Insurance	13,301	9,908	10,235	8,605	8,168	11,348	35,016	45,255	28,491	50,980	55,648	46,913
Ownership of Dwellings	7,544	8,165	8,338	9,546	10,942	13,158	13,655	15,610	18,953	24,564	29,567	37,605
Public Administration & Defence	23,312	24,872	27,518	30,250	33,027	36,334	42,818	49,491	56,093	70,290	83,000	103,687
Social and Community Services	37,144	39,593	42,772	44,830	47,743	52,407	69,706	84,279	117,017	164,943	191,205	237,348
GDP	**369,859**	**411,510**	**427,472**	**445,662**	**505,729**	**627,872**	**810,134**	**840,680**	**1,029,458**	**1,365,299**	**1,562,659**	**1,947,129**

Table A-1.26 **Gross Domestic Product at Current Prices – Khyber Pakhtunkhwa (Rural)**

(Rs million)

	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
Agricultural Sector	**78,270**	**81,038**	**85,209**	**93,179**	**102,016**	**110,606**	**122,196**	**142,554**	**170,861**	**218,340**	**252,665**	**308,961**
Industrial Sector	**65,563**	**77,343**	**80,594**	**80,115**	**105,740**	**160,001**	**219,883**	**185,736**	**206,143**	**290,720**	**335,644**	**412,537**
Mining & Quarrying	338	785	831	1,336	1,488	1,781	2,996	5,183	5,849	5,061	10,262	12,058
Manufacturing	28,913	40,268	43,261	48,275	68,674	119,345	170,954	119,237	151,632	211,968	218,891	284,228
Large Scale	*15,428*	*27,298*	*29,767*	*32,730*	*49,566*	*97,571*	*148,492*	*93,727*	*118,234*	*172,716*	*164,838*	*214,124*
Small Scale	*9,206*	*8,904*	*9,551*	*10,396*	*12,477*	*12,924*	*12,915*	*14,280*	*20,787*	*24,375*	*33,912*	*42,683*
Slaughtering	*4,279*	*4,066*	*3,943*	*5,149*	*6,631*	*8,850*	*9,547*	*11,231*	*12,610*	*14,877*	*20,141*	*27,421*
Construction	11,789	12,674	12,684	13,975	16,654	22,493	25,071	28,209	27,294	42,271	57,906	78,153
Electricity and Gas Distribution	24,523	23,615	23,817	16,530	18,923	16,382	20,862	33,107	21,367	31,420	48,585	38,097
Commodity Producing Sectors	**143,833**	**158,381**	**165,803**	**173,294**	**207,756**	**270,607**	**342,079**	**328,290**	**377,004**	**509,060**	**588,309**	**721,498**
Services Sector	**133,313**	**152,505**	**159,842**	**170,395**	**185,693**	**210,187**	**258,789**	**315,669**	**398,820**	**531,017**	**611,063**	**752,976**
Transport, Storage & Comm.	34,723	43,837	45,877	51,256	57,504	72,872	88,133	84,383	116,512	162,609	190,585	231,349
Wholesale & Retail Trade	46,627	54,041	53,543	56,042	60,958	63,117	72,180	103,096	134,052	160,288	179,745	238,954
Finance & Insurance	7,299	5,752	6,287	5,363	5,165	5,727	14,104	25,800	16,341	26,618	29,192	19,291
Ownership of Dwellings	5,196	5,824	6,158	6,973	7,905	9,399	9,644	11,395	13,732	18,101	21,712	28,097
Public Administration & Defence	13,882	14,811	16,387	18,013	19,667	21,636	25,498	29,471	33,403	41,856	49,425	57,945
Social and Community Services	25,586	28,240	31,589	32,747	34,494	37,436	49,231	61,523	84,780	121,545	140,405	177,339
GDP	**277,146**	**310,886**	**325,645**	**343,689**	**393,449**	**480,794**	**600,868**	**643,958**	**775,824**	**1,040,077**	**1,199,373**	**1,474,474**

Table A-1.27 **Gross Domestic Product at Current Prices – Khyber Pakhtunkhwa (Urban)**

(Rs million)

	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
Agricultural Sector	**2,492**	**2,325**	**2,176**	**2,527**	**2,929**	**2,930**	**2,967**	**3,418**	**4,280**	**6,377**	**8,928**	**8,190**
Industrial Sector	**25,337**	**27,758**	**27,972**	**27,864**	**35,777**	**56,212**	**82,504**	**59,313**	**79,147**	**102,669**	**104,689**	**147,238**
Mining & Quarrying	27	63	138	223	248	176	103	324	304	211	323	257
Manufacturing	11,976	17,630	20,504	19,943	24,377	43,715	65,185	47,055	66,598	79,072	75,016	114,477
Large Scale	*5,748*	*11,367*	*13,743*	*13,237*	*17,319*	*35,387*	*55,843*	*36,142*	*52,082*	*63,266*	*55,021*	*85,416*
Small Scale	*4,021*	*3,890*	*4,172*	*3,699*	*3,616*	*4,251*	*4,823*	*5,491*	*8,350*	*8,699*	*10,592*	*16,545*
Slaughtering	*2,207*	*2,373*	*2,589*	*3,007*	*3,442*	*4,077*	*4,519*	*5,422*	*6,166*	*7,108*	*9,404*	*12,516*
Construction	2,187	2,178	2,008	2,194	2,593	3,140	3,104	4,997	4,995	6,073	10,263	10,384
Electricity and Gas Distribution	11,147	7,887	5,321	5,504	8,560	9,181	14,113	6,937	7,250	17,313	19,087	22,121
Commodity Producing Sectors	**27,829**	**30,082**	**30,148**	**30,391**	**38,706**	**59,142**	**85,472**	**62,731**	**83,428**	**109,046**	**113,617**	**155,428**
Services Sector	**64,883**	**70,541**	**71,679**	**71,582**	**73,574**	**87,936**	**123,794**	**133,991**	**170,206**	**216,176**	**249,669**	**317,226**
Transport, Storage & Comm.	13,964	13,602	10,297	12,177	14,424	20,327	27,118	25,203	41,642	44,951	49,172	68,669
Wholesale & Retail Trade	21,581	29,028	32,940	29,271	26,501	28,559	33,957	42,341	56,265	68,568	81,810	105,678
Finance & Insurance	6,002	4,155	3,948	3,242	3,003	5,621	20,913	19,455	12,151	24,362	26,456	27,622
Ownership of Dwellings	2,347	2,341	2,180	2,573	3,037	3,759	4,011	4,215	5,221	6,463	7,856	9,508
Public Administration & Defence	9,430	10,061	11,132	12,236	13,360	14,698	17,321	20,020	22,691	28,433	33,575	45,741
Social and Community Services	11,559	11,353	11,183	12,083	13,250	14,971	20,476	22,756	32,236	43,398	50,801	60,009
GDP	**92,712**	**100,623**	**101,827**	**101,973**	**112,280**	**147,078**	**209,266**	**196,722**	**253,634**	**325,222**	**363,287**	**472,654**

Table A-1.28 **Gross Domestic Product at Current Prices – Balochistan (Overall)**
(Rs million)

	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
Agricultural Sector	**47,156**	**51,472**	**55,588**	**60,876**	**62,593**	**72,638**	**83,277**	**99,632**	**106,949**	**143,085**	**152,194**	**179,902**
Major Crops	9,215	9,802	9,822	12,590	12,735	13,407	14,614	18,079	19,485	34,916	31,634	25,548
Minor Crops	15,520	17,050	19,828	20,363	18,814	27,069	29,519	32,122	31,052	39,506	39,214	57,870
Livestock	17,666	19,134	20,726	22,670	25,881	28,024	32,409	38,017	46,288	58,861	71,262	85,965
Fishing	1,179	1,691	1,741	1,584	1,519	1,657	3,189	7,147	5,452	4,706	4,731	4,723
Forestry	3,576	3,796	3,471	3,670	3,643	2,481	3,547	4,268	4,671	5,097	5,352	5,794
Industrial Sector	**50,913**	**64,864**	**72,224**	**78,177**	**111,556**	**104,699**	**87,966**	**102,644**	**135,942**	**189,724**	**188,984**	**206,483**
Mining & Quarrying	32,284	41,625	43,250	43,525	56,528	44,528	51,254	58,041	68,789	77,641	77,716	90,418
Manufacturing	6,013	9,091	13,244	18,365	29,929	38,289	23,759	29,618	44,214	70,063	64,001	68,942
Large Scale	*1,502*	*4,486*	*8,257*	*12,259*	*22,064*	*30,854*	*15,432*	*19,624*	*32,275*	*55,561*	*44,315*	*43,668*
Small Scale	*1,899*	*1,969*	*2,264*	*2,745*	*3,765*	*2,243*	*2,643*	*3,227*	*4,272*	*5,532*	*7,639*	*9,003*
Slaughtering	*2,612*	*2,636*	*2,723*	*3,361*	*4,100*	*5,192*	*5,684*	*6,767*	*7,667*	*8,971*	*12,047*	*16,271*
Construction	5,926	6,717	7,088	6,294	6,047	5,893	5,756	8,700	9,512	12,020	13,913	17,442
Electricity and Gas Distribution	6,690	7,430	8,642	9,991	19,053	15,989	7,197	6,285	13,427	30,001	33,355	29,681
Commodity Producing Sectors	**98,069**	**116,336**	**127,812**	**139,053**	**174,149**	**177,337**	**171,243**	**202,276**	**242,891**	**332,809**	**341,177**	**386,384**
Services Sector	**86,783**	**101,474**	**107,842**	**119,085**	**134,315**	**150,662**	**140,229**	**166,824**	**221,237**	**269,190**	**295,763**	**349,371**
Transport, Storage & Comm.	25,435	30,283	29,889	32,016	34,436	38,448	36,901	44,723	63,308	84,601	88,576	77,770
Wholesale & Retail Trade	26,378	32,927	35,137	39,575	46,322	51,066	33,411	39,969	54,178	64,642	89,835	129,192
Finance & Insurance	1,127	970	1,157	1,763	3,034	4,454	4,530	7,680	10,356	11,114	8,273	7,361
Ownership of Dwellings	5,246	5,934	6,323	6,155	6,011	6,174	5,320	6,033	7,306	9,412	11,334	14,514
Public Administration & Defence	16,765	17,887	19,790	21,754	23,752	26,130	30,793	35,592	40,340	50,550	53,469	65,798
Social and Community Services	11,832	13,473	15,547	17,822	20,759	24,390	29,273	32,827	45,750	48,871	44,276	54,736
GDP	**184,852**	**217,810**	**235,654**	**258,138**	**308,464**	**327,999**	**311,472**	**369,100**	**464,128**	**601,999**	**636,940**	**735,755**

Table A-1.29 **Gross Domestic Product at Current Prices – Balochistan (Rural)**

(Rs million)

	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
Agricultural Sector	**27,500**	**33,264**	**39,550**	**46,384**	**52,179**	**60,435**	**69,153**	**82,574**	**96,543**	**104,589**	**112,638**	**127,922**
Industrial Sector	**37,895**	**46,333**	**50,049**	**50,029**	**70,161**	**58,110**	**48,628**	**56,611**	**66,919**	**102,773**	**99,369**	**102,373**
Mining & Quarrying	26,060	31,953	31,572	30,215	41,265	30,912	33,836	36,438	41,068	44,080	41,959	41,983
Manufacturing	2,968	4,299	7,019	8,447	11,438	13,463	7,134	11,136	12,386	32,703	26,553	31,087
Large Scale	*476*	*1,851*	*4,459*	*5,015*	*6,949*	*9,252*	*2,520*	*5,715*	*6,019*	*25,030*	*16,235*	*17,973*
Small Scale	*1,054*	*1,093*	*1,257*	*1,744*	*2,333*	*1,356*	*1,558*	*1,856*	*2,397*	*3,027*	*4,078*	*4,688*
Slaughtering	*1,438*	*1,355*	*1,304*	*1,688*	*2,157*	*2,855*	*3,055*	*3,565*	*3,971*	*4,647*	*6,240*	*8,426*
Construction	3,552	4,113	4,432	3,497	2,945	2,482	2,403	4,312	4,709	5,716	7,491	9,310
Electricity and Gas Distribution	5,315	5,969	7,025	7,871	14,512	11,253	5,255	4,725	8,755	20,274	23,366	19,993
Commodity Producing Sectors	**65,395**	**79,597**	**89,599**	**96,413**	**122,339**	**118,545**	**117,781**	**139,185**	**163,461**	**207,362**	**212,007**	**230,295**
Services Sector	**30,622**	**35,912**	**38,984**	**43,716**	**50,042**	**60,667**	**59,209**	**70,309**	**93,023**	**105,811**	**111,732**	**131,251**
Transport, Storage & Comm.	6,290	7,737	7,878	8,695	9,625	9,777	10,853	13,440	19,427	26,493	28,290	25,319
Wholesale & Retail Trade	7,909	10,316	11,474	12,923	15,089	21,020	14,271	16,999	24,878	26,423	28,161	42,672
Finance & Insurance	123	144	216	394	784	1,366	1,669	3,504	4,390	3,485	2,244	994
Ownership of Dwellings	3,355	3,692	3,822	3,467	3,133	2,956	2,542	2,622	2,868	4,073	5,370	7,478
Public Administration & Defence	8,129	8,673	9,596	10,549	11,517	12,670	14,932	17,258	19,561	24,511	26,341	29,724
Social and Community Services	4,815	5,349	5,998	7,689	9,895	12,877	14,943	16,485	21,899	20,826	21,325	25,063
GDP	**96,016**	**115,509**	**128,583**	**140,129**	**172,381**	**179,212**	**176,990**	**209,494**	**256,484**	**313,174**	**323,739**	**361,545**

Table A-1.30 **Gross Domestic Product at Current Prices – Balochistan (Urban)**

(Rs million)

	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
Agricultural Sector	**19,657**	**18,208**	**16,038**	**14,492**	**10,414**	**12,203**	**14,124**	**17,058**	**10,406**	**38,496**	**39,556**	**51,980**
Industrial Sector	**13,018**	**18,531**	**22,176**	**28,147**	**41,395**	**46,589**	**39,338**	**46,033**	**69,023**	**86,950**	**89,614**	**104,110**
Mining & Quarrying	6,224	9,672	11,678	13,310	15,263	13,617	17,418	21,603	27,721	33,561	35,757	48,435
Manufacturing	3,045	4,792	6,225	9,919	18,490	24,825	16,625	18,482	31,828	37,360	37,448	37,855
Large Scale	*1,026*	*2,635*	*3,798*	*7,244*	*15,115*	*21,601*	*12,912*	*13,909*	*26,256*	*30,531*	*28,079*	*25,695*
Small Scale	*845*	*876*	*1,008*	*1,001*	*1,432*	*887*	*1,085*	*1,371*	*1,876*	*2,505*	*3,561*	*4,315*
Slaughtering	*1,174*	*1,281*	*1,419*	*1,673*	*1,943*	*2,337*	*2,629*	*3,202*	*3,696*	*4,324*	*5,807*	*7,845*
Construction	2,374	2,605	2,656	2,798	3,102	3,411	3,353	4,388	4,802	6,303	6,421	8,131
Electricity and Gas Distribution	1,375	1,462	1,617	2,121	4,540	4,735	1,942	1,560	4,672	9,726	9,988	9,688
Commodity Producing Sectors	**32,674**	**36,739**	**38,213**	**42,640**	**51,809**	**58,792**	**53,462**	**63,091**	**79,430**	**125,447**	**129,171**	**156,089**
Services Sector	**56,161**	**65,562**	**68,858**	**75,369**	**84,273**	**89,996**	**81,020**	**96,515**	**128,214**	**163,378**	**184,031**	**218,120**
Transport, Storage & Comm.	19,144	22,546	22,011	23,321	24,812	28,671	26,049	31,283	43,881	58,108	60,286	52,450
Wholesale & Retail Trade	18,469	22,611	23,662	26,652	31,233	30,046	19,140	22,970	29,300	38,219	61,674	86,519
Finance & Insurance	1,005	825	940	1,369	2,251	3,088	2,861	4,176	5,965	7,629	6,028	6,366
Ownership of Dwellings	1,891	2,242	2,501	2,688	2,878	3,218	2,778	3,410	4,438	5,339	5,964	7,036
Public Administration & Defence	8,636	9,214	10,194	11,206	12,235	13,460	15,862	18,334	20,779	26,038	27,128	36,074
Social and Community Services	7,017	8,124	9,550	10,133	10,864	11,513	14,330	16,342	23,850	28,045	22,951	29,674
GDP	**88,836**	**102,301**	**107,072**	**118,009**	**136,082**	**148,787**	**134,482**	**159,606**	**207,643**	**288,825**	**313,201**	**374,210**

A.2

SPDC PUBLICATIONS

RESEARCH REPORTS

An Evaluation of the Federal Budget 2014-15
Hafiz A. Pasha, Muhammad Sabir, and Iffat Ara
RR 88, July 2014.

An Ambitious Budget 2013-14
Hafiz A. Pasha, Muhammad Sabir, Muhammad Asif Iqbal and Iffat Ara
RR 87, July 2013.

Imperatives for Fiscal Policy in the Federal Budget of 2013-14
Hafiz A. Pasha
RR 86, June 2013.

Predicting Sub-National Poverty Incidence for Pakistan
Haroon Jamal
RR 85, May 2013.

Pakistan Poverty Statistics: Estimates for 2011
Haroon Jamal
RR 84, October 2012.

An Exploratory Analysis of Inter-Temporal Multidimensional Poverty
Haroon Jamal
RR 83, June 2012.

Districts Indices of Multiple Deprivations for Pakistan, 2011
Haroon Jamal
RR 82, June 2012.

A Profile of Social Protection in Pakistan: An Appraisal of Empirical Literature
Haroon Jamal
RR 81, May 2010.

Assessing Vulnerability to Poverty: Evidence from Pakistan
Haroon Jamal
RR 80, April 2009.

Estimation of Multidimensional Poverty in Pakistan
Haroon Jamal
RR 79, January 2009.

Understanding Rural Poverty Dynamics: The Case of the Poorest District of Sindh, Pakistan
Haroon Jamal and Hari Ram Lohano
RR 78, June 2008.

Exploring the impact of Microfinance in Pakistan
Haroon Jamal
RR 77, June 2008.

Fiscal Policy Choices in Budget 2008-09
SPDC Research Team
RR 76, May 2008.

Pay Offs to Schooling and Returns to Credentials
Amir Jahan Khan
RR 75, January 2008.

Satisfaction or Frustration: A Survey of Selected District Governments
Haroon Jamal, Muhammad Asif Iqbal et al
RR 74, January 2008.

Trends in Regional Human Development Indices
Haroon Jamal and Amir Jahan Khan
RR 73, July 2007.

Indices of Multiple Deprivations 2005
Haroon Jamal and Amir Jahan Khan
RR 72, July 2007.

Education Status of Districts: An Exploration of Inter-Temporal Changes
Haroon Jamal and Amir Jahan Khan
RR 71, July 2007.

Income Poverty at District Level: An Application of Small Area Estimation Technique
Haroon Jamal
RR 70, July 2007.

Updating Poverty and Inequality Estimates: 2005 Panorama
Haroon Jamal
RR 69, June 2007.

Determinants of Total Factor Productivity in Pakistan
Qazi Masood Ahmed and Kalim Hyder
RR 68, June 2007.

Gender Inequality and Trade Liberalization: A Case Study of Pakistan
Naeem Ahmed and Kalim Hyder
RR 67, March 2007.

Determinants of Recent Inflation in Pakistan
Abdul Aleem Khan, Kalim Hyder and Qazi Masood Ahmed
RR 66, March 2007.

Estimating the Black Economy through Monetary Approach: A Case Study of Pakistan
Qazi Masood Ahmed and Haider Hussain
RR 65, October 2006.

State of the Economy: Growing Macroeconomic Imbalances
Shaghil Ahmed, Haroon Jamal, Qazi Masood et al
RR 64, July 2006.

Special Report: The Economy in The Aftermath of the Earthquake
Shaghil Ahmed, Kalim Hyder and Tabinda Areeb
RR 63, December 2005.

State Of The Economy: An Overheating Economy?
Shaghil Ahmed, Haroon Jamal, Qazi Masood et al
RR 62, June 2005.

Cancer: Social Implications Of Treatment And Financial Burden
Hina Shahid and Mahpara Sadaqat
RR 61, May 2005.

Province-wise Growth Patterns in Human Capital Accumulation
Muhammad Sabir and Zehra Aftab
RR 60, May 2005.

In Search of Poverty Predictors: The Case of Urban and Rural Pakistan
Haroon Jamal
RR 59, December 2004.

Does Inequality Matter for Poverty Reduction? Evidence from Pakistan's Poverty Trends
Haroon Jamal
RR 58, December 2004.

State of the Economy: A Shift towards Growth
Kaiser Bengali, Qazi Masood Ahmed, Haroon Jamal et al.
RR 57, June 2004.

State of the Economy: Behind the Aggregates
Kaiser Bengali, Qazi Masood Ahmed, Zehra Aftab et al.
RR 56, June 2003.

Poverty and Inequality During the Adjustment Decade: Empirical Findings from Household Surveys
Haroon Jamal
RR 55, April 2003.

Impact of Ownership and Concentration of Land on Schooling: The Case of Rural Punjab
Haroon Jamal and Amir Jahan Khan
RR 54, April 2003.

Zakat as a Social Safety Net: Exploring the Impact
Imran Ashraf Toor and Abu Nasar
RR 53, April 2003.

Mapping the Spatial Deprivation of Pakistan
Haroon Jamal, Amir Jahan Khan, Imran Ashraf Toor and Naveed Aamir
RR 52, April 2003.

Price and Income Effects on Urban Undernutrition
Haroon Jamal
RR 51, April 2003.

Private Returns to Education: Evidence for Pakistan
Haroon Jamal, Imran Ashraf Toor and Farhan Sami Khan
RR 50, April 2003.

Returns to Education: The Case of Fertility
Haroon Jamal and Imran Ashraf Toor
RR 49, April 2003.

Microfinancing: Fighting Against Poverty
Hari Ram Lohano and Haroon Jamal
RR 48, April 2003.

The Changing Profile of Regional Inequality
Haroon Jamal and Amir Jahan Khan
RR 47, April 2003.

The Knowledge Divide: Education Inequality in Pakistan
Haroon Jamal and Amir Jahan Khan
RR 46, April 2003.

Pakistan's External Debt Burden: Causes, Complexities and Remedies
Asad Sayeed and Ejaz Rashid
RR 45, September 2003.

The Slowing Down of the Growth of Total Factor Productivity in Pakistan
Hafiz A. Pasha, Aisha Ghaus-Pasha and Kalim Hyder
RR 44, December 2002.

Cost of Living Index by City of Pakistan
Hafiz A. Pasha and Aisha Ghaus-Pasha
RR 43, November 2002.

Recasting Sindh Budget (Expenditures) From Head of Account to Department Basis
Kaiser Bengali and Fauzia Mukarram
RR 42, January 2002.

Impact of the Afghan War on the Economy: Options for Pakistan
Kaiser Bengali, Qazi Masood Ahmed and Kalim Hyder
RR 41, December 2001.

Stabilization vs Growth: Federal Budget 2001-02
Kaiser Bengali, Qazi Masood Ahmed, Hari Ram Lohano et al.
RR 40, June 2001.

Incidence of Income Poverty in Pakistan
Aisha Ghaus-Pasha and Haroon Jamal
RR 39, March 2001.

Credit to the Poor: Consultations with Borrowers
Hari Ram Lohano, Fauzia Mukarram and Haroon Jamal
RR 38, February 2001.

Social Development and Economic Growth: A Statistical Exploration
Haroon Jamal
RR 37, February 2001.

The 1998 Population Census
Aisha Ghaus-Pasha, Zafar H. Ismail, Abu Nasar and Naveed Hanif
RR 25, June 1999.

Gender Inequality in Developing Countries: A Case Study of Pakistan
Hafiz A. Pasha, Aisha Ghaus-Pasha and Abu Nasar
RR 24, June 1999.

Evaluation of the Federal Budget, 1999-2000
Hafiz A. Pasha, Aisha Ghaus-Pasha, Zafar H. Ismail et al.
RR 23, June 1999.

Essays on the Federal Budget, 1998-99
Aisha Ghaus-Pasha, Zafar H. Ismail, Sajjad Akhtar, Ajaz Rasheed et al.
RR 22, July 1998.

Decentralized Governance of Sindh Katchi Abadis Authority
Hafiz A. Pasha, Aisha Ghaus-Pasha, Zafar H. Ismail et al.
RR 21, May 1998.

Fiscal Decentralization: Lesson From the Asian Experience
Hafiz A. Pasha
RR 19, January 1997.

Social and Economic Ranking of Districts of Pakistan
Aisha Ghaus-Pasha, Hafiz A. Pasha, Rafia Ghaus et al.
RR 18, January 1998.

Growth of Public Debt and Debt Servicing in Pakistan
Hafiz A. Pasha and Aisha Ghaus-Pasha
RR 17, April 1996.

Review of the Social Action Programme
Aisha Ghaus-Pasha, Michael G. McGarry, Asad U. Sayeed et al.
RR 16, August 1997.

The Provincial Budgets, 1997-98
Zafar H. Ismail, Ajaz Rasheed, M. Asif Iqbal et al.
RR 15, July 1997.

An Evaluation of the Federal Budget, 1997-98
Zafar H. Ismail, Sajjad Akhtar, Asad U. Sayeed et al.
RR 14, July 1997

An Evaluation of the Budget, 1996-97
Hafiz A. Pasha, Aisha Ghaus-Pasha, Zafar H. Ismail et al.
RR 13, July 1996.

Resource Mobilization and Expenditure Planning for Social Sectors in Pakistan
Aisha Ghaus-Pasha, M. Asif Iqbal, Rafia Ghaus and Naeem Ahmed
RR 12, June 1996.

The World Summit for Social Development: Its Implications for Social Sector Development in Pakistan
Asad U. Sayeed and Zafar H. Ismail
RR 11, June 1996.

Social Development Ranking of Districts of Pakistan
Aisha Ghaus-Pasha, Hafiz A. Pasha, Rafia Ghaus et al.
RR 10, June 1996.

Continuation Rates in Primary Education: A Study of Pakistan
Hafiz A. Pasha, Zafar H. Ismail and M. Asif Iqbal
RR 9, May 1996.

National Finance Commission: 1995 - Intergovernmental Revenue Sharing in Pakistan
Aisha Ghaus-Pasha, Rafia Ghaus, A. Rauf Khan and M. Asif Iqbal
RR 8, January 1996.

Integrated Social Policy and Macroeconomic Planning Model for Pakistan
Hafiz A. Pasha, M. Aynul Hasan, Aisha Ghaus-Pasha et al.
RR 7, June 1995.

Optimal Enrolment and Cost-Effective Expenditures for Public School System
Hafiz A. Pasha, M. Aynul Hasan, Ajaz Rasheed et al.
RR 6, October 1994.

Optimal Mix of Health Sector Expenditure
Hafiz A. Pasha, M. Aynul Hasan, Ajaz Rasheed et al.
RR 5, September 1994.

Database Development for Integrated Social Sector Revenue and Expenditure Model
Aisha Ghaus-Pasha, Zafar H. Ismail, M. Asif Iqbal et al.
RR 4, February 1994.

Specification of Integrated Social Sector Revenue and Expenditure Planning Model
Hafiz A. Pasha, Aisha Ghaus-Pasha, M. Aynul Hasan, et al.
RR 3, August 1993.

A Study on Improving the Efficiency and Effectiveness of Spending in the Social Sectors and Increasing Resource Mobilization in the Provinces
Hafiz A. Pasha, Aisha Ghaus-Pasha, M. Aynul Hasan et al.
RR 2, September 1992.

Fiscal Policy in Pakistan
Hafiz A. Pasha, Aisha Ghaus-Pasha and Rafia Ghaus
RR 1, October 1991.

Gender Research Programme

The Socio-Economic Impact of Floods in District Thatta: A Gendered Analysis
Khalida Ghaus, Muhammad Sabir, Tabinda Areeb and Omair Saeed
GRP-RR8, 2012

Gender Dimensions of Rural Non-Farm Employment in Pakistan
Haroon Jamal
GRP-RR7, 2012

Gender Dimensions of Development Induced Development and Resettlement: A Case of Lyari Expressway in Karachi
Khalida Ghaus, Nadeem Ahmed, Rabia Sidat and Tabinda Areeb
GRP-RR 6, 2012

The Socio-Economic Cost of Violence against Women: A Case Study of Karachi
Khalida Ghaus, Iffat Ara, Rafea Anis and Aasiya Kazi
GRP-RR 5, 2012

Gender Dynamics of Social Safety Nets: The Case of Zakat Recipients in Pakistan
Haroon Jamal
GRP-RR 4, November 2010.

Socio-economic Characteristics of Female-headed Households in Pakistan: Baseline Survey, 2009-10
Nadeem Ahmed
GRP-RR 3, November 2010.

Trade Liberalisation and Gender Dynamics of Employment in Pakistan
Iffat Ara
GRP-RR 2, May 2010.

Public Spending on Education and Health in Pakistan: A Dynamic Investigation through Gender Lens
Muhammad Sabir
GRP-RR 1, May 2010.

POLICY PAPERS

On the Estimation of An Absolute Poverty Line: An Empirical Appraisal
Haroon Jamal
PP 23, April 2003.

Hidden Subsidies
Hafiz A. Pasha, Aisha Ghaus-Pasha and Naveed Hanif
PP 22, April 2002.

Why has the Tax-to-GDP Ratio Fallen?
Hafiz A. Pasha, Aisha Ghaus-Pasha and Muhammad Sabir
PP 21, February 2002.

A National Poverty Reduction Strategy and the Role of Donors
Hafiz A. Pasha, Aisha Ghaus-Pasha, Zafar H. Ismail et al.
PP 20, October 2000.

Macroeconomic Framework for Debt Management
Aisha Ghaus-Pasha and Hafiz A. Pasha
PP 19, May 2000.

Revamping the SAP
Hafiz A. Pasha, Aisha Ghaus-Pasha, Zafar H. Ismail and Sehar Rizvi
PP 18, May 2000.

Statement to the Commonwealth Delegation
Hafiz A. Pasha
PP 17, October 1999.

Unsustainability of the Balance of Payments
Hafiz A. Pasha and Zafar H. Ismail
PP 16, September 1999.

Broad-Basing of the GST: The Strategy for Transition
Hafiz A. Pasha
PP 15, July 1999.

Provincial Resource Mobilization
Aisha Ghaus-Pasha, A. Rauf Khan and Rafia Ghaus
PP 14, June 1998.

Financial Sustainability of NGOs: Proposal for 1998-99 Federal Budget
Aisha Ghaus-Pasha, Zafar H. Ismail et al.
PP 13, May 1998.

Political Economy of Tax Reforms: The Pakistan Experience
Hafiz A. Pasha
PP 12, February 1997.

Ninth Five-Year Plan (1998-2003): Issues Paper
Hafiz A. Pasha, Aisha Ghaus-Pasha, Zafar H. Ismail et al.
PP 11, April 1996.

Fiscal Effort by Provincial Governments in Pakistan
Rafia Ghaus and A. Rauf Khan
PP 10, November 1995.

Implications of the TOR of the New NFC
Aisha Ghaus-Pasha
PP 9, June 1995.

Provincial Budgets of 1995-96
Aisha Ghaus-Pasha, Rafia Ghaus and A. Rauf Khan
PP 8, July 1995.

Switch Over to Ad Valorem Octroi Rates at Dry Ports
Aisha Ghaus-Pasha, M. Asif Iqbal and Naveed Hanif
PP 7, October 1994.

Rationalization of Octroi Rates
Aisha Ghaus-Pasha, A. Rauf Khan and Naveed Hanif
PP 6, October 1994.

User Charges in Health
Zafar H. Ismail and M. Asif Iqbal
PP 5, August 1994.

Sindh Government Budget of 1993-94
Aisha Ghaus-Pasha, Rafia Ghaus, M. Asif Iqbal and A. Rauf Khan
PP 4, July 1994.

User Charges in Education
Zafar H. Ismail and M. Asif Iqbal
PP 3, June 1994.

Sales Taxation of Services by Provincial Governments
Hafiz A. Pasha and Rafia Ghaus
PP 2, June 1994.

Rationalization of Stamp Duties on Financial Assets and Transactions
Aisha Ghaus-Pasha and A. Rauf Khan
PP 1, June 1994.

POLICY BRIEFS

Social Impact of the Security Crisis
Rabia Sidat
Policy Brief, December 2011

Women at Work
Samar Zuberi
Policy Brief, July 2011

The Elimination of Textile Quotas and Pakistan-EU Trade
Iffat Ara
Policy Brief, April 2007

CONFERENCE PAPERS

Neo-Liberal Governance and Poverty in Pakistan
Nadeem Ahmed and Ayesha Khan
CP 62, November 2009

How External Shocks And Exchange Rate Depreciations Affect Pakistan? Implications for choice of an Exchange Rate Regime
Shaghil Ahmed, Iffat Ara and Kalim Hyder
CP 61, December 2005

Agricultural Terms of Trade in Pakistan: Issues of Profitability and Standard of Living of the Farmers
Abdul Aleem Khan and Qazi Masood Ahmed
CP 60, May 2005.

Is Pakistan's Manufacturing Sector Competitive?
Iffat Ara
CP 59, May 2005.

The Plight of Working Mothers in Pakistan: Advantages and Disadvantages of A Joint Family System
Naveed Aamir
CP 58, May 2004.

Macroeconomic Reforms And Return to Human Capital in Pakistan
Mohammad Sabir
CP 57, January 2004.

Burden of Stabilization on Provinces and its Implication On Social Sectors
Qazi Masood Ahmed and Mohammad Sabir
CP 56, January 2004.

Macroeconomic Reforms and Total Factor Productivity Growth in Pakistan: An Empirical Analysis
Mohammad Sabir and Qazi Masood Ahmed
CP 55, October 2003

Budgets and Fiscal Decentralization: A Case Study of Sindh
Qazi Masood Ahmed and Mohammad Sabir
CP 54, October 2003

Districts level of Development as Push and Pull factors in Inter-district Migration in Pakistan
Abu Nasar, Mehtab S. Karim
CP 53, December 2002

Is Female Illiteracy a Determinant for Child Malnutrition: An Analysis of Developing Countries
Naveed Aamir and Abu Nasar
CP 52, December, 2003.

Tax Holidays, Cost of Capital and Investment Behaviour: Jorgenson Approach
Qazi Masood Ahmed
CP 51, October 2003.

Why Private Investment in Pakistan has Collapsed and How can it be Restored?
Kalim Hyder and Qazi Masood Ahmed
CP 50, June 2003.

Hidden Subsidies
Hafiz A. Pasha, Aisha Ghaus-Pasha and Naveed Aamir
CP 49, January 2003.

Gender and Public Spending on Education in Pakistan: A Case Study of Disaggregated Benefit Incidence
Muhammad Sabir
CP 48, January 2003.

Non-Profit Sector in Pakistan: Government Policy and Future Issues
Aisha Ghaus-Pasha and Muhammad Asif Iqbal
CP 47, January 2003.

The Income Tax Regime and the Non-Profit Sector: The Case of Pakistan
Zafar H. Ismail
CP 46, January 2003.

The Long-Run and Short-Run Impact of Exchange Rate Devaluation on Pakistan's Trade Performance
Zehra Aftab and Aurangzeb
CP 45, December 2002.

Crowding Out Hypothesis in a Vector Error Correction Framework: A Case Study of Pakistan
Kalim Hyder
CP 44, January 2002.

Dynamic Consequences of the 1997 National Finance Commission Award: Provincial Social Sector Expenditures
Muhammad Sabir
CP 43, January 2002.

Political Economy of Fiscal Reforms in the 1990s
Qazi Masood Ahmed and Mahnaz Fatima
CP 42, January 2002.

Stabilization Policy vs Growth Oriented Policy: Implications for the Pakistan Economy
Kaiser Bengali and Qazi Masood Ahmed
CP 41, January 2002.

Internal Migration: The Case of Sindh Province
Abu Nasar and Naveed Aamir
CP 40, October 2001.

Some Issues of Governance in Pakistan
Zafar H. Ismail and Sehar Rizvi
CP 39, May 2000.

Governance, Decentralization and Poverty: The Case of Pakistan
Zafar H. Ismail and Sehar Rizvi
CP 38, January 2001.

Devolution and Fiscal Decentralization
Hafiz A. Pasha and Aisha Ghaus-Pasha
CP 37, January 2001.

Brief on Annual Review of Social Policy and Development Centre for 2000: Towards Poverty Reduction
Hafiz A. Pasha
CP 36, December 2000.

Policy Research and Its Implementation: Pakistan and Canada
Zafar H. Ismail and Richard Shillington
CP 35, September 2000.

Issues in Institutional Reform for Devolution
Kaiser Bengali
CP 34, August 2000.

Issues in Fiscal Decentralization
Aisha Ghaus Pasha and Hafiz A. Pasha
CP 33, August 2000.

Public Expenditure Reform
Hafiz A. Pasha
CP 32, July 2000.

Social Sector Policies Under SAP
Zafar H. Ismail
CP 31, October 1999.

Impediments to Social Development in Pakistan
Zafar H. Ismail
CP 30, November 1999.

Pakistan's Ranking in Social Development: Have We Always Been Backward?
Aisha Ghaus-Pasha and Naeem Ahmed
CP 29, November 1999.

An Econometric Evaluation of Pakistan's National Education Policy, 1998-2010.
Sajjad Akhtar and M. Ajaz Rasheed
CP 28, July 1999.

Impediments to Improvement of Social Sectors in Pakistan
Zafar H. Ismail
CP 27, March 1998.

Gender Differentials in the Cost of Primary Education: A Study of Pakistan
Zafar H. Ismail
CP 26, December 1996.

Integrated Social Sector Macroeconomic Model for Pakistan
Hafiz A. Pasha, M. Aynul Hasan, Aisha Ghaus-Pasha and Ajaz Rasheed
CP 25, December 1996.

Determinants of Rates of Octroi Tax in Pakistan
Aisha Ghaus-Pasha, A. Rauf Khan and Rafia Ghaus
CP 24, April 1995.

Social Development Ranking of Districts of Pakistan
Aisha Ghaus-Pasha, Hafiz A. Pasha & Rafia Ghaus
CP 23, December 1996.

The City of Karachi: Planning and Managing for Urban Development
Zafar H. Ismail
CP 22, August 1996.

Sustainability of Public Debt in Pakistan
Hafiz A. Pasha and Aisha Ghaus-Pasha
CP 21, July 1996.

Has Poverty Returned to Pakistan?
Aisha Ghaus-Pasha and Asad U. Sayeed
CP 20, July 1996.

Improved Health Status and Economic Growth: Some Co-Integration Results from Developing Economies
M. Aynul Hasan, M. Rashid Ahmed and Aisha Bano
CP 19, July 1996.

Is There a Long-Run Relationship Between Economic Growth and Human Development? Some Cross-Country Evidence from Developing Countries
M. Aynul Hasan, Nadeem Ahmed and Nazia Bano
CP 18, June 1996.

Municipal Finance in Small Cities
Hafiz A. Pasha and Aisha Ghaus-Pasha
CP 17, December 1995.

Financial Development of Megacities
Hafiz A. Pasha and Aisha Ghaus-Pasha
CP 16, October 1995.

Is Public Sector Investment Productive? Some Evidence from Pakistan
Hafiz A. Pasha, M. Aynul Hasan, Aisha Ghaus-Pasha and Ajaz Rasheed
CP 15, September 1995.

Is the Social Action Programme (SAP) in Pakistan Financially Sustainable?
Hafiz A. Pasha, M. Aynul Hasan, Aisha Ghaus-Pasha and M. Ajaz Rasheed
CP 14, April 1995.

Results of Policy Simulations
Aisha Ghaus-Pasha
CP 13, March 1995.

Software Development and Use of the Model
Ajaz Rasheed
CP 12, March 1995

Specification of the Integrated Social Policy Macroeconomic Model
M. Aynul Hasan
CP 11, March 1995.

Overview of Integrated Revenue and Expenditure Planning Model for Social Sectors
Hafiz A. Pasha
CP 10, March 1995.

Development of Property Taxation
Abdul Waheed Khan
CP 9, March 1995.

Prospects of Resource Mobilization by the Provincial Governments
Imtiaz Ahmed Cheema
CP 8, March 1995.

Expenditure Planning Issues
Tariq Sultan
CP 7, April 1993.

Local Government Resource Mobilization
Kashif Murtaza
CP 6, April 1993.

Local Government Resource Mobilization
Hafiz A. Pasha and Aisha Ghaus-Pasha
CP 5, April 1993.

Problems in Resource Mobilization in Punjab
Imtiaz A. Cheema
CP 4, April 1993.

Provincial Government Resource Mobilization in Punjab
Hafiz A. Pasha
CP 3, April 1993.

Investment Strategy and Expenditure Requirements for Social Development
M. Aynul Hasan
CP 2, April 1993.

The Implementation Environment of the Social Action Programme
Javed Sadiq Malik
CP 1, April 1993.

WORKING PAPERS

Agenda for Sustained Economics Revival
Kaiser Bengali
WP7, 2013

Has Civil Society Failed in Pakistan
Nikhat Sattar
WP 6, 2011

Provincial Accounts of Pakistan: Methodology and Estimates (1973-2000)
Kaiser Bengali and Mahpara Sadaqat
WP 5, 2005.

Non-Profit Sector in Pakistan: Historical Background
M. Asif Iqbal, Hina Khan and Surkhab Javed
WP 4, 2004.

Law and the Non-Profit Sector in Pakistan
Zafar H. Ismail
WP 3, 2002.

Non-Profit Sector in Pakistan: Government Policy and Future Issues
Aisha Ghaus-Pasha, Hafiz A. Pasha and M. Asif Iqbal
WP 2, 2002.

Dimensions of the Non-Profit Sector in Pakistan
Aisha Ghaus-Pasha, Hafiz A. Pasha and M. Asif Iqbal
WP 1, 2002.

ANNUAL REVIEWS OF SOCIAL DEVELOPMENT IN PAKISTAN

Social Development in Pakistan: Devolution and Social Development
Annual Review 2011-12

Social Development in Pakistan: Social Impact of the Security Crisis
Annual Review 2009-10

Social Development in Pakistan: Women at Work
Annual Review 2007-08.

Social Development in Pakistan: Devolution and Human Development in Pakistan
Annual Review 2006-07.

Social Development in Pakistan: Trade Liberalization, Growth and Poverty
Annual Review 2005-06.

Social Development in Pakistan Combating Poverty: Is Growth Sufficient?
Annual Review 2004.

Social Development in Pakistan: The State of Education
Annual Review 2002-03.

Social Development in Pakistan: Growth, Inequality and Poverty
Annual Review 2001.

Social Development in Pakistan: Towards Poverty Reduction
Annual Review 2000.

Social Development in Pakistan: Social Development in Economic Crisis
Annual Review 1999.

Social Development in Pakistan
Annual Review 1998.

SPDC BOOKS

In Search of Gendered Development: A Compendium
Khalida Ghaus, Haroon Jamal, Muhammad Sabir, Nadeem Ahmed, Iffat Ara and Rafea Anis: Edited by Kaiser Bengali
SPDCB 3, 2014.

Provincial Governments and the Social Sectors in Pakistan
Aisha Ghaus-Pasha, Hafiz A. Pasha and Zafar H. Ismail
SPDCB 2, 1997.

Resource Mobilization and Expenditure Planning in the Provinces of Pakistan
Hafiz A.Pasha, Aisha Ghaus-Pasha. and M. Aynul Hasan
SPDCB 1, 1996.

DATABASE REPORTS

Gender Disaggregated Indicators of the Labour Market in Pakistan
Iffat Ara and Aasiya Kazi
DB5, 2013

Socio-Economic Indicators by Gender: A Regional Comparison for Pakistan
Naushaba Khatoon, Muhammad Sabir & Iffat Ara
DB 4, September 2005

Database Report 1997: Education Module
Zafar H. Ismail, A. Rauf Khan, Abu Nasar et al.
DB 3, November 1997.

Database Report 1997: Provincial Finance Module
Zafar H. Ismail, A. Rauf Khan, Abu Nasar et al.
DB 2, September 1997.

Database Report 1997: Federal Finance Module
Zafar H. Ismail, A. Rauf Khan and Naeem Ahmed
DB 1, July 1997.

CONFERENCE PROCEEDINGS

Proceedings of the Seminar on Prospects and Policies for the Future
CPP 4, January 2000.

Proceedings of the Second Conference on Resource Mobilization and Expenditure Planning
CPP 2, March 1995.

Proceedings of the Conference on Resource Mobilization and Expenditure Planning
CPP 1, April 1993.

OTHER PUBLICATIONS

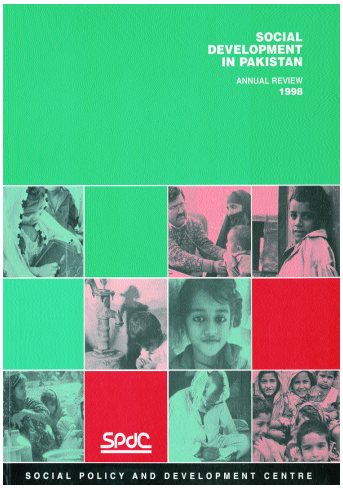
The Elimination of Textile Quotas and Pakistan-EU Trade
Shaghil Ahmed, Iffat Ara, Aurangzeb, Haider Hussain and Abdul Aleem Khan
Research Report, March 2007

ABC of the Economics of Tariffs and Import Quotas
Shaghil Ahmed and Iffat Ara
Booklet, April 2007

A.3

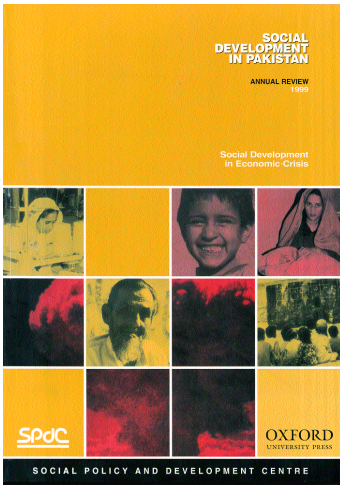
ANNUAL REVIEWS OF SOCIAL DEVELOPMENT IN PAKISTAN

Annual Review of Social Development in Pakistan 1998



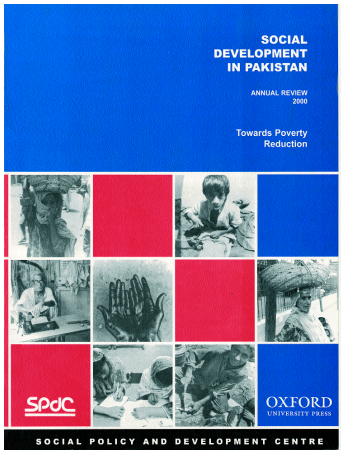
First of the annual series, the Review of Social Development in Pakistan was launched in the wake of a growing realization that the country was lagging behind in social development. It was felt that access to basic social services such as primary education, health care, and drinking water was limited, and that social underdevelopment had, perhaps, begun to slow down the pace of economic development as well. As such, the Review addressed the relationship between economic and social development, and the central role of human development in the growth process. It then traced in detail the evolution of the social sectors in Pakistan over the 50 years since independence, and compared Pakistan's social development between the provinces and with other countries in the region. Based on the custom-developed 242-equation Integrated Macroeconomic & Social Policy Model, a detailed quantitative analysis and assessment was made of the government's programmes and policies in the social sectors, including the Social Action Programme - the largest single social development programme in Pakistan's history - focusing on issues such as sources of financing, user-charges, and issues relating to cost-effectiveness of social service provision.

Social Development in Economic Crisis Annual Review of Social Development in Pakistan 1999



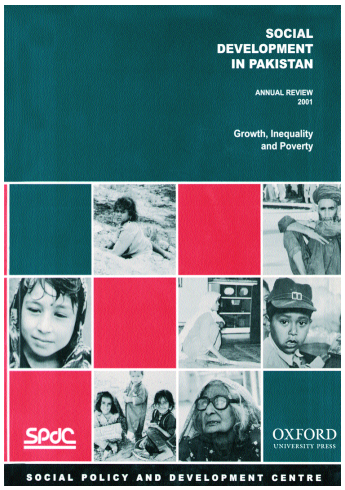
The second Review dealt with social development in an environment of severe economic crisis caused by international sanctions imposed on Pakistan following the country's decision to conduct the nuclear tests. The Review began by tracing the short and long term causes of the crisis, leading to Pakistan's return to the IMF/World Bank program. Further, based on SPDC's 246-equation Integrated Macroeconomic & Social Policy Model, it quantified the cost of the economic sanctions following the adoption of the nuclear path. It delineated the various options available to deal with the crisis, including the path of self-reliance, to achieve sustained development. It then explored the impact of each option on some of the key social dimensions: poverty, unemployment and the status of women and children. It also appraised the Social Action Programme, and forewarned that it was in jeopardy due to growing fiscal and institutional constraints. Given the prospect of rising poverty, it examined the types, nature and adequacy of different social safety nets - governmental as well as non-governmental - and highlighted the underlying problems of coverage and targeting.

Towards Poverty Reduction
Annual Review of Social Development in Pakistan 2000



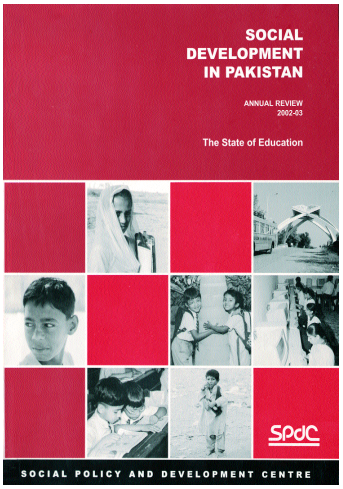
The Review focuses on the subject of poverty, identifying its nature, extent and profile, and highlighting the structural dimensions of poverty. Based on the conclusions that a poverty reduction strategy will have to be comprehensive and multidimensional in character, it covers a wide agenda. It comprises an appraisal of the role of the informal economy, not only as a residual employer but also as a household or community based welfare and support system, in mitigating poverty. Based on the results of SPDC's 250-equation Integrated Macroeconomic & Social Policy Model, it underlines the need for appropriate macroeconomic and fiscal policies to achieve faster growth in income and employment. In this respect, macro and micro aspects of a revival strategy, including options such as reducing the tax burden on the poor and orienting public expenditure towards the poor have been outlined. It also covers structural issues such as land reforms and development of human resources through access to social services, particularly pro-poor services. It discusses different elements of a strategy consisting of increased economic opportunities for the poor, their empowerment, and access to welfare and support through appropriate social safety nets, namely, public works, microfinance, food support and zakat. It also deals with issues of governance and poverty, devolution, economic governance, institutional capacity, and corruption.

Growth, Inequality and Poverty
Annual Review of Social Development in Pakistan 2001



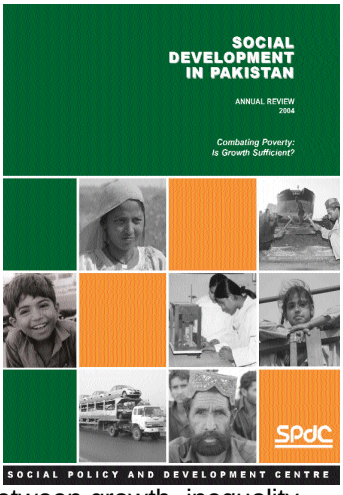
The Review is a detailed analysis and documents the pervasive inequalities across class and regional lines and in access of social services. Spread over six chapters, it begins with the profile of achievements in the realm of economic and social development since 1947; acknowledging as well that the gains have not been equitably distributed. Based on SPDC's 255-equation Integrated Macroeconomic & Social Policy Model, it presents the macroeconomic analysis of the state of the economy, along with the factors behind the aggregates with respect to unemployment, inequality and poverty. It questions the balance between stabilization and growth objectives and discusses policy options that can help or hurt the poor. There follows a comprehensive analysis of inequality from different perspectives: income inequality, consumption inequality, inequality between income groups - nationally and province-wise - inequality in public services and land inequality. The next chapter is devoted to inequality between and within provinces, including a district analysis and ranking of deprivation levels. Social policy finds specific attention, with a review of housing and evaluation of the ambitious Five Point Programme and the Social Action Programme. The last chapter attempts to provide an overview of the factors that determine inequality and poverty, and more generally, social development.

The State of Education
Annual Review of Social Development in Pakistan 2002-03



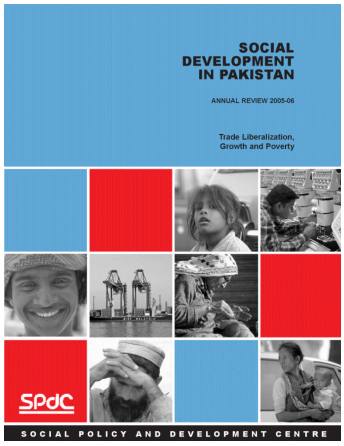
The Review is an in-depth analysis of the state of education in Pakistan. It breaks new ground, given that the traditional discussion relating to education has generally been limited to the issue of enrolment, particularly primary and girls' enrolment, and resource allocation. The Review is spread over seven chapters and begins with a broad profile of education in the country: Pakistan's standing regionally; literacy, enrolment and dropout trends; and availability of schools and teachers. It then documents the regional and class inequalities in education indicators, issues relating to the role of education in development - particularly in the context of the emergence of the knowledge based economy - and fiscal and sociopolitical factors that have inhibited the growth of education. The discussion ranges from the federal-level macroeconomic policy imperatives that have constrained provincial-level resource allocation to social sectors to the role of land inequality on education. There follows specific chapters devoted to critical issues in primary education and science education - matters relating to curriculum, textbooks and examinations- and a final chapter that discusses the sociopolitical impact of the creation of multiple and mutually exclusive streams of education in the country.

Combating Poverty: Is Growth Sufficient?
Annual Review of Social Development in Pakistan 2004



SPDC has over the years consistently highlighted the problems of social underdevelopment and inequality and poverty. It has advocated a macroeconomic policy framework that is pro-poor and leads to equitable growth; with equity defined in terms of class, region and gender. The Annual Review 2004 attempts to further advance this agenda. While earlier Reviews have largely been diagnostic, this issue is more prescriptive in nature. It suggests a policy framework whereby accelerated growth and rapid poverty reduction can be rendered complementary and feasible in the medium term. The Review presents a vision of poverty reduction at the outset and subsequent chapters provide empirical support for the suggested strategy. Spread over five chapters, it begins with the analysis of the development experience during the different political eras over the past three decades. It appraises the officially adopted national and provincial Poverty Reduction Strategy Papers (PRSPs). The Review presents the hard empirical analysis of the relationship between growth, inequality and poverty reduction and establishes the imperative of engaging with the issue of inequality to achieve poverty reduction. It also analyses the distribution of the burden of taxes and the benefits of public expenditure, with the objective of rendering the fiscal regime pro-poor. Further, it discusses issues relating to land reform - considered an essential factor in rural poverty reduction. In addition, the Review also includes a Sector Study, which focuses on the demand and supply aspects of export growth as a means to manage the current account balance.

Trade Liberalization, Growth and Poverty
Annual Review of Social Development in Pakistan 2005-06

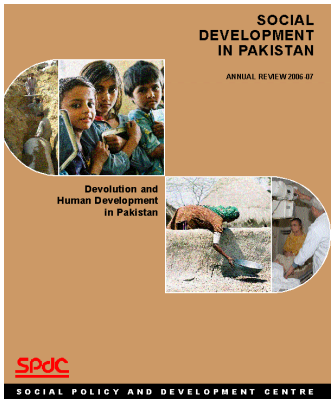


Since the late 1980s, there has been a clear effort to reduce trade barriers and to liberalize the economy in Pakistan, and this effort has been accelerating over time. The events of September 11, 2001 - and the GoP's response to them - have also led to a substantial change in the external environment facing Pakistan.

The above changes raise a host of questions: What has been the pace and sequencing of trade liberalization in Pakistan? How do Pakistan's trade restrictiveness measures compare to those of other developing countries in Asia? How has Pakistan's trade evolved over time in response to liberalization and how does this compare to the evolution of trade in other developing countries of Asia? What are the most important channels through which the process of trade liberalization affected Pakistan's economy? If trade had not been liberalized in Pakistan, would the economic growth, inflation and poverty situation be better or worse? How can policy makers guard against the adjustment costs of trade liberalization and reap maximum gains from any further increases in trade openness? How have the changes in the external environment and the policy responses resulting from the tragic events of September 11, 2001 shaped Pakistan's economy? How are the effects of the textile quota removal likely to play out on Pakistan's exports going forward? What policies would work best for the GoP's avowed objective in the MTDF of enhancing exports to achieve sustainable high growth?

Trade Liberalization, Growth and Poverty, SPDC's seventh annual review of social development in Pakistan, attempts to answer these questions. It places the on-going worldwide debate on the interactions between trade liberalization, growth and poverty in the context of Pakistan. The authors isolate the effects of trade liberalization on Pakistan's economy using econometric techniques and evaluate the empirical evidence in light of the predictions of economic theory. Policy implications concerning the GoP's goal of poverty alleviation are drawn from the results.

Devolution and Human Development in Pakistan
Annual Review of Social Development in Pakistan 2006-07

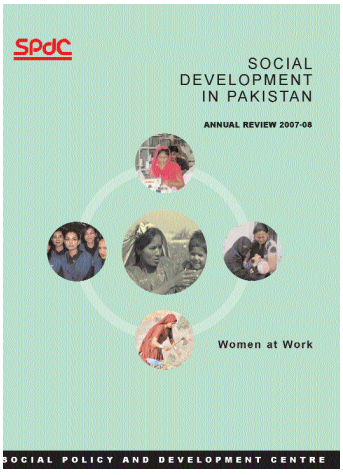


Implementation of the Devolution Plan in 2001 represents a significant move towards the decentralization of basic services in Pakistan. Six years ago a new legislative framework was introduced to bring a noticeable change in society. With the promulgation and implementation of the Local Government Ordinance, the responsibility of the provision of a large number of basic social services such as education, health and water supply and sanitation was devolved to the local level.

The critical appreciation of the efforts has raised questions such as: To what extent devolution has improved efficiency in public services? Has devolution empowered the people? Has it improved efficiency and equity in terms of fiscal decentralization? What has been the effect of devolution on human development, regional disparities, gender equality and poverty in Pakistan?

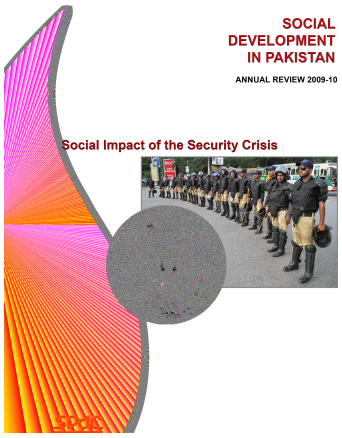
Devolution and Human Development in Pakistan being eighth in the series of Annual Review looks into various dimensions of the process of devolution and decentralization i.e. efficiency, equity, people's participation and empowerment. The report deals with the saliences of the problem and has proposed second generation reforms.social underdevelopment and inequality and poverty. It has advocated a macroeconomic policy framework that is pro-poor and leads to equitable growth; with equity defined in terms of class, region and gender. The Annual Review 2004 attempts to further advance this agenda. While earlier Reviews have largely been diagnostic, this issue is more prescriptive in nature. It suggests a policy framework whereby accelerated growth and rapid poverty reduction can be rendered complementary and feasible in the medium term. The Review presents a vision of poverty reduction at the outset and subsequent chapters provide empirical support for the suggested strategy. Spread over five chapters, it begins with the analysis of the development experience during the different political eras over the past three decades. It appraises the officially adopted national and provincial Poverty Reduction Strategy Papers (PRSPs). The Review presents the hard empirical analysis of the relationship between growth, inequality and poverty reduction and establishes the imperative of engaging with the issue of inequality to achieve poverty reduction. It also analyses the distribution of the burden of taxes and the benefits of public expenditure, with the objective of rendering the fiscal regime pro-poor. Further, it discusses issues relating to land reform - considered an essential factor in rural poverty reduction. In addition, the Review also includes a Sector Study, which focuses on the demand and supply aspects of export growth as a means to manage the current account balance.

Women at Work
Annual Review of Social Development in Pakistan 2007-08



In Pakistan, although women's labour force participation rate has increased from a very low level to almost 22 percent, it is still disappointing as out of the total female population, 78 percent of women of productive age are out of the labour force. A large part of employed women are working as unpaid family helpers or engaged in residual jobs. These alarming statistics guided SDPC to investigate questions such as: Is there any dynamism in the structure of female employment in Pakistan? Has improvement in women's education translated into their greater integration in the economy? Can women labour force participation be increased by encouraging women entrepreneurship? Will development of the microcredit sector help in generating employment opportunities for women? Does gender differential exist in access to paid jobs, especially at higher levels of education? Does vertical gender segmentation prevail in the labour market of Pakistan? What explains the gender wage gap? Is there any evidence of sexual harassment and violence against women in the workplace in Pakistan? Does domestic legislation provide an enabling environment for working women? How have the recent adverse economic developments affected the working woman? Women at Work, SPDC's ninth Annual Review of Social Development in Pakistan attempts to answer these questions. It also sets out a multi-pronged strategy for promoting women's employment in Pakistan by addressing gaps in various socioeconomic policies.

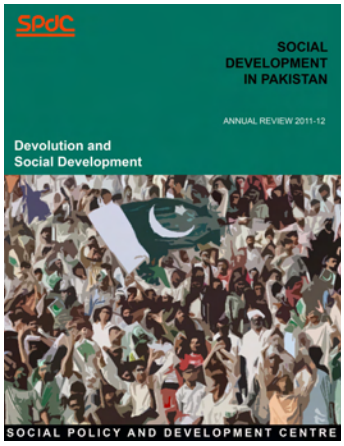
Social Impact of the Security Crisis
Annual Review of Social Development in Pakistan 2009-10



The South Asia region in general and Pakistan in particular are confronted with the daunting task of addressing the issues of terrorism, extremism and violence. Pakistan, undoubtedly, has been most adversely affected by the response of the United States following attacks on the twin towers of the World Trade Centre. The international political climate has not only created an urgency to redefine the security framework amid fears of transnational threats, but has affected global economic development. Today, international relations and domestic policy have become increasingly similar and intermingled.

Social Impact of the Security Crisis, SPDC's tenth Annual Review of Social Development probes the following aspects of the security related developments. What is the nature of the problem? What are the economic costs of the war on Pakistan's economy? How have the priorities of the federal and provincial budgets been affected as a result of the security crisis? What has been the affect of higher public spending on security on social development? How have local populations been affected by the security threat? What socio-economic impact has the conflict had on the household? How has the civil society responded to the changed security environment?

Devolution and Social Development
Annual Review of Social Development in Pakistan 2011-12



The 18th Amendment is a major charter of political rights as far as decentralisation and devolution of power to the provinces in Pakistan is concerned. It contains far-reaching stipulations for empowering Pakistan's four federating units – intended to give them unprecedented autonomy. Devolution and Social Development in Pakistan, being eleventh in the series of Annual Reviews of SPDC, examines the design and implementation issues of the decentralisation provisions of the 18th constitutional amendment and the 7th NFC Award. The two being major landmarks have the potential of having significant implications for the inter-governmental relations in Pakistan. However, much would depend on the consequential measures taken by the federal and the provincial governments in line with the constitutional provisions.

The report starts with looking into the underpinnings of the new devolution system and draws lessons from the other countries. It then discusses major changes related to legislative and fiscal autonomy and reviews the nature and status of the implementation of the transfer of functions to the provinces and lays out the financial and development implications of the Amendment. Implications of the 7th NFC Award and its impact on the finances of sub-national governments are also analysed along with the issues of sales taxation of services and borrowing powers of the provinces. Moreover, the report provides the current status and key features of the proposed laws related to the local government system. Finally, a number of emerging have been discussed which eventually have to be resolved through a consensus among the federating units, especially within the Council of Common Interests.

BIBLIOGRAPHY

Adams, Jr. Richard H. and Jane, J. He (1995) "Sources of Income Inequality and Poverty in Rural Pakistan", Research Report No.102, International Food Policy Research Institute, Washington, D.C.

ADB (2008), "Social Protection Index for Committed Poverty Reduction", Volume (2)-Asia, Asian Development Bank, Philippines.

ADB (2004), "*Social Protection Strategy Development Study*", ADB TA 4155-PAK (two volumes), Asian Development Bank, Islamabad.

Afzal, Uzma and Anum Yousuf (2013), "The State of Health in Pakistan: An Overview", *The Lahore Journal of Economics,* 18 : SE (September 2013): pp. 233–247.

Ahmed, A., H. Iftikhar, and G. M. Chaudhry. 2007. Water resources and conservation strategy of Pakistan. Pakistan Development Review 46:997-1011.

Alkire, Sabina and Maria Emma Santos (2010), "Acute Multidimensional Poverty: A New Index for Developing Countries," Oxford Poverty and Human Development Initiative, Working Paper 38, University of Oxford.

Alkire, Sabina and James Foster (2007), "Counting and Multidimensional Poverty Measurement," Oxford Poverty and Human Development Initiative, Working Paper 7, University of Oxford.

Assad Hafeez, et al (2011), "Lady Health Workers Programme in Pakistan: Challenges, Achievements and the Way Forward", *Journal of Pakistan Medical Association*, Vol. 61, No. 3, March 2011.

Bari, F., E. Hooper, S. Kardar, S. N. Khan, I. Mohammed, & A. Sayeed (2005), *"Conceptualizing a Social Protection Framework for Pakistan"*, *Pakistan Poverty Assessment Update*, Background Paper Series, Background Paper: 4, Poverty Group, Asian Development Bank, Pakistan Resident Mission, Islamabad.

Barrientos, Armando (2010), "Poverty Reduction and Policy Regimes: Thematic Paper", United Nations Research Institute for Social Development.

Barrientos, Armando (2006), *"Development of a Social Protection Strategy for Pakistan"* Social Protection projects at IDS, Institute of Development Studies, UK.

Bhutta, Z.A. et al (2011), "Improvement of Perinatal and Newborn Care in Rural Pakistan through Community-Based Strategies: A Cluster-Randomised Effectiveness Trial, *Lancet* 2011, 377(9763): 403-412.

Bourguignon, F (2003) "From income to endowments: the difficult task of expanding the income poverty paradigm", Delta Working papers Number 2003-03, Delta (Paris).

Dorosh Paul and Salam Abdul (2006), "Wheat Markets and Price Stabilisation in Pakistan: An Analysis of Policy Options", *PIDE Working Papers 2006:5, Pakistan Institute of Development Economist, Islamabad.*

Easter, K. W., and Y. Lin. 2005. Cost recovery and water pricing for irrigation and drainage projects. Washington: The World Bank.

Filmer, D. and L. Pritchett (2001), "Estimating wealth effects without expenditure data – or tears: an application to educational enrolment in states of India", Demography 38: 115-32.

Foster, J., Greer, J., and Thorbecke, E. (1984). "A Class of Decomposable Poverty Measures", Econometrica, 52, 761-765.

Francesco, Grigoli (2014). "A Hybrid Approach to Estimating the Efficiency of Public Spending on Education in Emerging and Developing Economies," IMF Working Papers 14/19, International Monetary Fund.

Gazdar, H. (2011), "Social Protection in Pakistan: in the midst of a paradigm shift?", *Economic and Political Weekly,* Volume xlvi no 28: pp. 59 – 66.

GoP (2013), "Public Sector Development Programme, 2013-14, Planning Commission, Government of Pakistan (GoP).

GoP (2013a), "Annual Plan, 2013-14, Planning Commission, Government of Pakistan.

GoP (2012), "PRSP Progress Report 2011-12", Ministry of Finance, Government of Pakistan.

GoP (2011), "Analysis/Review of Public Sector Development Programme, Planning Commission, Government of Pakistan.

GoP (2009), 'The National Education Policy, 2009', Government of Pakistan.

GoP (2008), "National Social Protection Strategy (NSPS), Centre for Poverty Reduction and Income Distribution, Planning Commission, Government of Pakistan.

GoP (2005), 'State of Environment Report 2005 (draft)', Government of Pakistan, available at http://www.environment.gov.pk/Publications.htm (visited on March 12, 2014).

Go P (2004), National Nutrition Survey 2001-2002, Planning Commission, Government of Pakistan, Islamabad.

GoP (2003), 'Quality of Primary Education In Pakistan', Ministry of Education, Government of Pakistan *in collaboration with* UNESCO Office, Islamabad.

GoP (2003a), 'Poverty Reduction Strategy Paper (PRSP)-I', Government of Pakistan.

GoP 2001, "*Food Consumption Table for Pakistan*", Department of Agricultural Chemistry, NWFP Agriculture University, Peshawar.

Gupta, Sanjeev, Kieko Honjo, and Marijn Verhoeven, (1997), "The Efficiency of Government Expenditure: Experiences from Africa," IMF Working Papers 97/153, International Monetary Fund.

Hasnain, Tahir (2009), 'Corporate Agriculture Farming: What this Means for Pakistan?', Economic Justice and Development Organization, Islamabad.

Hussain, Zakir (n.d.), 'Water and Agriculture', GC University, Faisalabad.

IFAD (2011), "Rural Poverty Report 2011", International Fund for Agricultural Development, Italy.

Jamal, H. (2013), "Predicting Sub-National Poverty Incidence for Pakistan", SPDC Research Report No. 85, Social Policy and Development Centre, Karachi.

Jamal, H. (2012a), "Districts' Indices of Multiple Deprivations for Pakistan, 2011", SPDC Research Report No. 82, Social Policy and Development Centre, Karachi.

Jamal, H. (2012b), "An Exploratory Analysis of Inter-Temporal Multidimensional Poverty", SPDC Research Report No. 83, Social Policy and Development Centre, Karachi.

Jamal, H. (2010), "A Profile of Social Protection in Pakistan: An Appraisal of the Empirical Literature, Research Report No. 81. Karachi: Social Policy and Development Centre.

Jamal, H. (2007), "Income Poverty at District Level: An Application of Small Area Estimation Technique" SPDC Research Report No. 70, Social Policy and Development Centre, Karachi.

Jamal, H. (2006), "Does Inequality Matter for Poverty Reduction? Evidence from Pakistan's Poverty Trends", *Pakistan Development Review,* Volume 45(3), autumn 2006.

Jamal, H. (2002), "On the Estimation of an Absolute Poverty Line: An Empirical Appraisal", *The Lahore Journal of Economics*, July-December.

Jamal H. and Khan A. J. (2007), "Indices of Multiple Deprivations 2005", SPDC Research Report Number 72, Social Policy and Development Centre, Karachi.

Jamal, H. et al (2003), "Mapping the Spatial Deprivation of Pakistan," Pakistan Development Review, 42(2).

Jamison, Dean T., and Laurence J. Lau (1982), *Farmer education and farmer efficiency,* Baltimore, MD: Johns Hopkins University Press.

Kahlown, Akram and Abdul Majeed (2004), 'Water Resources Situation in Pakistan: Challenges and Future Strategies', Pakistan Council of Research in Water Resources, Islamabad.

Khan, Mahmood Hassan (2000), "Rural Poverty in Developing Countries: Issues and Policies", IMF Working Paper Number WP/00/78, International Monetary Fund, Washington D.C.

Lanjouw, Peter (1999). "The rural non-farm sector: A note on policy options (draft paper), World Bank, Washington, D.C.

Lockheed, Marlaine E., Dean T. Jamison, and Laurence J, Jamison, and Lau (1980), Farmer education and farm efficiency: A survey. In King, Timothy, ed., *Education and income,* World Bank Staff Working Paper no. 402. Washington, D.C.

Malik Sohail, J (2005), 'Agriculture Growth and Rural Poverty: A Review of Evidence', Working Paper Number 2, Pakistan Resident Mission Working Paper Series.

Moock, Peter R., and H. Addou (1994), Agricultural productivity and education, In *International encyclopedia of education, second edition*. T. Husen and T.N. Postlethwaite, eds. Oxford: Pergamon.

Mubarik Ali (1988), "Supply Response of Major Crops in Pakistan: A Simultaneous Equation Approach", Special Report Series No. 11, Ministry of Food, Agriculture and Cooperatives, Government of Pakistan.

Murtaza, Ghulam and Munir H. Zia (2010), 'Wastewater Production, Treatment and Use in Pakistan', available at http://www.ais.unwater.org/ (visited on March 13, 2014).

Mustafa, Khalid et al (2007), 'Resource Degradation and Environmental Concerns in Pakistan's Agriculture, *Sarhad Journal of Agriculture*, Vol. 23, No. 4, 2007.

Naschold Felix (2002), "Why Inequality Matters for Poverty" Briefing paper Number 2, UK Department for International Development (DFID), U.K.

Naschold Felix (2009), "Microeconomic Determinants of Income Inequality in Rural Pakistan", *The Journal of Development Studies*, 45:5, 746-768.

National Nutrition Survey (2011), Humanitarian Response, Pakistan (www.pakresponse.info)

OPM (2009), "External Evaluation of the National Programme for Family Planning and Primary Health Care Management Review, Oxford Policy Management (OPM), August 2009.

PILDAT (2012), "Polio Eradication: A National Emergency in Pakistan", Briefing Paper No. 47, Pakistan Institute of Legislative Development and Transparency (PILDAT), November 2012, Islamabad.

Pickney, Thomas C (1989), "The Demand for Public Storage of Wheat in Pakistan", Research Report 77, International Food Policy Research Institute (IFPRI).

PMDC (2008), "National Survey on Prevalence of Hepatitis B & C in Pakistan", Pakistan Medical and Research Council (PMDC), Islamabad, 2008.

Salam, Abdul, M. B. Siddiqui, and Syed Wasim Raza Zaidi (2002), "Economics of Wheat Production: Results from Field Surveys in Punjab and Sindh. Agricultural Prices Commission. Islamabad: Government of Pakistan. (APCOM Series No. 202)

Sayeed, Asad (2004). "*Social Protection in Pakistan: Concept, Situation Analysis and the Way Forward"*. Centre for Research on Poverty and Income Distribution (CRPRID), Planning Commission, Islamabad, Working Paper No. 5. Jointly published with United Nations Development Programme (UNDP) and International Labour Organisation (ILO).

SPDC (2003), *Annual Review of Social Development in Pakistan-2002-03: The State of Education*, Social Policy and Development Centre (SPDC).

TRF (2010), "Third-Party Evaluation of the PPHI in Pakistan: Findings, Conclusions and Recommendations", Technical Resource Facility (TRF).

UNDP (2013), "Human Development Report: The Rise of the South", United Nations Development Programme, New York, NY 10017, USA.

UNDP (2011), *Human Development Report*, New York: Palgrave Macmillan for the UNDP.

UNDP (2008), 'Baseline Survey of Livestock Sector in Punjab and Sindh', Community Empowerment through Livestock Development and Credit (CELDAC) Project, United Nations Development Programme (UNDP).

UNESCO, Pakistan (2011), "Situation Analysis of the Education Sector" http://unesco.org.pk/education/documents/situationanalysis/National_Final_Report_Education_Policy_Analysis.pdf

UNICEF (1998), *The state of the world's children 1998,* Oxford, Oxford University Press.

WB (2010), "Delivering Better Health Services to Pakistan's Poor", The World Bank.

WB (2007), *"Social Protection in Pakistan: Managing Household Risks and Vulnerability*", World Bank Report No. 35472-PK.

WB (2006), 'Pakistan: Strategic Country Environmental Assessment Report', South Asia Environment and Social Development Unit, World Bank (WB).

WB (2005), 'Pakistan: Country Water Resources Assistance Strategy', Report No. 34081-PK, World Bank.

WB (2000), *The quality of growth.* New York: Oxford University Press.

Wermer, Nicola (2008), "Literature Review: Social Protection of the Rural Population", Background paper commissioned for the UNRISD Flagship Report on Poverty, Geneva.

WHO (2013), "Pakistan: Expanded Programme on Immunisation". http://www.emro.who.int/pak/programmes/expanded-programme-on-immunization.html (website visited on Oct 19, 2013)

WHO (2012), Global Tuberculosis Report 2012, World Health Organisation (WHO).

WHO (2008) Country Case Study, Pakistan's Lady Health Workers Programme, GHWA Task Force on Scaling up Education and Training for Health Workers, published jointly by World Health Organization (WHO) and Global Health Workforce Alliance (GHWA).

WHO (2006), "Country Cooperation Strategy for WHO and Pakistan 2005-2009", World Health Organisation (WHO), 2006.

WWF (2007), 'Pakistan's Waters at Risk', World Wildlife Fund (WWF) Pakistan, Feb 2007.

Zaidi, Akbar, S. (1988), *The Political Economy of Health Care in Pakistan*, Lahore: Vanguard.

Zaidi, Shela at al (2011), "Situation Analysis for Post Devolution Health Sector Strategy of Sindh Province".be added????

In a comparative and empirical study of the state of social development in rural Pakistan, SPDC's latest Annual Review, the twelfth in the series, explains how the social sector has fared, particularly, after the promulgation of the 18th Amendment to the Constitution made the provinces primarily responsible for health and education. The report brings forward urban-rural differentials using development indicators such as population, demography, education and public health; profiles and quantifies the rural economy; provides latest estimates of poverty; and analyses the pattern and structure of employment in rural areas, access to education, the state of the health sector and the effectiveness of social safety nets. By shedding light on the social sector, and comparing and contrasting urban-rural disparities, the report reinforces the importance of a healthy, educated citizenry and its centrality to the prosperity of Pakistan.

Social Policy and Development Centre
15-Maqbool Co-operative Housing Society
Block 7 & 8, Karachi 75350, Pakistan
Tel: (92-21) 111-113-113
Fax: (92-21) 3453-4285
E-mail: spdc@spdc.org.pk

Find us on